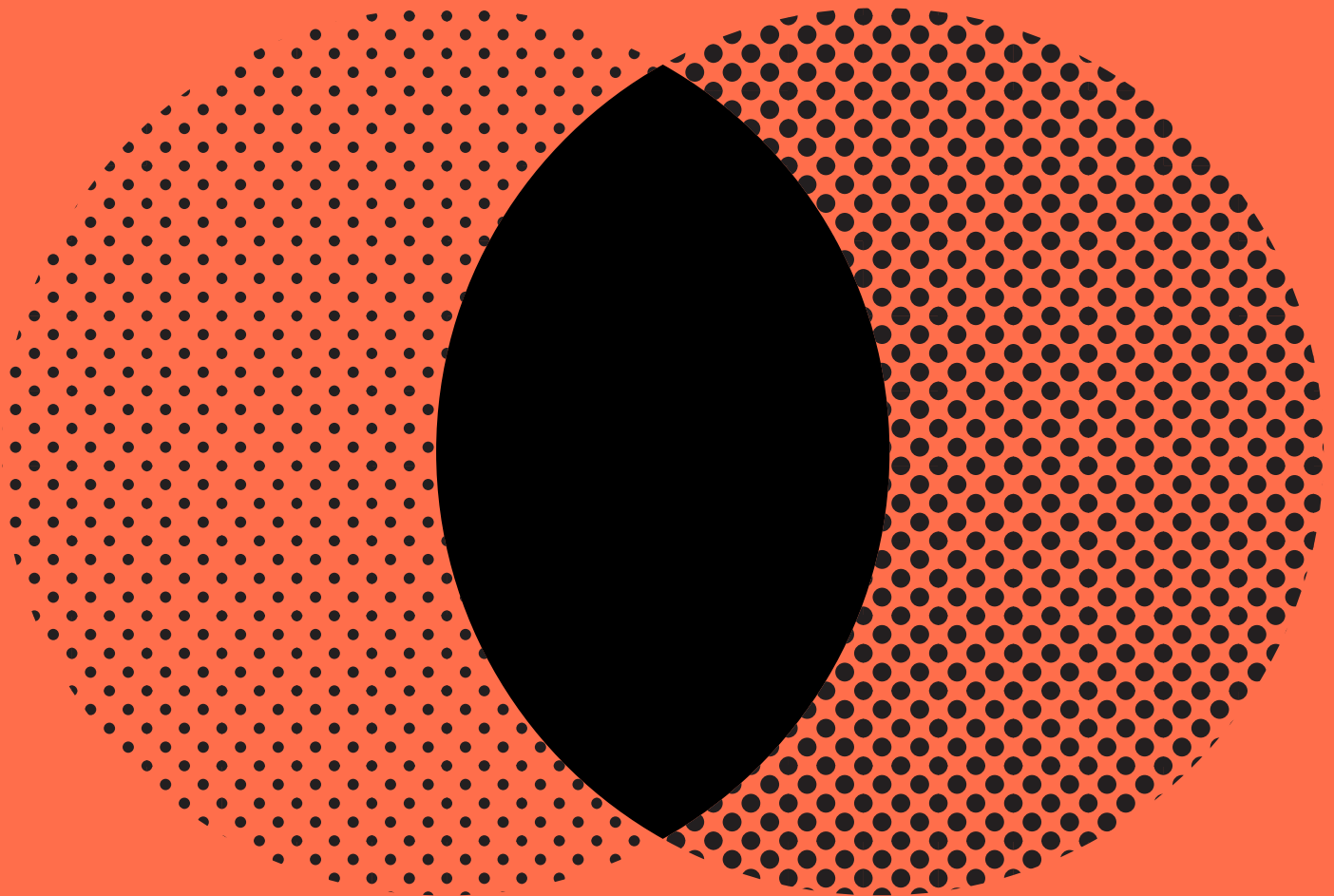


Irish Survey of Student Engagement

Results of qualitative data analysis projects

Report 5 of 5





Results of qualitative data analysis projects

Name of Report: Analysis of Qualitative Data Emerging from StudentSurvey.ie

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Organisation/ Institution: Letterkenny Institute of Technology

Foreword

The StudentSurvey.ie Steering Group is pleased to publish the results of five research projects analysing the qualitative data generated by the free-text response questions in StudentSurvey.ie and PGR StudentSurvey.ie. The results contained within this report make up one part of this research series.

Five projects were funded by research bursaries offered by StudentSurvey.ie in October 2020. The aim of the bursary awards was to promote greater ownership and encourage wider use of the StudentSurvey.ie and PGR StudentSurvey.ie data. Proposals for the analysis of the qualitative data emerging from StudentSurvey.ie and PGR StudentSurvey.ie were invited from members of the research community within the participating institutions, as well as commercial data analysis companies. The projects were completed in May 2021.

Each project is an independent project undertaken by qualified and experienced researchers on behalf of StudentSurvey.ie. Each project took a unique approach. Some projects involved analysis of all the qualitative data for a given year(s), and some homed in on a subset of the data. Some undertook a qualitative methodology, while others applied quantitative methods to qualitative data. The commonalities between all five projects are that they all utilised well-grounded methodologies, offer mechanisms for replication of the analysis in future years, and are innovative and authentic.

These results are the first of their kind for StudentSurvey.ie and PGR StudentSurvey.ie and we hope they are the first of many research projects involving the qualitative results of these surveys.

What are StudentSurvey.ie and PGR StudentSurvey.ie?

StudentSurvey.ie (the Irish Survey of Student Engagement) is an annual national survey of student engagement among first year undergraduate, final year undergraduate and taught postgraduate students in higher education institutions in Ireland.

PGR StudentSurvey.ie (the Irish Survey of Student Engagement for Postgraduate Research Students) is a biennial national survey of student engagement among Masters by Research students and PhD students in higher education institutions in Ireland.

Both surveys are designed to focus on student engagement, namely the amount of time and effort that students put into meaningful and purposeful educational activities, and the extent to which institutions provide such opportunities and encourage students to engage with them. The data collected reflect students' self-reported perceptions of their experiences.



Analysis of Qualitative Data Emerging from StudentSurvey.ie

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Acronyms

CAQDAS Computer-assisted qualitative data analysis

RQDA Rstudio package for Qualitative Data Analysis

CRAN The Comprehensive R Archive Network

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Executive Summary

StudentSurvey.ie collects data that reflects students' self-reported perceptions of their experiences related to student engagement and the extent to which third level institutions provide such opportunities and encourage students to engage with them. As part of this survey two qualitative questions are included, they are; what does your institution do best to engage students in learning, and what could your institution do to improve students' engagement in learning?

In 2019, 40,558 students answered these two questions and in 2020, 44,707 students answered them. This report presents a detailed analysis of the 2019 and 2020 data and proposes an analysis plan for the 2021 data.

For the question 'what does your institution do best to engage students in learning?'. Four themes of 'course structure, learning and assessment', 'facilities and environment', 'student relationships' and 'student support' emerged from the analysis. For the question 'what could your institution do to improve students' engagement in learning?' six themes emerged. They are: 'teaching methods', 'supporting learning', 'assessment', 'facilities and environment', 'student relationships' and 'student support'. These themes and the associated sub-themes identified are discussed herein.

Introduction

This study was commissioned in December 2020. The following research objectives were agreed:

Research Objectives

- 1) To analyse the 2019 undergraduate student survey qualitative data as a means of developing a coding frame.
- 2) To analyse the 2020 undergraduate student survey qualitative data as a means of allocating data to existing coding categories and identifying emergent categories.
- 3) To present findings from the analysis of the 2019 and 2020 undergraduate student survey qualitative data in report format.
- 4) To present an analysis plan for the 2021 undergraduate student survey qualitative data based on 2019 and 2020 findings.

This document presents an analysis of the qualitative data that was collected via two qualitative questions posed in the 2019/2020 undergraduate student survey (www.studentsurvey.ie), and presents an analysis plan for the 2021 qualitative data. Using QSR International NVivo 12 in the first instance, followed by manual qualitative analysis of the 2019 qualitative data, a code book was developed. Finally, a structural topic model was applied in R to support the manual analysis through an unbiased computer assisted model. The coding frame was utilised to analyse the 2019 qualitative findings and subsequently employed to analyse the qualitative findings from the 2020 data. The coding frame was adjusted as appropriate in line with the 2020 findings. The transferrable coding frame was developed for future use using the R package for Qualitative Data Analysis (RQDA), by means of the 'codingBySearch' function. To facilitate reproducibility, a how to guide and script has been developed for participating institutes.

Methodology

To facilitate systematic analysis of the qualitative data, the content analysis approach was employed (Schreier, 2012). The approach adopted when analysing qualitative data is dictated by the data source, that is, if the source of qualitative data is talk, observation, drawing/photographs/video or documents. The content analysis approach is suited to talk and documents (Leech and Onwuegbuzie, 2008), and was therefore suited to the data at hand. As highlighted by Mingers (2003, p.239), qualitative content analysis “concerns the analysis of texts for the occurrence of specific categories or terms”. The content analysis approach has been applied in prior education research (see for example Le et al., 2019; Niedlich *et al.*, 2020 and Walker *et al.*, 2018) and has been employed in prior student engagement studies (see for example: Alioon and Delialioğlu, 2019; Steen-Utheim and Foldnes, 2017 and Tran, 2017).

The main types of qualitative content analysis are conventional, directed and summative content analysis. Conventional content analysis involves developing coding categories from text data and as such, allows diverse and unique information to be obtained (Hsieh and Shannon, 2005). Directed content analysis employs theory and/or research findings as a means of defining coding categories. (Zhang and Wildemuth, 2009). Pre-existing theory and/or research findings provide coding categories that data may be allocated to. Data obtained by the researcher may also lead to the development of new categories or subcategories (Hsieh and Shannon, 2005). Finally, summative content analysis “involves the counting of words or content and the interpretation of that quantification” (Zhang and Wildemuth, 2009, p.37). The process of counting words or content is referred to as manifest content analysis while the interpretation of those words or content is referred to as latent content analysis (Hsieh and Shannon, 2005). A summary of these approaches is presented in table 1.

Table 1: Major coding differences among three approaches to content analysis

Type of content analysis	Study starts with	Timing of defining codes or keywords	Source of codes or keywords
Conventional content analysis	Observation	Codes are defined during data analysis	Codes are derived from data
Directed content analysis	Theory	Codes are defined before and during data analysis	Codes are derived from theory or relevant research findings
Summative content analysis	Keywords	Keywords are identified before and during data analysis	Keywords are derived from interest of researchers or review of literature

Hsieh and Shannon (2005)

To analyse the 2019 undergraduate student survey qualitative data as a means of developing a coding frame, conventional content analysis was employed. Given the lack of established coding categories, employing the conventional content analysis approach allowed coding categories to emerge directly from the data. This allowed diverse and unique information to be obtained (Hsieh and Shannon, 2005). This approach addressed objective 1. To analyse the 2020 undergraduate student survey qualitative data as a means of allocating data to existing coding categories and identifying emergent categories, directed content analysis was employed. This approach was most suitable in addressing objective 2 as the application of conventional content analysis on the 2019 data allowed initial coding categories to be developed. Directed content analysis then allowed the previously defined coding categories to be employed while allowing new coding categories to emerge from the 2020 data (Hsieh and Shannon, 2005). The report presents analysis of this data (objective 3) and presentation of an analysis plan for the 2021 undergraduate student survey qualitative data (objective 4). Computer automated qualitative analysis provides an objective foundation of insights in a systematic and organised manner. To this end, it does not offer interpretations but rather, it helps facilitate unbiased manual interpretations of feedback thereafter. Manual analysis

offers the ability to capture the complexity, sensitivity and variability of the human experience that cannot be explored through automation alone as its components are not definite or fixed in advance (Lincoln and Guba, 1985). Subsequent automated latent topic modelling supports the rigour and validity of overarching themes that emerge from the manual analysis. Taken together, the autocoded themes, manual analysis and structural topic models form a robust analytical approach to and output of textual data from studentsurvey.ie.

Analysis

Data Preparation

To ensure reproducibility, pre-processing was carried out on free and opensource software, Rstudio 4.0.3 and the script and how to guide for 2021 analysis is provided [here](#). Data was split into files in accordance with year and question type. A text mining package called TM was implemented as it offers user friendly transformation tools (tm_map) for data preparation (Feinerer, 2007). In order to use the transformation tools, a corpus was created from the textual data using the syntax below.

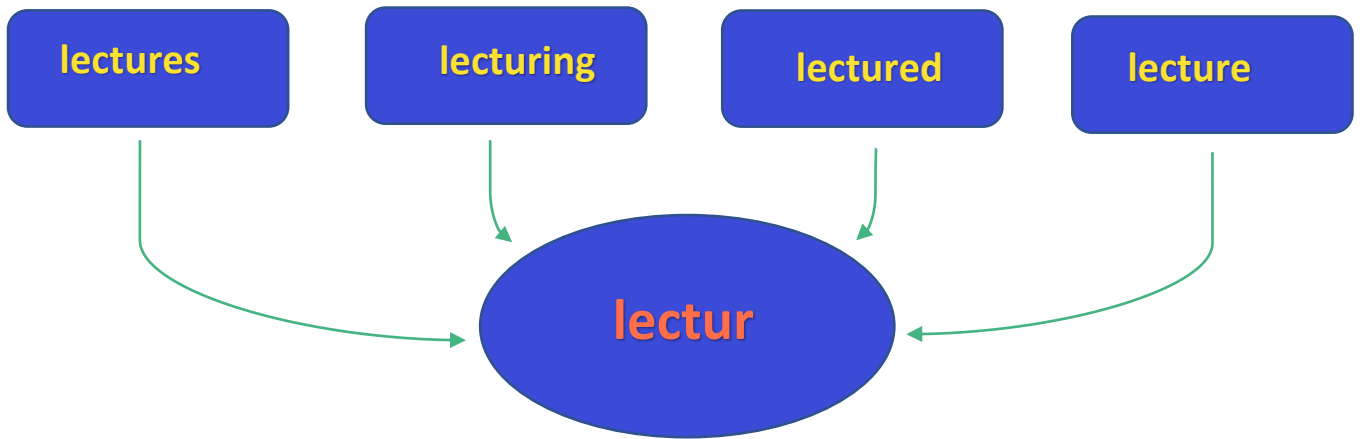
```
rio_csv_text <- VectorSource(text_csv)
corpus <- Corpus(rio_csv_text).
```

Using the TM package, special characters such as “/”, “-” were replaced with spaces as these divide sentences, paragraphs and points, and can impact text processing including word frequency outputs (Etaiwi and Naymat, 2017). Following this, numbers and long spaces were removed. Stop words are commonly used non-discriminative words such as ‘an or ‘the’ that provide little or no semantic value. As recommended by Silva and Ribeiro (2003), these were filtered to enhance the accuracy of results. The code below demonstrates how the transformation (tm_map) function is applied.

```
corpus <- tm_map(corpus, removeWords, stopwords("english"))
```

Text searches carried out in Rstudio are case sensitive, thus all text was converted to lowercase. In this way, ‘Class’ and ‘class’ were not differentiated during coding or frequency-based analyses. Stemming refers to the reduction of an inflected word to its root form (Willett, 2006). This normalises the data, enhances search index accuracy and ensures words of the

same semantic nature are collapsed into a single representation (Sharma, 2012). A demonstration is shown in Figure 1 below.

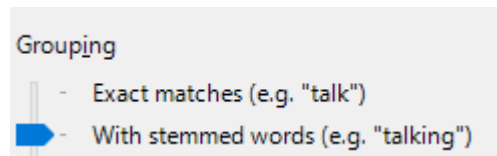


This process can be executed using syntax in R or through manual selection in NVivo.

a) Rstudio

```
corpus <- tm_map(corpus, stemDocument)
```

b) NVivo



An example of frequently used words and the associated search words are presented below.

Word	Similar Words
lecturing	lecture, lectured, lecturer, lecturers, lecturers', lectures, lecturing
students	student, students, students', students'
learnings	learn, learn', learned, learning, learning', learnings, learning, learns

Figure 1: Stemming Demonstration

Finally, to anonymise the text, institute abbreviations (e.g. LYIT) were replaced with "institute".

```
corpus <- tm_map(corpus, content_transformer(gsub), pattern =  
"IADT|ITC|MIC|GMIT|LYIT|AIT|DBS|DIT|DCU|UCD|LYIT|LIT|UCD|UCC|NCAD|NCI|  
MU|MTU|TUD|TCD|UL|WIT|MIE", replacement = "INSTITUTE").
```

Data preparation procedures were carried out to enhance automated analysis only (García, Luengo & Herrera, 2015). Pre-processing techniques resulted in low level readability therefore manual analyses of text was appropriately carried out without pre-processing. For the most part to preserve the authentic voice, only minor grammatical adjustments were made.

Data cleaning

Translation of Irish to English approach

Rstudio packages TranslateR and googlanguageR were initially employed to identify and translate Irish language responses. On inspection, automated translations did not accurately represent response meanings. Thus, the institute's Irish language Staff Officer revised all translations before analysis was carried out.

Overlapping comments

A small number of comments overlapped 'best' and 'improve' for the purposes of maintaining the integrity of the data, they remained in their initial response category, however any feedback that was not duplicated in responses offered by the respondent were noted in the relevant analysis

Editing

Very minor typographical adjustments were made to address unsaturation and minor spelling errors and to improve the overall readability.

Themes

Fourteen themes were automated from NVivo software with a mean of 23 subgroups within each. The mean frequency of theme mentions was 833.21 (SD=468.66) and subgroup mentions was 4.22 (SD=29.96). Due to considerable variance in subgroup frequencies (1-1226) and evidence of low frequency cut-off reducing stability, it was decided that only subgroup frequencies one standard deviation or more above the minimum would be included (>30). A break-down of responses by year and open text item are provided in the table below.

Table 2: Breakdown of Responses

	2019	2020
Total Responses	40558	44707
Best (Any) Responses	19987 (49.3%)	18451 (41.3%)
Improve (Any) Responses	21062 (51.9%)	20173 (45.1%)
Best (Reduced) Responses	19782	17920
Improve (Reduced) Responses	20716	19862

*Note: entries such as symbols and single letters which contained no semantic value were omitted to from Best (Reduced) Responses and Improve (Reduced) Responses. For example, a list of suggested omissions for Best 2019 can be found [here](#).

Analysis Approach

Computer assisted analysis

Computer-assisted qualitative data analysis (CAQDAS) was carried out using NVivo and Structural Topic Modelling package stm in Rstudio. The resulting coding frame is designed for use with Rstudio package for Qualitative Data Analysis (RQDA). In terms of appropriateness of instrumentation and robustness of analysis, NVivo Plus offers an automatic detection of themes function which uses linguistic processes and a sentiment dictionary to quickly identify patterns and trends within an item or dataset. This does not provide a replacement of manual analysis but rather, offers an objective foundation for further investigation (Bazeley & Jackson, 2013). In the interest of reproducibility and open accessibility, a code book of automated themes has been developed for use with RQDA.

CAQDAS packages such as RQDA facilitates efficient coding with larger sample sizes than is afforded with manual analysis. RQDA, an emergent and open source analysis software package, entails a two-level aggregation function which supports theory building and was therefore suited to the nature of this research. In addition, the application of this package for use in analysing qualitative data received considerable attention at studentsurvey.ie’s 2020 Practitioners Forum indicating a strong interest from stakeholders in the package and approach. Further, “RQDA can be extended to include statistical analysis of coded result and thus enables mixed method research in a research in a single platform” (Chandra and Shang, 2019:29).

The RQDA package was archived in May 2020 and as a result, the package could not be directly installed from R's CRAN (Comprehensive R Archive Network) repository. As a solution, an initial script developed by Victor Ordu (Ordu, 2020) was used to install RQDA for the purpose of studenturvey.ie analysis in the first instance. Since the inception of analysis, a new package 'RQDAassist' has been created and was (pre) released (15th February 2021) to assist R users in the installation of RQDA. Please see, how to [guide](#) for instructions.

Structural topic modelling is a semi-automated approach to identifying latent themes which builds on latent Dirichlet allocation and correlated topic modelling (Roberts *et al.*, 2019). This approach to qualitative analysis has become particularly popular among social scientists in recent years (Davidson and Bhattacharya, 2020; Pandur, Dobša, and Kronegger, 2020) and the benefits of its application to open text survey responses have been demonstrated in literature (Roberts, *et al.*, 2014; Tvinnereim and Fløttum, 2015). In this report, the topic model functions to support the manual analysis and investigate topic alignment with the overarching themes that emerge from manual analysis. Together, the traditional and pioneering analytic approaches increase validity and reliability of overarching themes identified in this report. To conduct the analysis, pre-processed data from 'Best' 2019 and 2020 were first combined using the function `rbind()`.

```
tidy_best_combine <- rbind(tidy_Best19, tidy_Best20)
```

Of note, words were filtered at 100 or more `filter(n())>100` and topics were set at 4 or 6 to investigate topic alignment with the overarching themes.

```
Stm_Best <- stm(user_matrix,  
  
          K = 4,  
  
          verbose = F,  
  
          init.type = "Spectral").
```

The number of words generated within a topic was set at 10 `top_n(10, beta)`.

Manual Analysis

The results from the computer assisted analysis provided a foundation for the manual analysis. In this way, overarching themes emerged as semantic value was added to the NVivo results. The procedure for manual analysis involved assignment of text to codes and extensively combing through the data manually. This allowed for the auto coded themes to be further refined and more meaningful themes to be identified. For example, an auto coded theme generated by NVivo was 'exam'. Assignment of text to this code and manual analysis revealed detailed discussion regarding exams as a means of assessment. An extensive, iterative analysis in this manner lead to the development of additional relevant information, resulting in the theme 'course structure, learning and assessment'. As previously noted, the cross thematic nature of some terms was identified and allocated accordingly.

Analysis was performed from January-April 2021. The subsequent chapters detail the findings from the analysis of the 2019 and 2020 data. Additional quotes are presented in a second document 'Student Survey Document 2 – Extra Quotes'. In the final section, an Analysis Plan for 2021 data is presented.

Findings and Analysis

‘What does your Institute do best to engage students in learning?’

NVivo was employed to perform initial coding of the 2019 data. NVIVO generated initial themes and an associated codebook (see Appendix 1.1). Using the codingbysearch() function in RQDA, text can then be assigned to these codes. 2019 initial codes identified are presented in figure 2, 2020 initial codes are presented in figure 3. As evidenced in figure 2, the auto code theme results are general in nature. However, this and the assignment of content to themes provided important guidance in terms of theme refinement. The auto code themes, and their associated nodes revealed the themes most frequently employed in student discourse through computer generated creation of a node matrix, detection of significant noun phrases and stem grouping. Using this and the content assigned to themes using RQDA, manual analysis was employed to sift through the data and formulate final themes. This resulted in the development of four overarching themes: *course structure, learning and assessment; facilities and environment; staff-student relationships* and *student support* (see table 3).

Some terms such as “small”, “online” and “class” were identified as initial themes using NVivo. Manual analysis further revealed the cross thematic nature of these terms. For example, “small class” was identified as an attribute in the role of discussion in *learning approaches*, “small class” size was referred to in the context of the creation of a safe and comfortable learning environment, and “small class” was also identified as an important feature of *staff-student relationships*. Similarly, the term online was cross thematic in nature. The role of online technologies was discussed in the context of *course structure*, the *learning approaches* and the *environment*. Manual analysis enabled these phrases to be contextualised across different themes as appropriate.

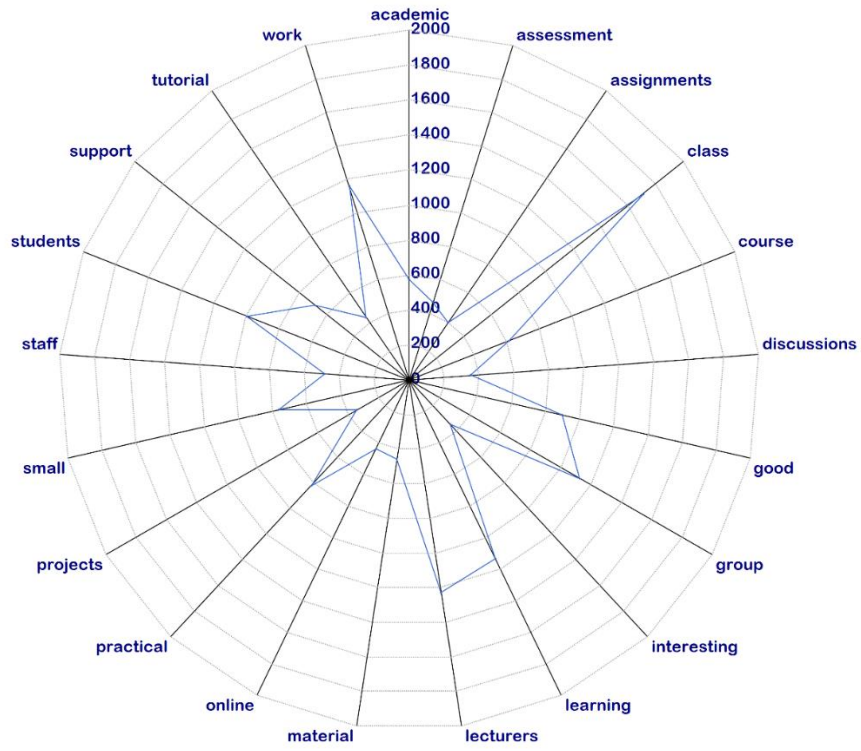


Figure 2: 2019 Auto code themes generated using NVIVO

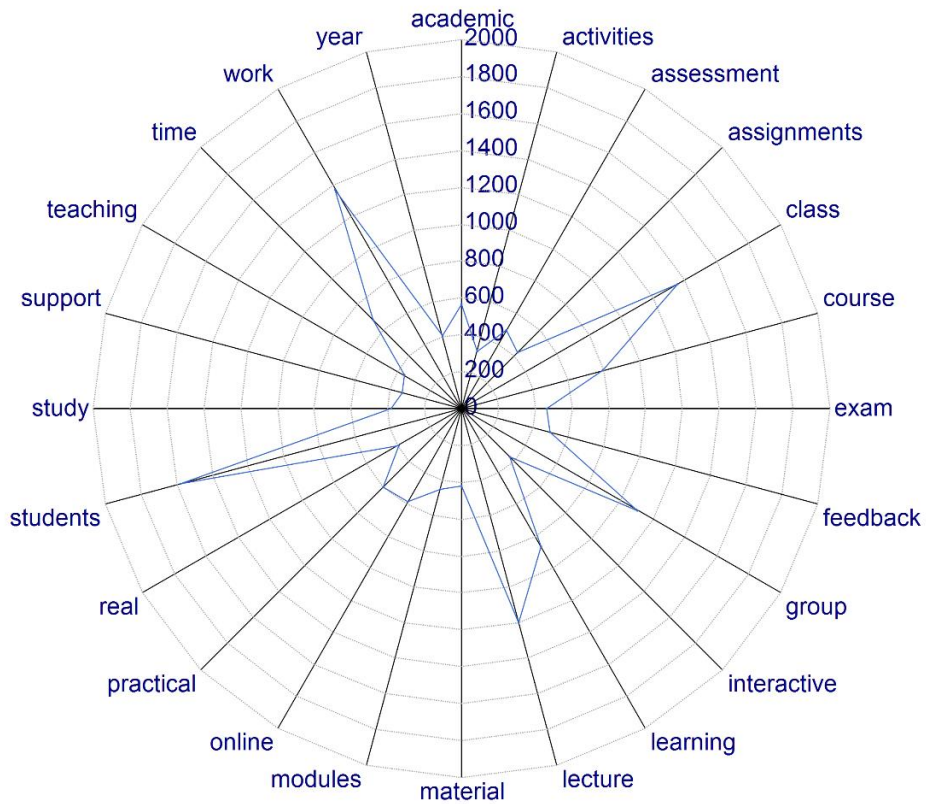


Figure 3: 2020 Auto code themes generated using NVIVO

Table 3 presents the four key themes that emerged from analysis of this question, along with the sub themes that arose. In the subsequent section each of these themes are outlined in detail.

Table 3: 'Best' emerging themes

Course structure, learning and assessment		
	Course structure	
		<i>Wide variety of courses</i>
		<i>Online learning</i>
	Learning approaches	
		<i>Teaching techniques</i>
		<i>Tutorials and practical learning</i>
		<i>Context</i>
		<i>Role of online technologies</i>
		<i>The role of discussion</i>
		<i>Class size</i>
		<i>Placement</i>
	Assessment	
		<i>Assessment approaches</i>
		<i>Practical nature of assessment</i>
		<i>Feedback</i>
Facilities and environment		
	Range of facilities	
	Availability of facilities	
	Online facilities	
	Friendly environment	
	Safe environment	
		<i>Active/ Self learning environment</i>
		<i>Staff role in creating a learning environment</i>
	Online Environment	
	Variety of events	
Student relationships		
	Lecturer-student relationships	
	Staff-student relationships	
	Student – student relationships	
	Support staff-student relationships	
Student support		
	Academic supports	
	Support for International Students	
	Student Services	
	Communication strategies	

Course structure, learning and assessment

Course structure

Course structure refers to a variety of aspects including the development and design of the course resources, curriculum, instructional strategies and methodologies, course schedule, and overall planning of a course before, during, and after a course is taught (Garrison, Anderson, & Archer, 2000). An examination of student comments pertaining to what their respective Institution does best to engage students in learning revealed a number of statements made in relation to *course structure*. Discussion ranged from general comments such as those referring to the range of courses offered, the interesting nature of their respective course, to more specific comments addressing part time courses, the real-world application of the course and the future value of the course.

Wide Variety of Courses

A wide variety of courses offered was highlighted a number of times (see Document 2 for further quotes). Moreover, the nature of the coursework and its application outside of the classroom were themes that emerged:

2019

“Provide opportunities to put learned material into practice and apply theoretical knowledge to solve real world problems. Encourages curiosity and enthusiasm in subject areas by not limiting learning to theory only.”

“I think I am lucky with my course that all lecturers are approachable and the course is designed to give us experience in every aspect of our field.”

“The variety of courses it offers is amazing. And helping keep track of future research/employability takes a lot of burden off.”

“Interesting courses, very relevant to modern life, feel like I can make an impact on society.”

2020

“Have a wide range of courses so students are able to choose to study what really interests them.”

“My course has a very encouraging environment with a strong emphasis on real world application.”

“They are encouraging and the skills we learn in our course is mostly what we really need to know for the future.”

Online Learning

While the role of online technologies as a facilitator of learning was a theme that emerged in both 2019 and 2020, in 2019 some students referred to the structure of online courses, highlighting the subsequent benefits provided in terms of achieving greater flexibility and an optimal work-life balance. Notably, those studying in a part time capacity outlined the benefits of online and blended *course structure*. This is exemplified by the following quotes:

2019

“Online course is good for part timers to help aid getting higher education.”

“The institution offers a blended approach with provision to the <redacted> to my particular honours level degree course. Offering an approach that’s adaptable to a family/work/education situation.”

“I find the online course very well structured with good resources (moodle, office 365) and a great selection of engineering software to experience. Some great online lecturers that really present the information in a way that is engaging and useful for a distance learner.”

“Framework for online learning, so that work, family, social and education can be done together.”

Additional comments

Additional comments referred to the manner in which course content is structured. Students acknowledged the strength of course presentation, content organisation and conversational structure. Notably, some comments alluded to the positive impact of course structure on learning and personal development.

2019

“There is plenty of support for students at <Institute>.....The course offers multiple layers of learning including; analytic, the hands-on approach and moves along at a blistering pace so you don't get bored, but not so fast that you are burnt out or loose position.”

“Send detailed course outlines and reading material to better our learning experience. Learning is based more on academic journals and papers than books to give a better understanding and different perspectives of the concepts learned in class.”

“All work provided online in a timely manner. Deadlines clearly noted. Student handbook from each of the modules very clearly laid out. Reading list supplied. Part time and full time courses offered. Class based and online courses offered.”

“Very clear structures, very specifically designed assessments, attendance is monitored. Active learning and group work strategies.”

2020

“Provide a varied and inclusive course which covers a number of different subjects.”

“The course content has been broken down into clear step by step achievable goals.”

“The discursive structure of course which brings together masters students from all fields of art, the common lectures and discussions are a great platform to voice and understand different ideas and perspectives.”

“Most lecturers in my experience are great at what they do and have a way of breaking up the difficult course content into smaller parts making it easier for students to understand.”

Notably, discourse pertaining to course structure illustrates the strength of Institutes in providing a range of courses that allow students to undertake a course that interests them, the real-world application of course content and the relevance of courses material for future employment.

This study confirms that students' perceptions of the overall usability of the course, in terms of user friendly and designed around student learning objectives are likely correlated to student experience and learning. Hence, the more organised the course layout, the more likely students will better engage with the course (Vargas, 2014; Eom et al., 2006). This study confirms Jaggars and Xu (2016) study on the online course quality and this can be related to student accessing content through VLE. They found that quality courses contained the following characteristics: clearly written objectives, well-organized content, variety of opportunities for interpersonal interaction, and effective use of technology (Jaggars & Xu, 2016). It is clearly evident in the findings that course structure plays a vital role in enhancing student engagement. This study also highlights the benefits of cross collaboration from a variety of disciplines.

Learning approaches

Student engagement has increasingly been seen as a defining characteristic of high quality teaching in third level education (Ashwin and McVitty, 2015). The move from lecture-based courses to interactive classes which enable student centred learning activities and active learning strategies are highlighted as being of importance to student engagement (Lumpkin, Achen and Dodd, 2015). Numerous statements were also made in relation to *learning and assessment*. In relation to learning, statements referred to matters such as the learning approaches employed, facilitating the role of the student in learning, the role of digital technology and the quality of learning materials (see Document 2 for further quotes).

Teaching Techniques

The *learning approaches* employed by their Institute was noted by many students as what their Institute does best to engage students in learning. Comments drew attention to the mix

of learning techniques employed by their Institute, with some noting the subsequent impact of the range of techniques on student engagement and understanding:

2019

“Changing techniques of class teaching. Accommodating for all learning types.”

“The variety of learning styles used for each module e.g. Large lecture groups, small seminar groups, PC labs, group work projects and lone assignments.”

“Different styles of learning are used e.g. use of powerpoints, reading materials, focus groups, posters, online modules etc. All of these different techniques are very helpful to engage students in learning.”

“The staff are dedicated and very organised. They show a good interest in their subject and use different learning techniques that naturally engage the students.”

2020

“By trying different techniques when it comes to learning.”

“It provides an excellent trained staff who are well educated and have experience in both research and industry. These staff members use a variety of different learning techniques from presentations to videos in order to help students understand the course work.”

“Engage students by using different types of learning techniques such as guest speakers on different topics, and practical experience (placement).”

“Using different teaching techniques to keep students interested and engaged. Such as clickers, debates, discussions, trips, project work, group work and general chatting about an aspect of the course in a more casual manner to help us understand something difficult.”

When addressing the specific techniques employed in teaching in their Institute, students referenced techniques such as flipped classrooms, video, guest lecturers, lab exercises, presentations, class discussions, blogs, quizzes and books (see Document 2 for more detail).

2019

“The teacher uses video clips, diagrams, pictures and illustrations to help us understand the course.”

“Interesting and varied lectures. Sometimes use films, guest lecturers or exercises to make things more exciting.”

“We use weekly class discussions and presentations on the readings to allow students to make real world connections.”

“Lecturers are generally very helpful and engaging when it comes to explaining course material. They use a variety of resources such as videos, films, books etc.”

2020

“Flipped classroom worked really well to develop discussion and work through topics. Informative guest lectures.”

“Variety of materials. PowerPoint presentation, video clips, books, case studies, personal experience and guest lecturers.”

“Some modules have weekly class blogs which forces you to engage in each weekly topic. And then the lecturer asked us to discuss.”

“Using PowerPoint slides and explaining the material clearly. Revision lecture at the end really helps. Quizzes during some modules really helped fill in the gaps. Lecturers and tutors encourage questions and give feedback.”

Tutorials and Practical Learning

The use of tutorials and practical learning techniques were referred to by several students. Analysis of 2020 data revealed an increase in the use of phrases including “real life examples”, “real life situations” and “real world examples” (see Appendix 1.1). Discussion referred to one-to-one and group tutorials as those things their Institution does best.

2019

“Lots of practical work to help learning.”

“Emphasis on practical skills which can be employed in the industry.”

“Gives interesting assignments which require students to research and learn by practice.”

2020

“One to one tutorials.”

“Giving a lot of practical work and tutorials.”

“Group tutorials, encouraging students to discuss concepts among each other.”

“Place an emphasis on practical skills and learning through practice.”

Context

The discussion of content in the context of every-day life was noted by many students.

2019

“Speak about real life problems and apply what we are learning to the real world and real situations.”

“Teamwork, presentations, working with live companies and applies learning to everyday examples.”

“Correlate material to our everyday lives in the context of global and national issues of the day.”

2020

“Encourage us to think about these issues in the context of everyday life.”

“Relate topics to our everyday lives so we clearly understand what they mean and they make it fun to learn.”

“Correlate material to our everyday lives in the context of global and national issues of the day.”

Role of online technologies

The role of online technologies as a facilitator of learning was also emphasised by a number of students.

2019

“Provide online resources to help with learning.”

“The institution provides easy ways to learn and access the information such as online resources.”

“Tutorials and online quizzes are a good way the institute engages students.”

“The online lectures provided and the assignments for each module provide the opportunity for engaging in learning.”

2020

“Good online system eg Moodle.”

“Excellent online resources. Slides available on blackboard/online textbooks/external resources on blackboard.”

“As part of my course, I do online lectures via <institute>. The Adobe connect platform is an excellent resource for learning and interaction.”

“As a distance learning, I find the online learning experience exceptionally well organised and delivered to a higher standard than expected. Considering there is no on campus attendance, I still feel like I am a fully involved student.”

How educators communicate with students has an impact on student experience. The rise of smartphones and laptops has impacted who we are teaching and how we should engage with the student (Dahlstrom et al, 2013). This study confirms that students find value in using technology to increase their academic success (Hamilton *et al.* 2020). Recent studies have found that students are very comfortable using social network sites to connect with other

students and for academic and course purposes (*ibid*). This area warrants further research moving forward.

The role of discussion

The role of discussion in class as a facilitator of learning was detailed by several students.

2019

“Some lecturers are very good at communicating with the class whether they use humour or real-life examples and encourage students to participate in class discussions to help remember important material.”

“Open forum/class discussion format of class is very engaging. The learning I have picked up from my peers in class is equal to that of the learning I have picked up from class notes/lectures.”

“The lecturers encourage us to get involved in the class discussion, which was something I was less confident doing in my BA. There seems to be more of an active learning environment in <Institution> where the focus is on getting a well-rounded education as an individual rather than solely an academic one.”

2020

“Seminars are based in interaction and discussion, rather than bare lecturing, so there is space for different opinions and viewpoints.”

“Programming classes/labs/tutorials involve a lot of discussions with lecturers which improves learning and encourages interest.”

“Ask questions frequently and hold group discussions to discover answers in a self learning environment.”

This concurs with Ying (2020) who stated that the discussion method is vital in enhancing student learning outcomes. Through discussion, the students learn to view and understand the world as it is and make connections through discussions with peers.

Class Size

Further analysis identified the relationship between class size and discussion.

2019

“Small class sizes, providing more opportunities for class engagement during lectures.”

“Small class size allows for more discussion and one on one interactions with academic staff.”

“Small class sizes which allow students to communicate with their teachers and other students with ease. It also forms stronger friendships within the class itself which can be critical if one starts to fall behind. It means nobody is scared to ask for help.” (cross thematic quote)

“Smaller class sizes so you can build more of a working relationship with your lecturer and get to know the students more in your class so its easier to participate in class and ask for help if required.”

2020

“Provides a safe space to allow students to question, engage and examine through structured class sizes that are not entirely overwhelming.....An intimate learning environment through both seminar discussion groups and lectures not filled with hundreds of people has allowed us as students to become comfortable and confident amongst our classmates and academic staff.”

“Smaller class sizes - allowing students to make friends more easily makes attending college and classes more enjoyable and therefore students are more likely to show up to lectures, be less afraid to engage in class and thus, learn.”

“Small class sizes to encourage students to ask questions and interact.”

“Small class sizes for maximum lecturer-student interaction.”

There have been various studies that have investigated the impact of class size on variables such as different teaching methods and the impact on student outcomes (Allgood *et al.*, 2015)

student grades (Bandiera *et al.*, 2010). Student interactions with educators and peers about course matters as a form of academic social capital. Beattie et al (2016) found that the expansion of class sizes is likely linked to significant reduction in student interactions with educators and peers. The student survey confirms this with many students stating that smaller class sizes are beneficial on a number of fronts (Cuseo, 2007). The study can assume that in line with Walstad *et al.* (2015) and Kokkelenberg *et al.* (2008) smaller class sizes lead to enhanced student outcomes in terms of engagement, grades, satisfaction, experience and retention.

Placement

Finally, the key role played by placement in facilitating learning was outlined by several respondents.

2019

“Provide opportunities to put what we are learning into practice through work placement.”

“It gives opportunities to work on project that are more similar to what we would be doing if we were out in a working environment. The work placement that we participate in is also great because when you go back to college you realize the use for the content of your course a bit more.”

“In the course I attend we have to attend work placement in two semesters to relate theory to practice. This I found very helpful for employment when we complete our course.”

“Work placement in 3rd year definitely made me more interested in being able to apply new learnt skills to my 4th year study.”

2020

“Gives students opportunities to complete practical work placements to apply their learning in the work place.”

“Links our learning to real life eg. work placement each year of college which helps students get a better understanding of real life experience of the working world.”

“Work placement really helps me to engage in learning by using the skills taught in class.”

“It makes things practical as much as it can and theories are applied to working situations in placements.”

“Placement allows me to engage with real life scenarios to apply learning.”

The study concurs with O’Donovan (2018) that three key areas emerged around the benefits of work placement: students considered work placements facilitate opportunity for learning, minimal barriers to learning were experienced by students and students felt that they had an opportunity to introduce new skills.

As is well outlined in literature, supervision is core to the educational experience of students (Cleak *et al.*, 2015; Goodyear, 2014; Kourgiantakis *et al.*, 2019). The current study concurred with this, finding that supervision and feedback from practice teachers had the biggest impact on both levels of placement learning and positive experience. However, as Kourgiantakis *et al.* (2019) noted, little is known about the mechanism by which supervision enhances student learning. Further research is necessary in this area. Another emerging theme in this area is the use of innovative models in work placement that could be implemented in work placement to further enhance learning (Ferns *et al.*, 2019).

It is evident from student discourse that students appreciate a variety of approaches in stimulating learning. Discussion-based learning approaches allow students to gain a greater understanding of course material, facilitates greater expression of thought and increases student interest. Smaller class sizes facilitate a greater degree of learning through the provision of a more comfortable and interactive space for students. The use of every-day examples allows students to relate theory effectively to practice. Moreover, the incorporation of work placement in programmes gives students the opportunity to apply theory to and gain experience of the work environment.

Assessment

Assessment frames learning (Gibbs, 2006a) and is central to the student experience (Hernandez, 2012). Assessment approaches, the practical nature of assessment and feedback were themes that emerged during analysis.

Assessment approaches

The *assessment approaches* employed by their respective Institute was detailed by numerous students as to what their Institute does best to engage students. Students also drew attention to the variety of assessment techniques employed. The subsequent impact of continuous assessment on student engagement and final exams/assessments was also detailed.

2019

“Wide variety of assessments - presentations, short essays, longer essays, presentations, reaction pieces, exams, mcq quizzes - I think often times the most successful modules are the ones that engage with students in a multiple types of assessment. Every student has different strengths and every student learns in different ways.”

“Has various types of assessments throughout the semester including projects, homework assignments, online quizzes, lab work etc.”

“The C.A.(continuous assessment) approach and the hands on practicals performed in the labs are excellent ways of learning and engaging in class work and also helps you from an exam point of view because physically proving a theory by doing experiments helps you retain the information to complete the questions asked in the exams.”

“Most modules are strictly continuous assessment which makes the content more understandable, interactive and engaging.”

2020

“Varied assignments and coursework submitted in different ways, reports, blogs, prototypes, screencasts.”

“Most modules have continuous assessment which makes students more invested in each lecture academically than cramming information into their head from notes. Each student has the module co-ordinator's email and office opening hours to discuss their progress.”

“Continuous assessments through semester ensure you must engage with course work at an early stage rather than waiting until semester end and cramming.”

“<Institute> provides huge variety in learning and assessment styles between modules, which I have found to be very engaging.”

Practical nature of assessment

Students also referred to the practical nature of assessments and project work, inclusive of those in a group capacity. Notably, a small number of students in the 2019 student survey findings noted fieldtrips as something their Institution does best to engage students in learning. Analysis of 2020 student survey findings demonstrated a very slight increase in the number of students referring to fieldtrips. As is evidenced in Appendix 1.1, there was an increase in students referring to “practical assignments”, “practical experience” and “practical labs” in the 2020 data.

2019

“Practical Assessments that prove that topics we are covering/learning are applicable in work situations or can be used in our chosen area of field.”

“The volume and variety of group work on various different projects engages students best in learning.”

“The institution emphasises independent learning, and practical learning. The theory covered in lectures can be applied to the practical assignments.”

“Group projects that apply to real world problems.”

2020

“Applies coursework to practical situations.”

“The lecturers are very hands on with us and the assignments are very practical.”

“There are lot of group projects, assessments that's keep you motivated to keep working towards doing well in your academics.”

“The volume and variety of group work on various different projects engages students best in learning.”

Feedback

The structure of assessments and feedback received was also outlined by students. As with 2019 results, 2020 results demonstrate the value of variety when it comes to assessments. The positive impact on learning, engagement and end of semester pressure is evident.

2019

“It allows for one to one feedback on assignments handed up so we can evaluate our marks and do better the next time.”

“Interaction is good with the online lectures. This year, we got responses from all assignments and course material prior to exams and it was very constructive.”

“There is always a chance to speak with academic staff about feedback, and on how to improve the work you are submitting.”

“Great feedback and support while doing assignments and after they are done on where you could improve.”

2020

“The lectures are very well organised and the continual assessment layout is very easy to understand and give proper feedback on my abilities.”

“Course materials readily available online, feedback on learning activities and assessments, very structured, very clear explanation of assessment process and requirements.”

“Continuous assessments throughout the year and feedback each step of the way.”

“When they give assignments to write they always give feedback which is a good way of keeping track of how you're getting on.”

It is evident that students appreciate a variety of assessments as a means of enhancing engagement. Further, the use of continuous assessments alleviated end of semester assessment/exam pressure. Students also emphasised the value of practical assessments. Assessments that were well organised, with feedback provided were emphasised by students.

The student survey highlighted the importance of assessment tools in the learning process (Schnetter et al, 2014) and particularly in the VLE. The importance of effective feedback has been highlighted in literature (for example, Carless (2007)). Academics are aware of the importance of delivering feedback to students in a variety of ranges from written to oral both in class and on an individual basis (Schmidt et al, 2001). This study concurred with previous studies (Carless, 2007) that students associate continuous assessment with motivation to learn on an on-going basis and believe it provides opportunities to get feedback on their learning.

Facilities and environment

Campus facilities are necessary to satisfy students in terms of student retention due to the time that is spent in this space and influenced by the physical facilities. Hence, students attach importance to physical facilities (Munawar et al, 2011). A number of students drew attention to the quality and number of *facilities*, the availability of physical facilities and of on-line facilities within their respective Institutions. Furthermore, key characteristics of an optimal learning environment were identified as one that is safe, friendly and active (promoting self-learning). A link between small class size and the creation of a safe and comfortable learning environment was apparent, as was the role of staff in creating a safe and comfortable environment.

Range of facilities

Some students identified the extensive range of facilities are being a key feature of what their institution does best.

2019

“Excellent facilities and guidance.”

“Provide a huge range of facilities on campus.”

“Provide lots of facilities to encourage students to come and interact in university life and to enjoy their experience socially in <Institute>.”

2020

“State of the art facilities.”

“Provides a supportive network of staff, students and they provide the facilities and tools we need to thrive in this specific environment.”

“Provide services/facilities to help students with coursework (one-on-one learning sessions, library, computer room)”.

Specific facilities referred to by students included library facilities, study facilities, sports facilities, IT facilities, student support centres and science facilities. This also extended to provision of facilities that aid students with experiments and practical aspects of study. The role played by these facilities in enhancing learning opportunities and reducing stress was noted by some students.

2019

“<Institute> has lots of libraries and workshops to help with exam stress and managing our workload.

“Tutorials are a great way to ask questions etc without feeling pressure in a lecture hall, there are always student support centers available that offer help with every problem you can possibly think of.”

“Provides a variety of facilities to encourage learning of tough subjects.”

2020

“The college has an excellent library with great facilities to encourage students to study in a quiet environment and provide lots of facilities like computers and books to help students complete course work, study and assignments. There are study rooms to allow students to get together and help each other understand work and get projects done in a helpful environment which benefits everyone.”

“Provide facilities to experiment with practical aspects of study.”

“Provides ample facilities to aid our research and learning and provides a skill centre to help us in anything we might need.”

“Good facilities like the library and good relaxation spaces encourage learning.”

“Plenty of activities outside of class and plenty of facilities around the college that reduce stress.”

Availability of facilities

Students also referred to the availability of facilities outside of class hours and the encouragement provided to avail of these facilities.

2019

“Library is open late most days and is encouraged that you go there to study.”

“Keeping the college labs and library open late.”

“They encourage use of facilities such as mac labs, photography studio, camera equipment outside of class time. They keep all information on Moodle and are good at engaging via email when needed.”

2020

“Great facilities are available to learn independently outside of class time.”

“Tutors encourage reading in our own time and to avail of the library and Curve facilities if necessary.”

“Provide the facilities needed to allow students to learn while encouraging them to use them.”

This study concurs with Han *et al.*, (2018) who found that the physical conditions of the classroom such as ambience, spatial layout, and functionality significantly enhance student engagement.

Online facilities

The quality of e-learning facilities was also emphasised by students. Comments referenced the accessibility of online facilities, and the subsequent positive impact on learning. This was also referenced in the context of distance learning.

2019

“My institution provides easily accessible online learning facilities such as <VLE>. This is very user friendly and makes accessing coursework and materials more organised.”

“I find the online course very well structured with good resources (moodle, office 365) and a great selection of engineering software to experience. Some great online lecturers that really present the information in a way that is engaging and useful for a distance learner.”

2020

“They have done a lot to make our online facilities very accessible, easy to use.”

“They promote use of the library and online facilities to help with your learning and make it easier for students.”

“The online facilities are set up very well for distance learning. The lecturers are well prepared and the direction is clear.”

The *environment* provided by these facilities was also prevalent in qualitative responses. Notably, it emerged that students felt their Institute provided an optimal learning environment.

Friendly environment

Students drew attention to the ability their Institute possessed in terms of creating a friendly environment. This was achieved through the facilities themselves and staff within them.

2019

“Comfortable learning environment. Modern buildings and approachable lecturers.”

“Welcoming friendly environment where everyone is extremely helpful and understanding”.

“A friendly environment, staff are willing to help. Staff will do as much as they can for you.”

2020

“An open and encouraging environment.”

“Learn in different ways in a relaxed environment.”

“Comfortable learning environment. Modern buildings and approachable lecturers.”

“It creates a friendly environment as well as offering lots of different kinds of help to the students to assist them on their path.”

Safe environment

Interestingly, it emerged that several students felt their respective Institute created a safe learning environment.

2019

“The institution provides a safe learning environment, with engagements between students and lecturers about course information and events occurring often, as well as engagements between students themselves.”

“Provides lessons and perspectives from some of the top minds in their respective fields. Provides a safe and enjoyable learning environment.”

“This institution provides a safe learning space where everyone feels included and feels as though they belong.”

2020

“It creates a safe and enjoyable environment”

“It allows a safe place to voice your opinion.”

“Provides a safe and encouraging environment.”

Further, in line with the advantages provided by smaller classroom size in relation to *course structure, learning and assessment*, the relationship between small class size and the creation of a safe and comfortable learning environment was also evident. This is exemplified by quotes such as the following:

2019

“They have small tutorial classes which provide students with a safe space to express their ideas and opinions. It keeps students focused as they don't feel overwhelmed or distracted by the amount of people in the room at a time. It provides opportunities to ask questions and get feedback which is important for active learning. They use practical examples and real life studies that students can relate to thus making engagement more meaningful.”

“Small class sizes ensures everyones needs are looked after. Lecturers are extremely helpful in explaining anything you ask them.”

“Small class sizes which allow students to communicate with their teachers and other students with ease. It also forms stronger friendships within the class itself which can be critical if one starts to fall behind. It means nobody is scared to ask for help.” (cross thematic quote)

2020

“Provides a safe space to allow students to question, engage and examine through structured class sizes that are not entirely overwhelming, which can produce a feeling of becoming lost in the crowd or knock a students confidence when engaging in lectures. An intimate learning environment through both seminar discussion groups and lectures not filled with hundreds of people has allowed us as students to become comfortable and confident amongst our

classmates and academic staff. The sense of belonging to an <Institute> community has been invaluable to my learning experience.”

“The tutorial groups are small, and for the most part, they are a safe space to query ideas and express opinions.”

“Small class sizes along with providing a safe and interactive environment for learning.”

“Small number of students in lectures gives a more relaxed learning environment and I personally find it easy to speak out in class and engage as I don’t feel pressure.”

The role of staff in creating a safe and comfortable environment was also outlined. While the role of staff in creating a comfortable environment emerged from the analysis of 2019 data, it was more prevalent in 2020 findings.

2019

“Lecturers in my department take the time to offer extra help if needed and get to know each individual student. This helps with in class learning as students feel more comfortable with lecturers.”

“Creates a comfortable environment and a strong connection between lecturer and student which significantly enhances learning.

“Comfortable learning environment, the lecturer is on the same level as student making the student feel comfortable to ask questions if unsure, different learning methods also engage the students in learning by doing it online via padlet etc. Hands on approach for better results in memorising.”

“Places them in a comfortable environment with excellent facilities and kind understanding staff.”

2020

“The lecturers that are involved with their students make college a safe, encouraging place and devote a lot of time to helping students who need it.”

“I love your library and library staff, always feels like a safe place to be and study, and find a friend from class.”

“We received a lot of support from the International Office which makes us very safe.”

“Provides a safe and comfortable environment. Supportive staff who are approachable and not stand-offish to students. Fosters good relationships with classmates leading to lifelong friendships.”

This study concurs with previous studies highlighting the importance of both psychological safety and lecturer authentic leadership on student engagement and performance. The importance of having an environment where students are free to make questions, discuss their issues and receive feedback without retribute is evident in this study (Soares et al, 2017).

Active/ Self learning environment

There has been pressure on higher education providers to adjust traditional instruction practices to ensure that they are more student centred due to the changing needs of students, working life and economic and political changes (Hartikainen et al, 2019; Ditcher, 2001). The student-centred approach has resulted in enhanced student experience in student learning (Hartikainen, 2019).

Analysis revealed several additional environmental aspects that were detailed by some students in relation to what their respective Institution does best to engage students in learning. Discussion referred to features such as the facilitation of an active learning environment, self-learning environment and one that prepares students for placements and the real-world. Additional words employed to reference the environment created by students' Institutes included 'collaborative', 'friendly', 'engaging', 'happy', 'healthy', 'fun', 'informative', 'respectful', 'warm', 'welcoming', 'inclusive', 'interactive', 'intimate', 'organised', 'supportive', 'positive', 'relaxed' and 'team-based'.

2019

“It creates a friendly and welcoming environment which supports self learning and learning coursework.”

“Provides clear course materials in line with syllabus, facilitates relaxed classroom environment with discussion welcomed.”

“A warm atmosphere for learning is provided in a non-judgemental atmosphere. Extremely knowledgeable lecturers combined with their own personal approachability.”

2020

“Encourages the use of self-learning and provides the resources to do so such as the lab notes as well as academic staff providing help in labs and lectures when needed.”

“Ask questions frequently and hold group discussions to discover answers in a self learning environment.”

“Creates a healthy and respectful environment.”

“Treating students as equals which allows for a relaxed learning environment and a great deal of understanding from lecturer and other staff members with any issues or problems students may be facing inside college as well as outside of college.”

It is evident that many students feel their Institute excels in terms of the academic and social environment they have created - one that allows students to excel in a comfortable, safe and healthy space. Classes provide an environment where active learning and discussion occurs in a student-centred manner. Tutorials and small class size aids in the creation of an intimate learning environment, within which students can solve problems and excel. The high standard of staff aids in the creation of such an environment.

Staff role in creating a learning environment

The teaching and learning experience in higher education is changing. In the past years, we assisted a change from a purely lecture-based teaching to a more participative approach. The engagement of students and staff effectively as partners in learning and teaching is one of the most important issues facing higher education today (Healy *et al.*, 2014), some students highlighted this in their responses.

2019

“The use of active learning environment rooms and student led tasks during the smaller lectures/tutorials.”

“<Institute> provides an environment that is both academically and socially inclined. I find myself well engaged with and constantly learning new things while taking part in interactive class activities or different societies at <Institute>.”

“There are no barriers between lecturers and students, students are free to query and seek advice in a very friendly and open environment.”

2020

“The use of active learning environment rooms and student led tasks during the smaller lectures/tutorials.”

“<Institute> provides an environment that is both academically and socially inclined. I find myself well engaged with and constantly learning new things while taking part in interactive class activities or different societies at <Institute>.”

“There are no barriers between lecturers and students, students are free to query and seek advice in a very friendly and open environment.”

Online Environment

Analysis also revealed that the quality of e-learning facilities presented in relation to the theme of *course structure, learning and assessment*, resulted in some students commenting about the positive, interactive, online learning environment created by their Institute.

2019

“Interactive online learning, open environment to ask questions and participate during lectures.”

“I have found my course very engaging, and extremely well put together, however it is an online course so a very different environment.”

“The online platform, <Institute platform>, is the easiest and faster way of communicating with academic staff and tutors. I feel comfortable enough in asking questions and have my doubts cleared so that I can concentrate on my performances on writing assignments and revising course material.”

2020

“Interactive online lectures and interesting group work/discussions during residentials.”

“Really interactive online platform.”

“Interactive online classroom sessions.”

“It provides online lectures and resources that allow students to continue their learning experience away from the university.”

Variety of events

Contributing to the positive environment experienced by some students, is the availability of events, both academic and social. The variety of events available act as a means of allowing students to become more immersed in student-life and enhance learning and relax when necessary.

2019

“There is a lot of social events which connect to courses and it is good for students to get out and interact as well as learn.”

“They hold different events throughout the academic year to encourage students to get involved in activities to mix with other students.”

“The <jobtitle removed> sends weekly emails to remind us of upcoming events that will help us with our coursework and development.”

2020

“Keeps motivating students and conducts many social events to balance studied and social life.”

“Lots of networking events and events where we are addressed by world-renowned intellectuals.”

“Classes are usually very interactive and institution has lot many interactive social activities to offer through several Clubs, events, tours, etc.”

“There’s a real sense of community in the college as there is constantly events on for people to get involved and more interested in learning.”

Student relationships

A number of student relationships emerged as being perceived at that which the Institute does best, namely lecturer-student relationships, staff-student relationships, students-student relationships and support staff-student relationships. The nature of these relationships is exemplified in the following discussion.

Lecturer-student relationships

Student engagement can be defined as the interaction of students' in-class with other learners and instructors (Kelly *et al.*, 2010) and with associated learning materials, which may sit out of class time. The importance of student engagement in the learning process is seen as of utmost importance in teaching strategies. Studies have found that when this occurs, there is increased student engagement in the learning process (Mennenga, 2013; Bouterie Harmon and Hills, 2015; Whittaker, 2015). Students specifically referred to student-lecturer relationships, detailing that they were strong, fostering more engaged and open relationships. The subsequent impact on learning is evident. Comments referred to the tendency for lecturers to extend extra effort in developing relationships with their students.

2019

“The lecturers have a great relationship with the students.”

“Even though we are only first years lecturers regularly stay behind and help when asked.”

"<Institute> provides a great learning experience due to its small classroom size. A student does not feel intimidated to ask questions and part take with others as everyone knows each other by name and quite well. The relaxed relationship of lecturers who refer to be addressed by their first name also make the learning experience very free flow and more like an open discussion."

2020

"There is a relationship with the students, the lecturers don't just dish out info they ensure we understand and are willing to help if we don't".

"The lecturers actually seem to care about us and get to know us. We have a good relationship with them so we engage more."

"<Institute>, and in particular the lecturers and wider staff on the <programme name> programme, know that we come from diverse backgrounds, varied work experiences and different career paths / trajectories. They work to make the learning relevant to all of us and they tailor the needs to the individual which is incredible and makes you feel so listened to and encourages learning to the highest standards."

The extra effort expended by lecturers in developing strong relationships is evident and appreciated by students. Some students also referred to the standard of the staff within their Institute, addressing the positive impact of these standards on their learning experience.

2019

"Very well organized practicals in the course. They quickly and practically prepare us for applying the work in a meaningful way and are generally well taught and presented. Furthermore the lecturers are almost all of a very high standard, with in depth knowledge of their subject and often encourage participation and engage with the students who do very well."

"Has a high standard of tutor staff who encourage learning in a fun and dynamic way."

"Excellent teaching standards."

2020

"<Institute> has a very high standard of lecturer that communicate very effectively."

"High standard of lecturers/educators who are approachable."

"Provides an excellent standard of lectures and tutorials with academic staff who really care about helping students understand and improve the world they live in by teaching them how to think."

"Good communication between students and academic staff. Informative on why we are covering certain topics. Challenge your thinking causing you to think outside the box and have fun and experiment with ideas why I also producing work to as close of an industry-standard as we are currently able for."

Moreover, in line with the advantages provided by smaller classroom size in relation to *course structure, learning and assessment* and *facilities and environment*, the impact of small class size on *staff-student relationships* was evident.

2019

"The institute offers a welcoming environment for students and due to smaller class sizes it is easier to engage with lecturers and other students which enriches the overall experience of learning here."

"Have small classes and staff learn our names and know us personally in <school>."

"Smaller class sizes provides a much more intimate and concentrated relationship with the lecturer. This makes it much more easier to approach the lecturer and ask questions."

2020

"Smaller classes so the lecture knows you and creates a relationship."

"Small class sizes as opposed to a university. This makes it a lot easier to ask questions and less daunting to approach lecturers. Lecturers form personal relationships with

students here and show they have a genuine interest in seeing you do well. They motivate you and provide guidance to allow you to progress further.”

“Small course numbers allow a more intimate student/staff relationships. Allows greater learning and feedback systems. Lecturers get to know students on a personal level and can give specific advise and criticism rather than general reports.”

It is evident that the strong relationships with their lecturers has many benefits for students. Students feel more comfortable in the class environment, asking more questions as a result. In addition, students expressed the ability to voice their opinions, greater flexibility, more enjoyable classes, greater ease of learning, extra assistance when necessary and greater involvement.

2019

“Excellent student-lecturer relationship; leading dynamic debates; providing collaborative and active learning (using videos, guest lecturers); boosting students' confidence.”

“Lecturers ensure excellent relationships with students which encourages effective communication and therefore better motivation.”

“Get to know the student and build relationships with us to make learning and asking questions easy.”

“Lecturers help students with projects, give them advice and offer assistance when needed.”

2020

“Lecturers interact well with the students and always listen and take our opinions into account.”

“Lecturers make an effort to help and are quite understanding when it comes to being flexible in some circumstances.”

“Some lecturers make it enjoyable to come to class and make it easy for us to learn.”

“Lecturers come up with very new and creative ways to involve students and getting them to engage in learning.”

Staff-student relationships

Comments revealed that students felt that staff-student relationships were an area in which their Institute excelled. Many students referred to staff in a general manner, illustrated by the following quotes:

2019

“Provide personal attention to each student.”

“They go to great efforts to make sure everyone is cared after and if someone is in need of help they will go out of their way to help/provide support for the problem.”

“They are constantly helping students with problems they face on a daily basis.”

2020

“I feel they take the time to assist and go out of their way to answer questions we don't understand. There seems to be genuine care taken.”

“Personal attention to each student, when you have a problem the staff do their best to make you feel listened to and help you solve it.”

“Use very professional staff who I always feel have my back as a student in their institution while maintaining the highest professional and ethical standards of the institution.”

Some comments also revealed the relationship students felt they had with their campus, School or Department as a whole.

2019

“My department is small, and the close personal relationships I have built with my lecturers have really sparked a desire for knowledge and personal growth within me.”

“There's a level of intimacy within the <Institute> campus, allowing academic staff to encourage the language of learning to be filtered into casual conversation. Lecturers are approachable. The environment must be welcoming in order to capture the learner's attention, and I believe that through sheer love for their subject as well as a welcoming learning environment (ethos of college and lecturers) that students will completely engage in the learning experience.”

“Smaller class sizes as you progress through college and specialize further encourages a sense of communal learning. In my department especially, we learn as much from each other as students as we do from lecturers, and lecturers encourage this. There's also strong alumni connections and it's made very clear how what I learn will be used in future careers.”

2020

“Everybody in my department genuinely care about their students and encourage them to succeeded.”

“There's a level of intimacy within the <Institute> campus, allowing academic staff to encourage the language of learning to be filtered into casual conversation. Lecturers are approachable. The environment must be welcoming in order to capture the learner's attention, and I believe that through sheer love for their subject as well as a welcoming learning environment (ethos of college and lecturers) that students will completely engage in the learning experience.”

“Smaller class sizes as you progress through college and specialize further encourages a sense of communal learning. In my department especially, we learn as much from each other as students as we do from lecturers, and lecturers encourage this. There's also strong alumni connections and it's made very clear how what I learn will be used in future careers.”

Student – student relationships

As indicated by a small number of comments, the intimate environment created by their respective Institute also fostered stronger relationships among students themselves. Comments were more evident in the 2019 data set.

2019

“The classes and groups are small enough to allow lecturers to students and students to students to form a relationships, therefore not being afraid to ask questions.”

“Smaller class sizes so you can build more of a working relationship with your lecturer and get to know the students more in your class so its easier to participate in class and ask for help if required.”

“Smaller class sizes as you progress through college and specialize further encourages a sense of communal learning. In my department especially, we learn as much from each other as students as we do from lecturers, and lecturers encourage this. There’s also strong alumni connections and it’s made very clear how what I learn will be used in future careers.”

2020

“Provides a safe and comfortable environment. Supportive staff who are approachable and not stand-offish to students. Fosters good relationships with classmates leading to lifelong friendships.”

Support staff-student relationships

While many comments were those in relation to the lecturer-student relationship, some comments did specify other staff members within the Institute.

2019

“Excellent quality of teaching on my course, there are a plethora of helps available via the student union, pastoral care, admin and teaching staff at students finger tips - all supported and informed via a really efficient and caring student union.”

“There are many facilities available for both full time and part time students, such as the academic writing centre, where students can visit and look for support with various assignments. Our library staff are extremely friendly and will assist in the research process.”

“Lecturers and support staff are very helpful and very approachable. We are blessed that our lectures are located within the building where our school is. That way we meet staff and can talk to them or more they talk to us which ensures that there are no communication issues. We also are encouraged to ask questions and give opinions.”

2020

“Having Expert Passionate Lecturing staff back up by a wonderful Chaplin, Sports officer and certain admin staff team members.”

“The library staff are amazing for their enthusiasm and workshops to get student engagement. They put in so much effort and it doesn’t go unnoticed.”

“Full Support from all staff (Lecturers, Library staff, admin, Health) everyone. This matters when your disability impacts on your ability to fully participate.”

As evidenced in student comments, this extended to staff such as administration, library, students union, sports, health, pastoral and support staff, leading to the final theme of *student support*.

Many studies have reviewed the importance of student engagement in educational settings (for example, Bakker et al, 2015; Jang et al, 2010). The belief is that the level of relationship quality is closely aligned to the educational experience of the students and the better the experience, the more engaged and more beneficial these relationships are. Retrospectively, this can positively influence student’s involvement in academic, social and extracurricular activities. Kim and Lundberg (2016) found that student-faculty engagement results in greater levels of classroom engagement. This research supports these studies and further supported Connell and Wellborn (1991) by acknowledging the importance of a positive relationship with education faculty and staff across the institutes.

Student support

Student support services are seen as an economic benefit for students and HEIs have been developing these supports further in recognition of this (Lee *et al.*, 2016). Students are more likely to use support services when their access is made easier (Ebert et al, 2021) The quality and availability of the supports provided by their Institute were referenced consistently by students as to what their Institute does best to engage students in learning. Key areas highlighted in this section include academic supports, student services, the International office and communication strategies employed.

2019

“It provides its students with excellent support services to ensure that they can perform to the best of their ability.”

“Offering academic support services outside the classroom.”

“They best engage by having multiple support services for the students.”

2020

“Provide a number of support services that are always available and easily accessible.”

“Support services for mature students are excellent.”

“Plenty of support services are provided for struggling students.”

Academic supports

Numerous academic supports were addressed by students. Specifically, students referenced supports such as the library, the access office/ learning centres, the willingness of staff to hold extra classes when necessary and extra support for International students. Student services including the student union and medical services were also highlighted. As table 2 depicts, analysis of 2020 data saw the inclusion of terms including “mature support”, “student support” and “support centres”.

Library

When discussing the library students referred to supports such as information workshops and resources, opening hours, staff, working space, computer access and online resources.

2019

“Having so many workshops available in the library during the year to help teach students how best to learn.”

“Library for studying is open 7 days a week, and wi-fi is always work well.”

“The laptops in the library are a great idea.”

“<Institute> provides students with an online library. This helps students in doing their home works and researches. There are lots of course materials provided which stimulates students to easily carryout their courses assignments.”

2020

“The library resources and online accessibility for papers/journals.”

“Have great library opening times especially coming up to exams and offers rooms to do group work on campus. It also offers a number of non course related talks and courses to broaden ones knowledge on a number of topics.”

“For me, the library is fantastic and helps to enable engagement in learning by offering access to a huge range of databases, collections etc and providing an efficient and easy to use service.”

Academic Support Centres

When discussing academic support centre services, students referred to supports such as access office, academic writing, study, maths, science, language and referencing.

2019

“Learning support services.”

“Support from staff is available when required. Information is available for the access office. I have not had a negative experience since commencing college.”

“Outside of lectures, there are regular classes and workshops that are free to all students E.G Math's learning centre, creative writing classes, referencing workshops etc.”

2020

“Academic supports in Writing Centre, Science Centre, Maths Centre etc.”

“Give international students some language support.”

“Academic writing staff are brilliant and employ lecturers that have previous experience working in the field.”

“A wide variety of support services e.g. career services, scholarships and employability programmes.”

Some comments pertaining to what their Institute does best to engage students in learning also noted the extra supports provided to students in terms of classes, services and materials to facilitate learning.

2019

“Staff are willing to hold extra classes as and when the students need extra support.”

“Provides extra tutorials for students to help them through areas they are experiencing difficulty in.”

“Providing ranges of extra materials for different perspectives on topics.”

2020

“Assign extra classes to complete assignments.”

“Provide extra classes with lecturer to discuss the topic that you not fully understand.”

“Lecturers that care about our futures that go the extra mile to explain something or give extra classes to help us understand complex subjects.”

“Upload extra reading materials on moodle.”

In line with the benefits provided by online learning in relation to the themes *course structure, learning and assessment* and *facilities and environment*, the support provided by online learning is also evident.

2019

“Provide a lot of online material for home research.”

“Online support classes for difficult subjects.”

“Online support is great. I am an online student.”

“Having online service of blackboard is a great help to engage students in relation to online discussions.”

2020

“Online supports for distance learning.”

“Very good lectures and excellent online support.”

“Online supports in terms of reading and research materials is very good.”

“Additional support outside of lecture hours through online support/tutorials.”

Support for International Students

Supports for International students were also addressed in student comments.

2019

“Give international students some language support.”

“I think that <Institute> has done a very good job in providing additional supports for foreign students which include English and SPSS support. These supports were essential for our Dissertation paper.”

“The staff helped a lot not only in coursework but also in final year project. Besides, institution provides academic English class and writing center for international students which is really helpful.”

2020

“We received a lot of support from the International Office which makes us very safe.”

“International Office has provided a great extent of help for foreign exchange student.”

Student Services

The support provided by the Student Union was also addressed by students. The regular communication and approachability of the union was noted by some.

2019

“The Students Union make a lot of efforts to engage students through events, workshops and training as well as just having a great presence on campus.”

“The students union are very vocal, involved and helpful.”

“Students union provides a voice for the whole student body.”

“The Students Union provide a voice for us as students and allow us to come to them with problems we may have.”

2020

“The student union are very good at trying to get people involved in all aspects of college life which is great.”

“Student Union do a great deal of encouraging and advertising supports.”

“The Students Union make a lot of efforts to engage students through events, workshops and training as well as just having a great presence on campus.”

“The students union make you very aware of all the ways in which you can get help with your academic work and hold work shops.”

Additional support services that emerged from analysis related to careers, disability, counselling, and health services.

2019

“Provides and promotes counselling/disability and education services.”

“The careers office and the help they provide.”

“It provides many support services that are open to all full-time students such as learning support, counselling and medical services. This caters to any issue a student may have in order to allow them to work to their full potential. Lecturers are also willing to help students and direct them to these services if needed.”

“The health services are easily accessed.”

“It provides all round supports academically, socially, financially, physically and from a mental health point of view.”

2020

“Has good supports for disability students which helped me as a disability student to learn at ease.”

“Provides and promotes counselling/disability and education services.”

“The counselling service provided by the college is excellent and has helped me stay in college when otherwise I might have had to drop out due to difficult circumstances.”

“It provides many support services that are open to all full-time students such as learning support, counselling and medical services. This caters to any issue a student may have in order to allow them to work to their full potential. Lecturers are also willing to help students and direct them to these services if needed.”

“Providing external supports for academic writing, mental health, physical health and well-being.”

There is a wealth of studies investigating the relationship between student support facilities, student experience which lead to student satisfaction (for example: Petruzzellis *et al.*, 2006; Arambewela *et al.*, 2005; Thomas and Galambos, 2004).

Communication strategies

A number of academic and non-academic supports were addressed by students. In addition, comments referred to the effective communications informing them of these supports.

2019

“The College itself and the students union are very active on social media, providing details of extra workshops or academic skills courses available.”

“Different services have a strong social media presence e.g. The Careers Service. Having a strong social media presence is very beneficial to students and effective in communicating ideas/knowledge/services etc.”

“Lots of support services for Maths, science, and writing, which we are encouraged (receive regular emails regarding these services) to use.”

2020

“Contact students with supports via email.”

“Sends out informative emails about seminars taking place.”

“They have a wide variety of learning support groups on offer. For example writing centres, maths support groups. And many more. We receive regular emails about such activities and are encouraged to avail of any help we require. Anything we struggle with there is always someone to help in <Institute>.”

“The College itself and the students union are very active on social media, providing details of extra workshops or academic skills courses available.”

“Different services have a strong social media presence e.g. The Careers Service. Having a strong social media presence is very beneficial to students and effective in communicating ideas/knowledge/services etc.”

‘What could your Institute do to improve students’ engagement in learning?’

In line with the analysis of the data pertaining to the question ‘What does your institution do best to engage students in learning?’, data relating to the question ‘What could your Institution do to improve students engagement in learning?’ was analysed utilising the same approach. Initial coding to the 2019 data was performed using NVIVO. Initial themes and an associated codebook were developed. These initial themes provided a means whereby text could then be assigned to codes. 2019 and 2020 initial codes are presented in figures 4 and 5. Again, these general auto code theme results acted as an important guide in theme refinement. The auto code theme and their associated nodes revealed the terms most frequently employed in student discourse (see Appendix 1.2).

Using manual analysis to sift through the data and formulate final themes, six key themes emerged from analysis of this question; ‘teaching methods’, ‘supporting learning’, ‘assessment’, ‘facilities and environment’, ‘student relationships’, and ‘student support’. The sub themes that also emerged are listed below in table 4. In this section, each of these themes are sub themes are discussed in turn.

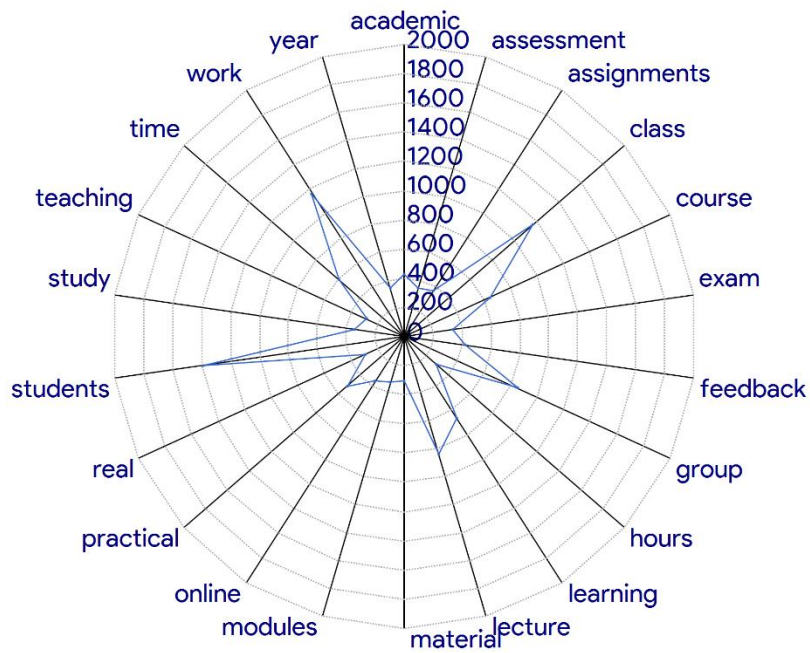


Figure 4: 2019 Auto code themes generated using NVIVO

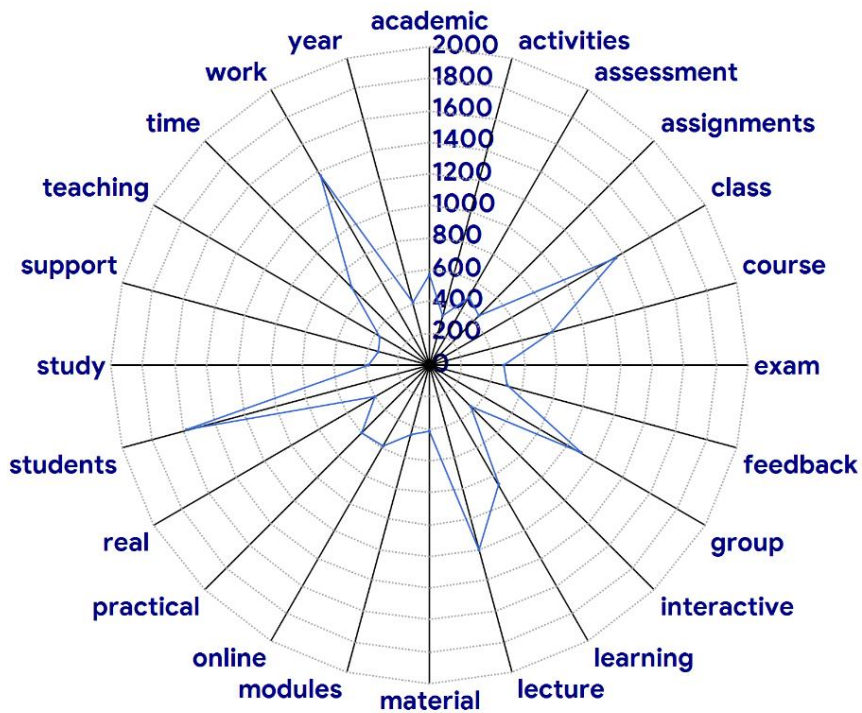


Figure 5: 2020 Auto code themes generated using NVIVO

Table 4: 'Improve' emerging themes

Teaching methods		
	Teaching pedagogies	
	Practical content	
	Use of technologies	
	Online teaching technologies	
	Lecturer's approach	
	Content	
	Online resources	
	Standard of lecturers	
	Class size	
Supporting learning		
	Alignment of content and learning outcomes	
	Make learning fun	
	Group work	
Assessment		
	More continuous assessment	
	Make learning fun	
	Group work	
	Reduction of work load	
Facilities and environment		
	Range of facilities	
	Promotion of the available facilities	
	Utilisation of online facilities	
	Active learning environment	
	Psychological safety in the classroom	
	Smaller class sizes	
Student relationships		
	Lecturer – student relationships	
		<i>Influence of class size on lecturer-student relationships</i>
		<i>Individual lecturer-student relationships</i>
	Staff- student relationships	
	Student- student relationships	
Student support		
	Academic support	
		<i>Extra classes</i>
		<i>Library services</i>
		<i>Other academic supports</i>
	Induction	
	Support for international students	
	Student Services	
		<i>Mental health supports</i>

Teaching methods

Student comments in relation to what their Institution could do to improve students engagement in learning illustrated a number of statements made in relation to *teaching, learning and assessment*.

Teaching

Teaching pedagogies

Comments revealed that students felt *teaching* could be enhanced in different ways, from greater use of a flipped classroom model, practical teaching approaches, real-world application, interactive techniques, modern teaching methods and innovative teaching approaches such as using the students a year ahead as class aides.

2019

“It could provide more practical ways of teaching rather than just lectures.”

“More interactive elements in teaching. Like videos/talks/guest speakers etc.”

“More interactive class, more group discussions to ensure everyone is up to speed.”

“The classes could be a bit more workplace focused. Some of the teachings are not the real world, I think if the teachings are real-world students would benefit more.”

“Have more practical class to further explain subjects, have students of a year above explain the subject so students can have a more relate able person that has done the subject but isn't a professional and been teaching the subject for years.”

2020

“More flexibility in delivery of content and more flipped classroom style learning.”

“Introduce different kinds of teaching methods.”

“Switch teaching method from standard PowerPoint presentations to much more in class activities and team work based activities.”

“Better focus on real world applications for what we're learning so we can see why we are learning what we are learning.”

Practical content

The role of practical content and classes was stressed by numerous students as a means of improving student engagement in learning.

2019

“Ensure learning is linked to practical elements of the work environment in which students will be employed after the completion of their studies.”

“Some of my lecturer just read of power points full of notes, we as students can find this boring so maybe if the lecturers created more practical work to get us more involved in class there would be better engagement, it’s a better way to learn instead of memorizing pages of notes.”

“More practical learning experience. We just get to sit down all day and listen to the lecturers talk or take in assignments. We need to be engaged practically, in doing so we would also gain knowledge needed for the work place.”

2020

“Improving the practical aspect of an abstract course alongside the theory.”

“Have more practical learning instead of rote learning for exams, base more on skills acquired than ability to memorise.”

“Teach more practical real life applicable material.”

“Provide more practical classes to follow up after theory classes.”

Use of technologies

Additional comments revealed that students also felt the use of technology in teaching was something their Institution could do to improve students’ engagement in learning

2019

“New teaching styles and use of technology.”

“Change modules content and structure! Use of technology as primary teaching tool!”

“Some subjects which are teaching computer programme's are taught in a lecture hall, which should be taught in front of a computer. Some things in my course like learning Avid and script writing should be learned from the get go.”

2020

“Technology used in class is very behind and not practical or useful.”

“Use interactive technology during lectures.”

“Technology is advancing and as a result, new students seem to have a different way of learning from traditional methods. Adapt to best reach them.”

Online Teaching Technologies

Some comments illustrated the use of technology extended to the area of online teaching. This was more evident in 2019 discussion.

2019

“Use of technology for online learning and interaction could be improved radically.”

“Have more live lectures for students online. One or two evening in a term isn't sufficient for an online course.”

“I partake on an online course and for me I think allowing students to be more interactive vocally while on line would improve the overall experience.”

2020

“Improve the online platform, Blackboard is not very user friendly.”

“Again being an online student, a suggestion would be to make both the Moodle services less cumbersome and to really clarify the access to online learning materials from the students library.

“More online resources - books online for distance learning.”

“Regarding the online course, maybe increase the number of live lecture.”

Lecturer's approach

Notably, discussion also revealed that students felt their respective lecturers could demonstrate a greater degree of organisation and interest in relation to their modules.

2019

"Lecturers need to be more organised in their teaching and more engaging in class. I find a lot of them skip slides of their slides aren't in order therefore making it impossible to learn points in the correct order for answering exam style questions. They also need to clearly lay out what type of answer styles they expect in exams as many of them do not and you end up with a bad mark when you think you've answered correctly."

"In some subjects, the course material could be presented in a more constructive manner, as well as, providing proper sources of information."

"More enthusiasm on the lectures when teaching."

2020

"Be more organised with course content and communicate assignments clearly."

"If lecturers had a more enthusiastic and supportive approach, all lecturers should have notes available that are easy to follow."

"Passionate teachers about the subject they are teaching."

Content

In addition, some students felt the teaching material used by their lecturers could be updated and related to the working world to a greater degree.

2019

"Re-vamp old course material and make better use of tutorial and seminar time."

"More interaction with students and more updated course material that can be applied in the real work world."

"Relating course material to real world situations."

2020

“Update some course content.”

“More career focused modules.”

“Real world examples of coursework that is relevant to every day problems.”

Online resources

The provision of online resources was also noted by students.

2019

“Provide more online resources in certain modules.”

“By ensuring online resource for all modules to make it easier for students that are commuting to catch up on work, should they miss a lecture due to public transport issues.”

“I think the online resource management is poor, and many of my fellow classmates agree.”

“Better online resources, online quizzes and supplementary work.”

2020

“The academic staff could use the online resources, i.e. <virtual learning environment>, more to connect with students and put more readings/materials online.”

“More online resources for modules.”

“More interactive online resources.”

“More online resources to elaborate on notes.”

Standard of lecturers

Finally, comments extended to the standard of lecturers employed to teach. Some comments referred to consistency in standards, while others alluded to necessity to enhance the teaching skills of staff.

2019

“Improve teaching skills of some staff.”

“Maybe examine the teaching ability of a few lecturers.”

“Well, in my opinion, not every lecturer teaches the same, some are very good and some are lacking in teaching skills.”

“Teaching staff should improve teaching methods.”

2020

“Proper evaluation of staff and their teaching abilities as some lecturers have poor teaching skills which drastically impact on my success in university in a negative way.”

“Review some lectures teaching skills.”

“Improve the level of teaching or teaching support.”

“Some professors are poor in teaching quality.”

Some comments in 2019 analysis also referred to the qualifications possessed by academic staff, highlighting that staff should hold a teaching qualification.

2019

“Implement mandatory teaching qualifications before allowing staff into teach a class.”

“Improve classroom teaching skills. All lecturers should have an adult teaching qualification Highly knowledgeable professors who have know idea how to deliver information to students to facilitate learning is a complete waste of time.”

“Also, when staff are brought in part-time there should be proper checks done on their teaching ability. They may be excellent in their qualifications but very poor in communicating the knowledge to students.”

This was not as directly prevalent in 2020 analysis. However, as evident in previous statements, the quality of teaching standards was discussed. This is also evident in comments such as the following:

2020

“They seem to hire industry professionals as teachers which is great to an extent in that the individuals understand the field. They should focus more on people who have good teaching experience because I find an awful lot of the quality problems within this course come from the teachers not being able to plan lessons / coursework effectively. In my experience so far, I've had to go and teach myself most of my course work from online resources. Better teaching quality would make a huge difference.”

The findings correlate with recent studies that found that teaching staff must organise content and teaching pedagogies in line with the new modes of delivery. This results in students feeling less isolated in the learning process (Aristovnik et al, 2020). An emphasis on enhancing lecturers' skills and knowledge also falls under this domain and further corresponds with the findings of this survey.

The effectiveness of online learning depends on the designed and prepared learning material, the lecturer's engagement in the online environment, and lecturer–student or student–student interactions (Sun, 2016 and Bao, 2020). This study clearly highlights the same argument.

Class size

Students also felt smaller class sizes would improve student engagement in learning.

2019

“Have teachers who make a priority of including/hearing from all class members in small classes e.g. tutorials.”

“Could improve by adding more small classes instead of whole-course lectures.”

2020

“Reduce class sizes to promote interactivity maybe?”

“Smaller group work, class sizes are frequently too big to facilitate meaningful discussion.”

“Smaller class sizes would improve students’ engagement in learning.”

Supporting Learning

Comments demonstrated a clear link between teaching and *learning*. Discussion denoted the value of employing a variety of teaching approaches to facilitate learning.

2019

“Listen to students and try different teaching techniques as everyone learns differently.”

“A more diverse teaching method, including videos, practicals etc, as each student learns differently and I feel a lot was reading rather than videos and demos and presentations that I feel I would learn better from.”

“Ask them what they would like, or in lectures a number of learning methods could be utilized to get the point across to engage more with students. It’s not all about standing at the top of a room reading from a PowerPoint.”

2020

“Provide better tutorials and variety of learning techniques.”

“Diversify the learning techniques.”

“Law lectures engaging in more diverse teaching methods i.e class participation problem questions, moot court, teaching videos etc.”

Additional approaches recommended as a means of facilitating learning included providing class material in advance of class, ensuring adequate time and attention is paid to ensure students understand content. Comments also referred to peer-based learning and approaches to facilitate learning outside of the classroom.

2019

“Put up the slides on moodle before the lecture. Everybody has a different learning style and this has more options to improve their engagement.”

“Encourage more peer-based learning.”

“Outside of class learning i.e site visits, attend events.”

2020

“More time for practicing skills.”

“Encourage us by being a support and making sure we understand the work rather than giving us material and not following up on how we found it.”

“More peer to peer learning, higher focus on project based learning. Less lecturer-focused learning.”

“Promote more visits to companies.”

Alignment of content and learning outcomes

A small number of students referred to learning outcomes referring issues such as the need for greater clarity, relevancy and cohesion between learning outcomes and course content.

2019

“More clarity in learning outcomes.”

“Have clearer and more relevant learning outcomes.”

“The description of the learning outcome not always match what is taught in the course.”

“Better communications....There's lots of paper handouts at the beginning of each semester with subject learning outcomes and CA's etc but these are not uniform, there is a lot of unnecessary information in them. They could be laid out much clearer and make it easier to understand from the outset.”

2020

“More clearly organised lectures, precise learning outcomes, more past questions.”

“Modules could have clearer learning outcomes.”

“More clearly defined learning outcomes in all lectures.”

“Increase the emphasis on learning outcomes and let us have access to more detailed notes.”

Make learning fun

Students also noted they would appreciate efforts to make learning more fun. The use of techniques to achieve this included practical activities, quizzes and tests.

2019

“Make the class more fun or entertaining instead of just sitting in a class from 9-4 without breaks.”

“Make learning more fun and active. It is hard to pay attention at times as we receive so much information at once.”

“By providing a fun way to learn such as multiple choice quizzes.”

“Some modules can be quite boring in terms of how teaching material is presented to students. More practical examples and illustrations make things easier to understand. I think it would be helpful to have tutorials in final year as I do not have these this year and I think they would be good to ask questions.”

2020

“Make lectures a bit more fun somehow.”

“Some lectures are quite boring, so maybe if those classes were made more enjoyable and interesting and take a different approach that would be good.”

“Make classes or tutorials more fun and use more real life examples when teaching.”

“Make the lectures more interesting by maybe having less intense powerpoints that have lots of writing on them.”

Group work

Interestingly, there were varying opinions in terms of group work and discussion as a facilitator of learning. Some felt a greater amount would enhance learning, while others felt less group work was necessary.

2019

“More group conversations.”

“More group work throughout different years.”

“Less group work.”

“Less group work, less pressure to speak in class, I find group work very ineffective and rather a waste of time.”

2020

“Introduce more group work into lectures.”

“More group discussions.”

“Do more group activities in some subjects especially the more difficult ones.”

“Less group work.”

“Less group work - it can cause social anxiety, alienation and discord between group members.”

Assessment

Assessments were outlined by many in relation to what their Institution could do to improve students engagement in learning. Clear explanation of assessments was noted by students.

2019

“Outline what the assessments involve from the outset and be more organised in their teaching.”

“Varied teaching methods, clear explanations of assignments and more detailed information on assessments beforehand and feedback on assessments.”

“Provide detailed feedback on submitted assignments. Provide clear outlines on what is required for each assignment. Clearly outline due dates at the start of the semester.”

2020

“Being more clear about assessment, expectations etc.”

“Provide clearer information on modules online and be more organised regarding assessments, due dates, etc.”

“Explain assignments to more extent, be approachable.”

Discussion indicated that students felt more practical assessments would improve student engagement in learning.

2019

“More practical assignments and continuous assessment.”

“Less focus on formal written assessment. More practical assessment (important for my course).”

“More practical assignments related to real life situations in the classroom.”

“More practical, hand-on assignments that can be applied to working situations.”

2020

“More real-life practical assessments.”

“More online multiple choice assessments or practical assessments.”

“More practical assignments linking to classroom practice/ methodology.”

“Give more practical assignments, and prep for working life. Essay writing is not something I have ever used in industry, should all be work reports/document focused.”

More continuous assessment

Discussion also highlighted that some students felt a greater degree of continuous assessment would improve student engagement in learning.

2019

“More CA work. But less group CA.”

“Include more CAs as it takes the pressure off students when it comes to exam time and it furthers their interdependent learning. Include further activities where students work as a group.”

“More CA based learning as a lot of students do not exam well.”

“More ca based projects, less written exams (memory based).”

2020

“More CAs and less exams.”

“Maybe have more CA in the course instead of mainly exams.”

“More CA, less final exams.”

“More continuous assessment and less examination emphasis.”

Some comments noted that a greater degree of continuous assessment would alleviate the high degree of stress experienced in relation to final exams.

2019

“Move to a continuous assessment approach rather than stressful 100% final exams in the <exam location>.”

“Make assessments more spread out, and have frequent ‘little’ assignments worth small percentages rather than no assignments and one large exam at the end of the year. When your grade relies just on the end of year exam it is very stressful.”

“Less focus on exams and work on continue assessment to reduce stress.”

2020

“More CA and less pressure on the final exam.”

“More CA, reduces learning by cramming at exam time.”

“Options for CA % on modules that currently don’t have CA% in over all grade as many students find 70% exam based modules very difficult and stressful.”

Group assessment

Similarly, as with group learning approaches, some students felt that a greater degree of group assessments would be beneficial while others felt less was necessary. The link between group projects and less exam weight was noted by some.

2019

“Spread assessment for modules thinner generally. By introducing more group assignments and striking a balance between exam weight and assignments, it will engage the student with more current issues related to their course. Students will find it easier to engage in these things.”

“Do more group assignment. Will help improve teamwork which is a vital skill for the workplace. Many of my assignments in final year has been sole based or 100% exam based. I think every module should have a mid term assignment and encourage continuous assessment.”

“Less group projects, however provide more information/support when doing group projects and how to deal with conflict if a person is not taking part and how to say it to them without causing a row within the group.”

“Less group CA's for part time, full time working/prof. students.”

2020

“Give more group project to simulate a workplace environment.”

“Less marks contributing to written exam where you memorise lecture slides , more marks on lab reports, presentation, exercises, research based assignments , group assignment etc.”

“Less group projects and pressure”

“Less group work and more opportunity to shine at an individual level.”

Feedback

The importance of receiving feedback in relation to assessments was highlighted by students.

2019

“More individual feedback.”

“Give more feedback on areas you are not good in so you can improve on it before the next assignment. Possibly go through the brief in a more, ensuring every student knows what they are at.”

“By giving feedback on assignments and tutorial sheets and what are the key aspects to study from the module.”

2020

“Encourage lecturers to give more feedback on grading. I would like to know areas I can improve upon. A test result on its own its not much help.”

“Give more feedback on assignments throughout the semester.”

“That lecturers are more accessible and approachable to students; willing to answer their questions and provide feedback on assignments.”

“More continuous assessment or feedback would be great to gauge understanding and progress.”

Reduction of workload

Finally, comments drew attention to the work load experienced by students. Students noted that their work load could be lessened and better organised.

2019

“Reduce the work load a bit.”

“Help students condense work load.”

“Understanding and managing the work loads of students - cross school/course coordination.”

“Realistic time frames and work load spread out more evenly, especially in final year.”

2020

“The lecturer should evaluate the amount of work load.”

“Lighten work load - this may result in a better quality of work being produced.”

“Make sure each student isn't struggling with the work load.”

“Could distribute work load more appropriately.”

Facilities and environment

Analysis revealed several comments in relation to *facilities*. General statements referred to the need for better and greater facilities.

2019

“Improve facilities.”

“Update facilities and modernise teaching methods.”

“Have more facilities.”

2020

“Provide better learning facilities.”

“Provide better facilities to keep students on campus during breaks.”

Range of facilities

More detailed comments referred to the type of facilities that students felt were required or necessitated improvement in order to improve students engagement in learning. This included class, library, study, sports, IT, student support and science facilities.

2019

“Better tutorial facilities in place to help students with a subject they are finding challenging.”

“Provide better library facilities. The library is too small for the volume of students can be stressful at exam time especially for people travelling to study.”

“I’m in the science department and the main issue is that all of our machines and equipment are old and broken and we do not get enough out of the labs.”

“More facilities .eg. sports facilities, a pitch for example, and better amenities and cheaper options for food.”

“Provision of learning support facilities.”

2020

“Better classroom facilities, very small rooms sometimes and often uncomfortable seating with nothing to write on.”

“Even more library facilities, extra learning centres where you can learn computer softwares.”

“Update some of the learning facilities on the campus, especially the classrooms used for lectures and technical subjects. Out of date computers and poor layouts prevent effective learning experiences.”

“Improve facilities for science building.”

“Definitely sports facilities and maybe student place where students can go to relax during the day.”

Promotion of the available facilities

Notably, comments referred to the opportunity to notify students of the facilities available to them.

2019

“Notify students regularly to use the facilities.”

“I feel at the moment there is very little else they can do besides more promoting of the facilities that can be availed of in the college.”

“Emphasis the extra facilities available for people struggling with adapting to 3rd level. Such as student support services.”

“For those of us who are not on campus, there should be more engagement with the college. I am not sure what facilities are available because I have only been there once a week in Semester Two. There is a library but I haven't been and I haven't been shown around it. Perhaps more engagement with outside courses (for example the <course name> course) to ensure the students know what is available to them.”

2020

“By continuing good work and making sure that facilities that are available are known to students.”

“Remind students of facilities which are available to them after first year as they may not have made use of them before and might need them as they progress through college.”

“Advertise their facilities more.”

Quality of core services, such as the lecturers teaching ability and knowledge, class materials and delivery style are central to a student’s experience level (Banwet and Datta, 2003). However, facilities have emerged in recent years as having significant impact on student’s satisfaction. This has also been highlighted in these findings. There is desired quality of higher education facilities should be constantly evolving in line with the changes with teaching and learning methods and the students' expectations (Vidalakis *et al*, 2013).

Utilisation of online facilities

Some students also outlined the necessity to use and also improve online facilities as a means of enhancing student engagement in learning.

2019

“Encourage the use of online facilitates more, I find that some students can be afraid to voice their concerns regarding an assignment but by using blogs or an online interactive system people would gain a better understanding on certain things

“Utilise online facilities like blackboard more.”

“Better facilities - computers with certain programs etc. Better place online for getting lecture notes, uploading assignments - blackboard can be very disorganised and confusing.”

2020

“The institution should ensure that all lecturers are using the online learning facilities that they've paid a lot of money for students to have. There's little point in having these if you cannot access material such as slides and course notes outside of the class.”

“Change the online learning system. It's outdated and does not notify students when new assignments are put up.”

Active learning environment

Discussion in relation to what students Institution could do to improve students engagement in learning also extended to the *environment* provided by facilities. The creation of a more engaging, open and active learning environment was noted by students.

2019

“Create an engaging learning environment.”

“Promote an open environment for error, everything takes time and the way college works is quite different to school and takes time to develop.”

“Create a more active learning environment.”

2020

“The institute could move away from rote learning into more of a fun, active, comfortable and engaging environment which would allow students the opportunity for meaningful real life experiences.”

“Make it a more comfortable environment, less pressure.”

“More interactive learning environments.”

Psychological safety in the classroom

Comments also noted that improvement could be made in relation to the classroom environment. Students desire psychological safety in their learning environment. They described the demand for the creation of a safe space and an atmosphere for learning.

2019

“Ensure all class environments are encouraging of questions and divergent opinions. Sometimes you second guess yourself or don't answer as getting something wrong is almost belittled.”

“Aim to diminish awkwardness students may feel when answering or considering to answer questions. You might want to speak but be afraid to in front of peers. Create an environment where discussions in class between student and lecturer or students and students are commonplace.”

“More welcoming environment to approach lecturers are class.”

“More enthusiastic in teaching to bring about a more comfortable environment for speaking out.”

2020

“Create an environment where it is easier to ask questions. Get lecturers to suggest that no question is a bad question.”

“Do more than just give students information, create a safe environment to make mistakes.”

“Engaging in class discussion around HRPD instead of lectures, lots of room for interesting explorations of the ideas but most students hate the class because it is lecture and research based as opposed to an interactive learning environment.”

Smaller class sizes

Student comments also alluded to the role of smaller class room size in providing an enhanced environment. Interestingly, some comments noted the value of smaller class sizes in achieving a greater degree of engagement and a more intimate learning environment.

2019

“Too big classes sizes in engineering to have proper engagement with the lectures, I feel not enough lab access or lab time is given as well.”

“Better and more developed small class scenarios (i.e. tutorials), as opposed to 300 person lectures.”

“Have more lecturer (or teacher's assistant) interaction with students. More tutorials with small class sizes that are interactive.”

2020

“If the class is too big (example generals and psych nurses) divide the group in lectures then ask questions /discussions etc”

“Divide lectures with large number of students into slightly smaller groups, sometimes they feel large and impersonal.”

“Provide more smaller classes such as <peer assisted learning platform> for more subjects so that we can have a stronger learning environment.”

Student relationships

Discussion highlighted *staff-student relationships* as an area where their Institution could improve students’ engagement in learning. Discussion was over-whelmingly focused on the relationships students had with their lecturers.

Lecturer – student relationships

2019

“Build stronger relationships between lecturers/academic staff and students.”

“Work on better relationship between lecturers and students.”

“The attitude of lecturers must change. In the department of <otheridentifier removed> there has been a very poor student lecturer relationship as lecturers try to distance themselves from students and avoid any interaction outside of lectures.”

2020

“Make the actual lecturing more personal, create more of a relationship between students and lecturers.”

“Have more interaction between lecturers and students in order to create a better engaging relationship.”

“Make the actual lecturing more personal, create more of a relationship between students and lecturers.”

These key themes that have emerged are in line with Wanner (2015) who found that students outlined a desire to make lectures more engaging and interesting, enabling students to become more involved in the learning process. Educators bring their philosophies into the classroom, which in turn, can influence the types of learning activities that occur in the classroom and influence student engagement and learning (Sawers *et al.*, 2016). Learners have outlined that they wish for a move away from the traditionalist approach where delivery is teacher centred and based on the mantra that knowledge is transmitted from teacher to student. The desire is for a constructivist approach which is student centred and based on the mantra that knowledge is developed through experience (Dori and Belcher, 2005).

Influence of class size on lecturer-student relationships

Again, as evidenced in *teaching, learning and assessment*, and *facilities and environment*, the impact of smaller classes on these relationships was clear. A common thread through themes, and as evidenced in some quotes, the impact of smaller class size on the lecturer-student relationship was discussed.

2019

“Smaller classes would improve/develop relationship with lecturers, too hard to ask a question in front of 250 students.”

“Academic staff - student relationship needs to be better. Make it less commercial to ensure class size is not as big as 150 students, leaving no scope for students to have a personal relationship with the professors.”

“Could have smaller size class. Needs more diversity. Needs to take active measures for students engaging among each other, especially international students with local students.”

2020

“Smaller class sizes where possible to allow a more connected relationship amongst students and lectures.”

“Smaller class sizes, more personal attention, with 500+ in a class its nearly impossible for us to feel our lecturers know who we are and therefore would be able to help us if we were in trouble academically.”

“Reduce class sizes to have more interaction between classmates and lecturers.”

Individual lecturer-student relationships

Analysis also revealed that students felt they would benefit from a greater degree of individual contact.

2019

“More one on one contact or focus groups.”

“More one on one sessions where they personally evaluate your work.”

“Have time set out where you could go to your lecture one on one for help with stuff your stuck with.”

2020

“To have a bit more one on one contact with the lecturers as a good relationship with them makes you want to do better.”

“Take to students one on one at least once a week.”

“Have more one on one time and spend more time on subjects in which the students are stuck on.”

Staff- student relationships

While the majority of comments related to lecturing staff, a small number of comments referred to staff such as the Head of Department.

2019

“More scheduled follow ups or consultations with staff members or heads of departments.”

“More supportive head of department.”

“More career guidance needed. More supportive head of department- understanding family issues the social care courses being less focused on disability.”

2020

“Having head of department talk to class.”

“Better facilities, more feedback from students and interactions from head of departments.”

“Better schedules and a head of department that can manage and respect students opinions.”

Student- student relationships

Finally, some discussion alluded to the need for provisions to improve student-student relationships.

2019

“At <Institute>, we just had two short face-to-face tutorials during the year. More tutorials are definitely required in order to build up a stronger relationship with fellow students and the tutor.”

“Holding much more event for students to bond up the relationship.”

“As a student engaging in online studies it is very difficult to get to know your fellow students. I think it would be a good idea to host a second open day half way through the program so that students can meet face-face for discussions and to get to know each other. I think this would result in a better peer-peer support structure.”

2020

“Enjoy learning relationships with other students.”

“Enable students to work autonomously, enjoy learning relationships with others, and feel they are competent to achieve their own objectives.”

“Plan more events to engage students & allow students to meet fellow students.”

“Encourage more active participation. Quizzes help because people don’t have to answer individually. It encourages group work and getting to know fellow students.”

Student support

The final theme of *student support* revealed various areas in relation to what their Institution could do to improve students engagement in learning. Notably, students felt that the number and quality of support services could be improved.

2019

“Offer better supports. A lot of the support services refuse to answer, don’t communicate with other support departments, or their nearest available appointment is months away.”

“Invest in variety of support services.”

“Invest in a variety of support services.”

“Have more student support services on campus, have more facilities on campus such as better library service.”

2020

“Variety of support services.”

“More student support services.”

“Better support services.”

“Continue to expand current support services.”

“Offer more support services.”

Academic support

Extra classes

Linked to the theme of *teaching, learning and assessment*, discussion illustrated that students felt extra support could be provided in terms of extra classes, tutorials and material as a means of improve students engagement in learning.

2019

“Possibly check in more with students on the more difficult subject areas such as psychology or offer extra lectures possibly on difficult topics.”

“Provide extra tutorials in order to explain difficult topics better.”

“Extra notes in lectures.”

“Online classes, extra material online.”

2020

“Offer extra classes with post graduate students to get advice on how to approach particular topics. I want more than just labs and tutorials, I want to go into an environment to get advice not tested.”

“Potentially add an extra tutorial for each module.”

“Lecturers could include more explanatory notes in their lecture slides. it can be difficult to study past material or something you missed without any extra notes.”

Library services

Numerous comments referred to the support provided by the library. Many students felt the services provided by the library could be enhanced.

2019

“Better initial introduction to library online database searching via dedicated sessions given for same.”

“The library and IT facilities could be improved I think eg more computers with faster operating modems, and a more slick library would definitely help students engagement. The library seems a bit out dated and uninviting at the minute.”

“Have a bigger collection and choice of books in the library.”

“Have online versions of most books in the library.”

2020

“Make library books easier to find in the library.”

“Having a better library more databases and books available.”

“My institute could provide more course-related books in the library.”

“More library seats to allow students to study. More access to ebooks etc without having to use library PCS.”

Analysis revealed a small number of comments in relation to the availability of support services. These comments highlighted the difficulty some students experienced in accessing support services given their lack of availability in evenings and weekends.

2019

“Have out of hours academic writing classes etc as those of us working cannot take time off to attend when the classes are normally run.”

“24 hour library is needed.”

“Very poor consideration for part time students, all supports services are day time and on the other campus, very little use of technology to support students through VoD / recordings, etc.”

“Provide more physical spaces (rooms) for group learning outside the regular timetable.”

2020

“There are no support services available after 5pm or at the weekends, so although there are class scheduled for people who work fulltime there are no supports (writing center/ maths supports etc).”

“Greater number of computers and printers to improve access. Earlier library and computer opening hours - possibly longer hours over the semesters - mirroring those available during formal exam periods.”

“Besides having some of the supports available during weekends or evenings to facilitate mature or working students, I think we are lucky with the amount of support we receive.”

The importance of raising awareness of and providing access to these support services was also commented upon by students.

2019

“Raise awareness of support services offered.”

“Provide better access to support services.”

“Making academic support services more transparent.”

“More emphasis or advertising on the support services that are available around the campus.”

“Put more emphasis on support services which are available and have them well-advertised.”

2020

“Emphasize more on the student support services that are available in college and tell students if they think they need to use them.”

“Inform students about the support services such as the skills centre and keep reminding students about the support services as students get an overload of information at the beginning of the student year and some information is forgotten.”

“Make more accessible and less intimidating support services.”

“Access to overall support services, such as DSS, is limited. The waiting lists for both counsellors and Student health are too long and not well managed.”

“Some other students in my course have had some difficulty in meeting with student support services.”

Other academic supports

Additional academic supports identified included academic writing, computer, math and science supports.

2019

“Support services for computer literacy and unbiased financial/citizen information.”

“Offer more support services like tutoring.”

“Make the Academic Writing Centre easier to find and accessible. Also having people to proof read essays.”

“More maths support hours, similar supports in other science subjects.”

“Offer better learning support services.”

2020

“Better learning support services geared to the different fields (i.e. science).”

“More academic support service.”

“As a mature student, the programmes to help with academic writing and maths week were invaluable to me. This certainly helped me get a feel for college and how to approach the semester. I felt that young first year students would also benefit from this type of training.”

“Better lecturers and more support for areas outside of math like chemistry etc.”

Induction

Moreover, some students indicated that additional support in the form of an introductory session at the beginning of the semester would be beneficial. Such support, students felt, would allow them to get to know one another better and understand and facilitate a smoother transition for students. This was mainly evident in 2019 findings.

2019

“An introduction session @ the beginning of semester, as the class consists of 4 different groups & it can be difficult to form relationships; which can be daunting & isolating.”

“Introduction to each other at the beginning or first year.

“Engage more with the part time students - make sure that they have access to at least some of the things that full time students do. For example, in first year we didnt get any kind of tour or introduction to the facilities on campus- this is basic stuff and its not being done.”

“More introduction for students returning to third level after a period of time away - particularly part time students.”

Support for international students

Comments also indicated that international students felt additional support would benefit them. Suggestions included promoting interactions between international and national students, providing English classes and aiding international students in adapting to their new environment.

2019

“They should try to have more activities to both international and native students together. I see many international students isolated.”

“I think they should do English class for the international students.”

“Create a closer relationship with international student in order to identify any difficulty they have settling in a new environment and make them feel welcomed and adapt in the environment quickly.”

2020

“Should guide international students with Irish academic expectations.”

“Probably should make the instruction of learning supporting service easier for International students who are not quite good at the English language.”

“Better support and communication for international students are expected.”

Student Services

Mental health supports

Many comments referred to the need to improve mental health services in the Institute.

2019

“Provide better support services; i.e. More counsellors.”

Provide better student support services, especially regarding counselling and mental health. Recognise the huge pressure that the postgraduates are under, and create a more feasible workload by increasing cross-faculty communication.

“My institution could offer better support services, particularly for those with difficult family circumstances and mental health difficulties.”

2020

“Have more advertisement and aids for support in all shapes and forms, especially from a mental health side. The college lacks mental health support services, some students don’t just need help solving a maths problem or writing a better essay, they need the support mentally that will help them be able to work effectively and just do better.”

“Two years ago I had quite some difficulty organising a counselling appointment through the college. My mental health wasn't great and my engagement could've been better had I had more access to a counselling service.”

“I think that the institution could encourage and create an awareness around mental health and general wellbeing as this will improve students engagement in learning.”

Additional support services addressed included social, financial, well-being support services.

2019

“Make more health services available.”

“Provide more learning and listening support for students.”

“More health and well being services are needed so students feel like they matter.”

“Provide social support to distance learners outside the campus.”

2020

“More engaged in their social support and making <identifier> more student learning friendly.”

This study reflects many studies that are emerging during the pandemic which are highlighting the need to consider student wellbeing. There has been increasing awareness and research within higher education relating to the link between student engagement and wellbeing.

However, this area still warrants further research and understanding (Boulton *et al.*, 2019). Wellbeing can be viewed a number of ways including positive affect (for example enjoyment, gratitude, contentment) and negative affect (for example anger, sadness, worry) (Deiner *et al.*, 2017). Aristovnik et al (2020) found that there is a high level of negative emotions and low level of positive emotions experienced by students post Covid-19, and this will have a long-term effective on students mental health.

Analysis Plan for 2021

Given the similarity of results in 2019 and 2020 across Best and Improve items, it is recommended that the overarching themes developed in this report are applied in 2021. As in 2019 and 2020, the proposed analysis plan for 2021 involves a combination of automated and manual analysis. For analysis of Best and Improve variables, it is proposed that the textual data be subcategorised according to Tables 3 and 4 respectively. To do this textual data should be coded in RQDA using the autocoded output from appendix 1.1. and 1.2. In light of 2019 and 2020 responses and analyses, the codes in Appendix 2.2 and Appendix 2.3 are developed for use. These pre-processed codes have been developed for 2021 analysis in accordance with data preparation requirements in Rstudio. This will ensure that appropriate codes are selected by their stem to enhance search index accuracy and efficient categorisation.

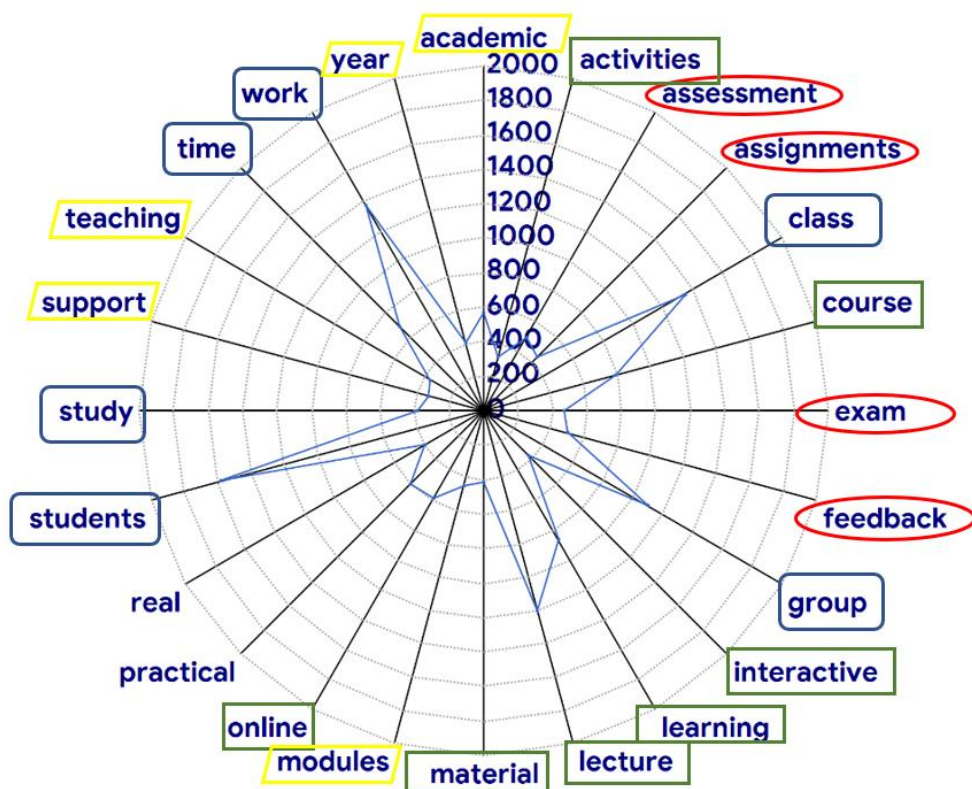


Figure 6. Cluster analysis of Improve 2020 data

In addition, to develop a short search guide for initial insights, cluster analysis may be applied so that similar key words can be identified and associated with the main themes. For example, Figure 6 demonstrates four-word clusters from Improve 2020 item responses. Thus, to explore the theme of learning, recommended alternative searches may include 'course', 'interactive' 'lecture', 'activities', 'material' and 'online' and their subtheme identified from autocoding. To this end, items in red may be searched to explore assessment, items in yellow may be used to explore student support and items in blue may be coded to explore facilities. Nonetheless, this is speculative and cluster analysis should be carried out on 2021 data when it becomes available.

A sample output for the theme of learning using the cluster word search from NVivo autocodes and applied through RQDA is demonstrated below in Figure 7 below.

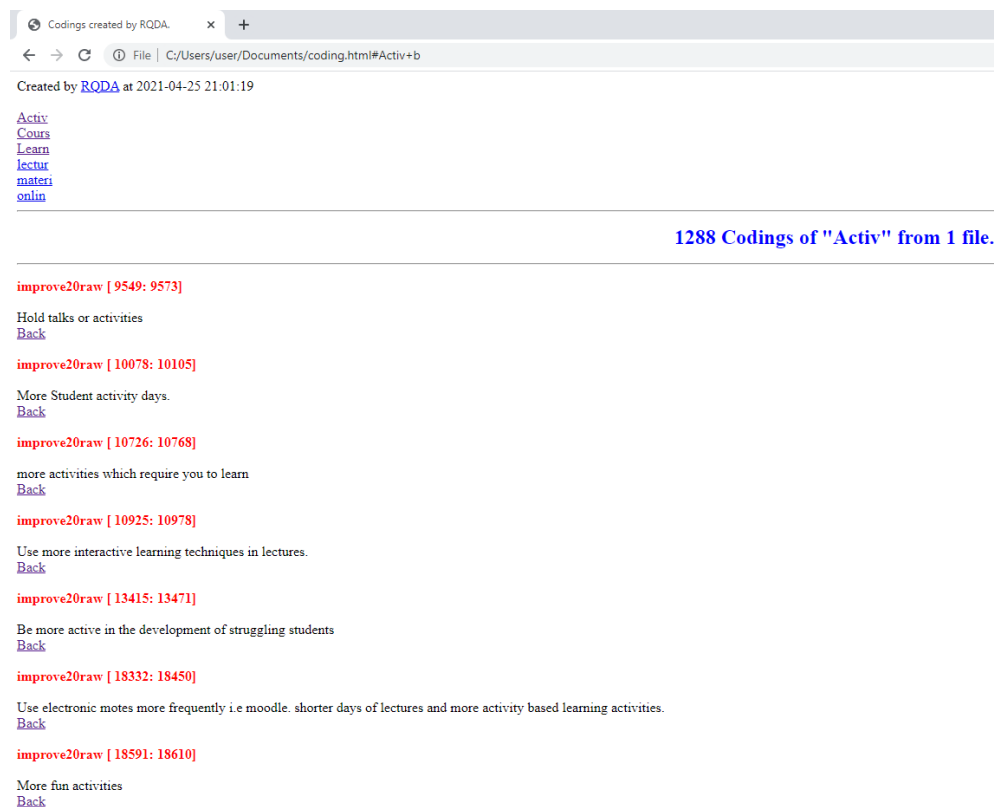


Figure 7. Exported html file containing codes relating to learning

With consideration of time costs associated with qualitative analysis at institute level, there are four recommended steps for institutes in 2021 using the script and guide [here](#).

1. Prepare frequency measures of Best (Op_inss1) and Improve (Op_inss2) responses.
2. Apply coding frame
3. Explore comments
4. Identify emerging themes

To analyse qualitative data in 2021, Rstudio is recommended. When installing, Rstudio, it is advised that R and Rtools be installed also. You can install R (base) and Rtools [here](#) and Rstudio [here](#).

1. Once installed, you can begin to prepare the data and generate frequency measures. If you are not familiar with R it is recommended that you run syntax from Steps 1, 2 and 3, and write frequencies to an Excel file where you can edit to a style that suits your needs. See [here](#) for a demonstration video.
2. To apply the coding frame developed in this report it is suggested that institutes follow the instructions in Step 4 to install RQDA and open RQDA. This is a user-friendly package that allows you to manually add cases, categories and codes manually as well as automatically using the codingbysearch function. It is recommended that both raw and preprocessed data are coded in RQDA. A demonstration of raw and pre-processed are demonstrated in Appendix 2.1
3. In RQDA, you can interpret data from each of the underlying themes.
4. In the results section of this document, we have identified themes that are emerging as the educational environment evolves. At this point, the exploration of comments relating to safe environments online and psychological safety are recommended.

Conclusion

As is evident in the findings chapter, a number of themes repeatedly emerged in the data. Across both questions, 'what does your institution do best to engage students in learning?' and 'what could your institution do to improve students' engagement in learning?' common themes of learning, assessment, facilities and student support were evident.

Learning

Data suggests that contextualised learning, discursive learning opportunities and smaller class sizes are appreciated by students. A variety of teaching approaches including flipped classrooms, video, guest lecturers, class discussions, one-to-one and group tutorials, and blogs are valued by learners. Consequently, analysis demonstrates the importance of multimodal learning as a means of engaging students. An emerging theme in the 2020 data relating to the first question was that the use of "real life examples" was considered a positive by students. This, in line with the emphasis on guest lectures in student responses illustrates the importance of creating cohesive links between theory and practice. Students demonstrate an appreciation for illustrating clearly how class content informs work.

In terms of what Institutions can do to improve with respect to the theme of learning, a closer focus on module learning outcomes was emphasised by students. Further, the importance of structure within individual modules and across courses was appreciated by students. A demand for increased interactivity and fun were themes that emerged. Student discussion clearly emphasised the importance of a relaxed and sociable environment as a facilitator of learning. Interestingly group work generated contrasting views, some students would welcome more opportunities for group work, while others would prefer to see less group work.

Assessment

A variety of assessment techniques including continuous assessment, the practical nature of assessments and project work, inclusive of those in a group capacity, and opportunities for regular feedback were identified as things Institutions do best. 2020 data evidenced an increase in students referring to "practical assignments" and "practical experience". Again,

the importance of creating cohesive links between theory and practice is evidenced. In terms of what institutions could do to improve assessment similar themes emerged. These included having more opportunities for continuous assessment, and more opportunities for regular formative feedback during the semester. It is evident from student discourse that means by which learning can be enhanced are simultaneously an area in which their respective Institutes excel, but given its importance, also an area where they wish to see improvement. The ongoing nature of formative feedback facilitates improvement and growth. Group work, this time in terms of group assessments, was again a contrary theme that emerged in the 'improve' data. Some students felt that a greater degree of group assessments would be beneficial, while others felt less was necessary. The polarising nature of group assessments in relation to both questions is an area where further research would be of value. Further research would reveal why this is the case.

Facilities

The range and availability of learning facilities were identified as aspects of what Institutions do best to engage students in learning. However, analysis of the data related to what Institutions can do to improve student engagement identified a need to increase the range of facilities and to better promote the facilities that are available for students. It is evident throughout many areas pertaining to the themes identified, that those areas where students feel their Institute excels also represents those areas in which students feel their Institute could improve. This can be expected given that students would naturally like to see their Institutes continue to improve in those areas in which they are proficient.

Learning environment

The learning environment was identified as a common theme in the data. The quality and accessibility of e-learning facilities were noted as key features institutions do best. While a safe a friendly, interactive learning environment was also noted by students. Interestingly, psychological safety was referenced across a number of themes; several students felt their respective Institute created a safe learning environment, small class size was noted as a positive in the creation of a safe and comfortable learning environment, and the role of staff in creating a safe and comfortable environment was identified. This raises interesting

considerations for institutes. Analysis illustrates that students feel their institutes are skilled in their use of e-learning facilities. This will be a key factor as online learning environments continue to grow. How do Institutes ensure they create the safe and interactive learning environment expected by students in a physical classroom, one enhanced by smaller class sizes? While the role of staff in creating a comfortable environment was evident in the findings from both 2019 and 2020 data, it was more prevalent in 2020 findings. On the contrary, themes of a safe learning environment and one that is interactive also emerged from analysis data related to the 'improve' question. Demand for the creation of an active open learning environment and one whereby students felt safe and comfortable in asking questions was identified.

Student relationships

Lecturer - Student Relationships

Similarly, lecturer-student relationships was identified as a common theme that emerged from analysis of both questions. In terms of what institutions do best, strong lecturer- student relationships foster more engaged and open relationships. The extra effort expended by lecturers in developing strong relationships was appreciated by students. Furthermore, along with advantages provided by smaller classroom size in relation to *course structure, learning and assessment* and *facilities and environment*, the impact of small class size on *staff-student relationships* was evident. Students identified this as a key element of creating a safe, interactive and engaging learning environment. As such, this should be a key consideration in the creation of safe and interactive learning environments. In terms of what institutions can do to improve, building stronger and more personalised lecturer-student relationships emerged as a theme. So too did the influence of class size on these relationships, students reported that smaller class size and personalised relationships with lecturers would create a safer learning space for them.

Student support

Several academic supports were mentioned by students across both questions. The library, the access office/ learning centres, the willingness of staff to hold extra classes when necessary, and extra support for International students were all identified as supports

institutes do best. Analysis of the 2020 data saw the inclusion of terms including “mature support” and “support centres”. Furthermore, careers, disability, counselling, the Student Union and health services were mentioned by students. Support was also a theme in terms of what institutions can do to improve; holding extra classes, strengthening the library services, and increasing international student supports by means of increased integration were mentioned.

Mainly evident in 2019 findings, some students indicated that they would welcome additional support in the form of an introductory session at the beginning of the semester. Such support, students felt, would facilitate improved student-student relationships and simplify the transition process for students. The need to improve mental health services in the Institute was mentioned by a number of students. Alongside this, support services including social, financial and well-being support services would be welcomed.

Emerging themes

Psychological safety: mental health, lecturer- student engagement

The analysis of qualitative data illustrated common themes across the responses relating to what their Institution does best to engage students in learning and what their Institute could do to improve students’ engagement in learning. A key area, that may warrant assessment in analysis moving forward is that of safety – both physical and psychological. Analysis of the 2019 and 2020 data in relation to both questions is indicating that the subject of safety may become a prominent theme or subtheme moving forward. Therefore, it is recommended the phrases relating to this subject matter are assessed in future data collated. Analysis of this emerging subject matter indicates that students place importance on feeling safe in their learning environment. This feeling of safety appears to impact their ability to learn and feel comfortable socially in their Institute. Notably, comments highlighted the importance of supports in relation to mental-health. This is an area in which students felt their Institute could improve. Better awareness among Institutes, and communication and provision of supports may be necessary. Given that many third level students were experiencing anxiety and stress, and this is expected to be further impacted by the pandemic (McGuire, 2020), this

is an emerging theme/subtheme that should be monitored closely. Soares and Lopes (2017) found that psychological safety alongside lecturers that show authentic leadership, contribute to academic performance. Students feel that when the lecture hall is a safe environment, their academic performance enhances. This is again linked back to effective teaching pedagogies. Aristovnik et al (2020) found that there is a high level of negative emotions and low level of positive emotions experienced by students post Covid-19 and this will have a long term effective on students mental health. The effects of Covid-19 are profoundly influencing their emotional well-being

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Appendix 1

Appendix 1.1: The auto code theme and their associated nodes for 'Does Best'

Autocoding		Year	
Theme	Sub-Theme	Reference Frequencies In 2019	Reference Frequencies In 2020
Academic:		574	644
	Academic Staff	206	255
	Academic Support	39	41
	Academic Writing	35	
Assessment:		866	607
	Continuous Assessment	322	474
	Assignments	400	449
	Group Assignments	61	63
	Practical Assignments		31
Class:		1707	1805
	Class Discussions	136	181
	Class Sizes	69	50
	Extra Classes	40	34
	Interactive Classes	63	88
	Practical Classes	122	121
	Small Class Groups	43	33
	Small Sizes	412	418
	Tutorial Classes	107	99
	Class Activities		31
	Class Participation		30

	Class Time		33
Course:		609	701
	Course Content	42	45
	Course Material	123	139
	Course Work	84	74
	Online Course		30
Discussions:		354	439
	Class Discussions	136	181
	Group Discussions	45	
	Open Discussion		34
Examples:			362
	Practical Examples		41
	Real Life/World Examples		152
Good:		896	
	Good Facilities	31	
	Good Lecturers	162	
Group:		1123	1184
	Group Assignments	61	63
	Group Discussions	45	70
	Group Projects	159	145
	Group Work	318	328
	Small Class Groups	43	33
	Small Groups	70	76
	Tutorial Groups	37	51
Interesting:		341	463
	Interesting Lectures	80	125
	Interesting Topics	31	38
	Interesting Modules		33

Learning:		1134	1115
	Active Learning	35	
	Learning Centers	49	35
	Learning Centres	130	
	Learning Centre		95
	Learning Environment	33	61
	Learning Experience	45	28
	Learning Material	39	52
	Learning Support	46	44
	Practical Learning	33	40
Material:		458	608
	Course Material	123	139
	Learning Material	39	52
	Online Material		33
	Reading Material		35
Online:		435	616
	Online Resources	33	47
	Online Course		30
	Online Material		33
Practical:		823	967
	Practical Classes	122	121
	Practical Examples	36	41
	Practical Learning	33	40
	Practical Work	203	245
	Practical Assignments		31
	Practical Experience		46
	Practical Labs		50

Projects:		346	
	Group Projects	159	
Small		767	477
	Small Class Groups	43	30
	Small Class Sizes	164	171
	Small Classes	248	245
	Small Group	70	
Small Class			477
Staff:		1709	573
	Academic Staff	206	255
	Teaching Staff		31
Lecturers:		1226	1601
	Approachable Lecturers	37	
	Engaging Lecturers	63	
	Excellent Lecturers	54	67
	Good Lecturers	162	243
	Great Lecturers	39	46
	Interactive Lecturers	44	47
	Interesting Lecturers	80	125
Lecture Slides			31
Students:		995	1169
	Engaging Students	54	81
	Helping Students	31	35
	Student Union	50	70
	Mature Student		32
	Student Support		30
Support:		690	755

	Academic Support	39	41
	Learning Support	46	44
	Support Services	69	67
	Student Support		30
	Student Centres		35
Teaching:			374
	Good Teachers		32
	Teaching Staff		31
Tutorial(S):		434	484
	Tutorial Classes	107	99
	Tutorial Groups	37	51
Work:		1160	1303
	Course Work	84	74
	Group Work	318	328
	Practical Work	203	245
	Placement Work	37	51
	Work Experience		30
Real:			544
	Real Life Examples		99
	Real Life Situations		48
	Real World Examples		53
Life:			390
	Real Life Examples		99
	Real Life Situations		48

Appendix 1.2: The auto code theme and their associated nodes for 'Improve'

		2019	2020
Term		Frequency of reference (those over 30)	Frequency of reference (those over 30)
Academic		425	565
	- academic staff	109	167
	- academic writing	32	47
	- academic year		36
Activities			321
	- group activities		32
Assessment		346	488
	-continuous assessment	215	326
Assignments		370	433
	- group assignments	41	43
Class		1170	1354
	- class activities	29	28
	- class discussions	57	67
	- class sizes	96	114
	- class time	47	47
	- extra classes	32	37
	- interactive classes	46	40
	- practical classes	52	46
	- tutorial classes	48	57
Course		643	794
	- course content	31	50
	- course material	95	108
	- course work	73	72
Exam		336	464
	- final exams	39	58
Feedback		425	499
	- detailed feedback	34	47
	- individual feedback		33
	- student feedback		38
Group		852	1101
	- group activities		32
	- group assignments	41	43
	- group discussions	43	30

	- group projects	75	110
	- group work	272	355
	- study groups	66	75
Hours		283	
Interactive			369
	- interactive classes		40
Learning		667	862
	- interactive learning	48	57
	- learning experience		40
	- learning material		39
	- learning support		30
Lecture		842	1199
	- certain lecturers		40
	- engaging lectures		49
	- interactive lectures	57	89
	- lecture halls	34	50
	- lecture notes	48	49
	- lecture slides		51
Material		303	417
	- course material	95	108
Modules		324	452
	- certain modules	32	43
Online		362	584
	- online course		38
	- online resources		43
	- online students		31
Practical		517	599
	- practical classes	52	46
	- practical work	133	144
Real		292	396
	- real life	30	27
	- real life examples		29
	- real life situations		29
	- real world examples		35
Students		1393	1581
	- help students	34	41
	- international students	36	59
	- mature students	80	72
	- part time students	41	49

	- student engagement	69	56
Study		347	383
	- study groups	66	75
	- study spaces		48
Support			331
Teaching		286	360
Time		589	682
	- class time	47	47
	- full time	32	27
	- part time students	41	49
Work		1166	1372
	- course work	73	72
	- group work	272	355
	- practical work	133	144
	- project work		29
	- work experience	69	46
	- work load		30
	- work placement	65	72
Year		342	407
	- final year	67	79

Appendix 2: Analysis Plan for 2021 Data

Appendix 2.1: Demonstration of data preparation output

Best19	Best_Tidy19
Provides a lot of oppostunities to choose our own topics	provid lot oppostun choos topic
Moodle. Moodle is key. Notes on moodle. Make it mandatory. PLEASE	moodl moodl key note moodl make mandatori pleas
Slideshow's showing past projects.	slideshow show past project
Provide clear week by week class learning guidelines	provid clear week week class learn guidelin
Mix of modes of learning and assessment	mix mode learn assess
Good communication with students	good communic student
Small class sizes	small class size
Open and honesty	open honesti
Relating prior knowledge and learning to current learning. Relating and identifying individuals skills	relat prior knowledg learn current learn relat identifi individu skill
Its a small group. All students in this course are passionate about the subject . The institution doesnt directly engage us but our supervisors want us to do well.	small group student cours passion subject institut doesnt direct engag us supervisor want us well
Lots of presentations, very interesting projects, evaluation of peer reviewed literature, intensive searching of informations.	lot present interest project evalu peer review literatur intens search inform
Group work	group work
Discussions within the classes	discuss within class
The Good Start Program	good start program
Best20	Best_Tidy20
The teachers are helpful and attentive to the students.	teacher help attent student
There are many events associated with cooperation in the college.	mani event associ cooper colleg
Attend to the subjects we are interested in and regularly evaluate us.	attend subject interest regular evalu us
They encourage a love of music in the students.	encourag love music student
The Institute gives us plenty of time to discuss matters in our own time outside of class.	institut give us plenti time discuss matter time outsid class
Just to get the best mark.	just get best mark
You could have more discussions about the topic with the lecturer and the class, to make it more interesting to process information – in the image of [redacted].	discuss topic lectur class make interest process inform " imag redact
Through support and a positive helpful attitude.	support posit help attitud
With enthusiastic lecturers who provide interesting learning. Students simply read or browse through slides to find the information in the book without providing notes.	enthusiast lectur provid interest learn student simpli read brows slide find inform book without provid note
Give clear deadlines for assessment/examination as soon as possible. Give a timetable of all lectures at the start of term.	give clear deadlin assessmentexamin soon possibl give timet lectur start term

Improve19	Tidy_Improve19
Allow more lab time for students who are slightly behind with their work	allow lab time student slight behind work
Use more illustrations to explain complex problems.	use illustr explain complex problem
Better explanation and help with students	better explain help student
Explain the topics and not just copy & paste off the board	explain topic just copi past board
Student staff interaction	student staff interact
less theory more practical	less theori practic
Be more interactive with each student, review grades with students that are taken in online assessments	interact student review grade student taken onlin assess
some class could be a lit less writing notes and do some group work.	class lit less write note group work
More information online, more homework.	inform onlin homework
do something about the lectures that don't make it care what they want the report work to be like and keep changing their minds on how they want it to look.	someth lectur make care want report work like keep chang mind want look
A better facility for open access rooms in the engineering building.	better facil open access room engin build
Really dislike group work without peer assistance actually help	realli dislik group work without peer assist actual help
More one on one contact or focus groups	one one contact focus group

Improve20	Tidy_Improve20
Be more organised when it comes to briefs and more critically comments and feedback in assessments	organis come brief critic comment feedback assess
Connect the college to real world problems and the workplace. College seems very disconnected from actual working and living environment.	connect colleg real world problem workplac colleg seem disconnect actual work live environ
Explain to them more what sort of methods of thought they want you to explore	explain sort method thought want explor
Give a massive cash injection to the campus to make it functional and usable	give massiv cash inject campus make function usabl
Have outside lectures , too compact to the point I can't breathe and fall asleep and get a headache	outsid lectur compact point canât breath fall asleep get headach
I cant think of any	cant think
Introduce more days for tutors to evaluate your work so it gives more opportunities for feedback	introduc day tutor evalu work give opportun feedback
maybe sometimes it is too relaxed	mayb sometim relax
More career-focused examples/modules	career focus examples modul
More communication with tutors	communic tutor
More feedback	feedback
More individual teaching	individu teach
more one on one engagement with staff	one one engag staff
Putting more emphasis on research	put emphasi research

Appendix 2.2: Recommended codebook for 2021 Best responses

Course structure, learning and assessment
tutori
academ
cours
teach
learn
Materi
class
small
life
practi
onlin
activ
feedback
asses
assign
discuss
staff
lectur
work
talk
exampl
Facilities and environment
facil
activ
learn
eniviron
onlin
librar
lab
servic

staff
lectur
materi
resourc
avail
centr
academ
Student relationships
student
lectur
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inter
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Student support
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talk
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Appendix 2.3: Recommended codebook for 2021 Improve responses

Teaching methods
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Supporting learning
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Assessment
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Facilities and environment
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onlin
class
academ
group
small
study
Student relationships
student
lectur
relat
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inter
support
engag
staff
teach
class
small
Student support
support
servic

lab
librar
<i>health</i>
onlin
class