



Enhancing the Assessment and the Feedback in Higher Education

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Enhancing the Assessment and the Feedback in Higher Education

Quality Assurance in Education

1.0 Introduction

Assessment and feedback within educational settings are essential for enhanced learning. The literature identifies further improvement in the HE context of assessment setting and feedback provision. Raaper (2016) and López-Pastor and Sicilia-Camacho (2015) establish that providing feedback and a robust assessment setting is crucial for improving student performance and academic progression. The National Student Survey (NSS) provides further insight into the students' perspectives on the success of assessment and feedback received from Higher Education (HE) institutes. NSS data from 2020 to 2022 presents a substantial need to improve assessment and feedback in HE. The sector-wise NSS score for assessment and feedback was 72.6%, 68.6%, and 68.5% in 2020, 2021, and 2022 respectively. As the data indicates a decline in student satisfaction, a significant improvement is needed as student satisfaction was low compared to other themes. Student surveys, especially NSS, are predominant in evaluating the current context of quality and pedagogic alignment in academic institutions (Gomis et al., 2022b). Studies seldom use such surveys to identify critical challenges and reinforce quality assurance in higher education (Teeroovengadum et al., 2019). Similar studies (MacKay et al., 2019) have recognised challenges, although there is limited evidence of providing streamlined guidance on enhancing assessment and feedback. This study aims to develop a set of drivers that could be used as guidance in facilitating assessment and feedback for the successful academic progression of HE students. To develop such drivers, the questions under the 2022 NSS Section 3 – assessment and feedback will be the basis for the research framework. Although other surveys are available, such as NSSE etc., the NSS was specifically chosen as the underpinning framework for this study. This is due to its section 3 being directly related to obtaining satisfaction with assessment and feedback in HE. Questions Q8 - The criteria used in marking have been evident in advance, Q9 - Marking and assessment have been fair, Q10 - Feedback on my work has been timely, and Q11 - I have received helpful comments on my work, which will be reflected within this study.

2.0 Literature Review

2.1 Clear instruction given on marking criteria

Student support available before and during assessments is also fundamental to student performance. Winstone and Boud (2020) identified that most Higher Education Institutes (HEIs) prefer to assess students by challenging them on specific assessment tasks. Cockett and Jackson (2018) further identified using clear, detailed structure in explaining assessment, marking process, and marking criteria improves student achievements rather than challenging students to open-ended cases. It is also acknowledged that most HEIs offer assessment support through summative but not formative feedback. Winstone and Carless (2020) further emphasise that feedback needs to be provided and facilitated strategically within the module/assessment design. Information on the assessment and feedback subsequently influences the quality of student performance and progression (Day et al., 2018). Detailed instructions need to be presented to students from HEIs to ensure successful assessment opportunities and how they will influence progression.

Previous studies established a correlation between feedback and marking criteria, which are essential for successful student performance. Killingback et al. (2020) portrayed the need for assessment instructions and student feedback quality, quantity, and content consistency for both summative and formative contexts. It further signified the importance of a rubric in generating an in-depth understanding of the assessment and providing feedback. Studies emphasised the significance of interpersonal relationships in addition to supportive nonverbal cues (Chalmers et al., 2017) in feedback provision, although it is time-consuming.

Literature suggests tutors must improve their commitment to supporting students' academic success. Formative feedback on assessment needs further awareness, and inefficient rubrics and marking schemes lead to poor student achievements (Chan & Ho, 2019; Hohmann & Grillo, 2014). This reflects the underpinning issue of student success rates: the lack of understanding of assessments. A clear guideline is needed to address assessment guidance, and identifiable literature proposed that this is best achieved using rubrics. An appropriate rubric encourages students to self-assess and self-improve their academic work. However, one essential aspect that the previous research has not

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3 identified is contextualising student feedback is crucial for their level of comprehension. The
4 importance of contextualised feedback must be acknowledged by academics and integrated into
5 curricula.
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7 **1.2 Fair Procedure in Marking and Assessment Setting**

9 Summative assessments are predominantly used in evaluating learning outcomes and students'
10 academic understanding (Medland, 2014). The module learning outcomes and the curriculum
11 framework must align in developing a robust assessment. Assessments are used as the best instrument
12 for increasing student engagement, bridging the training gap, and contextualising the learning
13 environment and competency of the student (Al-Kurdi et al., 2018). However, emphasising "fair
14 procedure" in assessment is critical, as it is the cornerstone of knowledge development and equitable
15 evaluation.
16

17 Studies identify that HEIs seldom use rubrics to promote fair procedure within student
18 assessments. Rubrics foster transparency in assessment by clearly conveying marking criteria and
19 performance expectations. As such, rubrics serve as a framework to promote balance and consistency
20 within the assessment procedure (National Research Council, 2001; Stiggins, 2008). Rubrics are also
21 widely used as they are coherent and transparent in signposting critical areas of the marking scheme
22 and how it is being graded. In context, rubrics promote fair practice in marking and assessment settings.
23 Similarly, Marcuccio & Silva (2019a) establish vital characteristics that will improve fair making and
24 practice, such as understanding the assessment requirement, support for progression and integrated
25 feedback models such as VLE Rubrics.
26

27 Most of the findings relate to the rubric being an instrument of support to the learning
28 curriculum within a framework. However, the learner's motivation in dealing with the assessment is
29 prominent. Pui et al. (2020) and Zhang et al. (2018) further identify that using rubrics alone would
30 satisfy signposting the fair procedure incorporated with assessments. Further emphasis should be
31 provided to academics and tutors to reflect on how HE assessment is developed and further indicate the
32 guidelines for developing such assessments.
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35 **1.3 Provision of feedback for improvement**

36 Student support is critical to academic achievement (Gomis et al., 2022a). The feedback process
37 is a complicated and continuous endeavour with limited frameworks and holistic policies for its
38 delivery. The provision of effective feedback has the potential to influence, develop and improve
39 students' academic achievements. Previous studies conclude that time was a factor in making feedback
40 effective and meaningful to the students. Stevens et al. (2013) identified that feedback was to be
41 provided to encourage constructive changes within the assessment or subsequent work. According to
42 Hattie (2007), the three concepts for giving feedback are the correction and reinforcement process,
43 analysis and self-evaluation.
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46 A central aspect of considering these pedagogical decisions depends on student engagement,
47 where the tutor often justifies the student's capacity (Winstone & Carless, 2020). The most common
48 aspects reflected are the students' ability to interpret the feedback, their correct understanding, and their
49 willingness to implement the feedback given. Many forms of feedback are available, such as peer-
50 review, self-assessment, etc., but all these forms can be categorised as summative or formative
51 evaluation (Chong, 2020; Alderman et al., 2012). The common perspective is that formative feedback
52 allows constructive criticism at an interim pace, focusing on student assessments, whereas summative
53 allows feeding forward, focusing on student progression following their assessment (Winstone & Boud,
54 2020; Huisman et al., 2018; McCarthy, 2017).
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57 Much evidence is present in identifying the effectiveness of using rubrics for feedback. In
58 providing assessment feedback, most tutors focus on improvements rather than performance (Watling
59 & Ginsburg, 2019). The study identifies that feedback should not be restricted to the assessment
60 requirement. Shute (2008) discusses that formative feedback needs to transfer information intended to

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3 modify students' thinking and behavioural attributes. Nevertheless, key emphasis must be provided on
4 the student's overall performance rather than mere assessment support.
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6 Winstone and Carless (2020) and Watling and Ginsburg (2019) suggest that verified feedback
7 requires a major investment of time. Gomis et al. (2022a) identified feedback as vital to active teaching
8 and learning, although most feedback strategies are outdated. López-Pastor & Sicilia-Camacho (2015)
9 differentiate formative feedback, providing interim, task-specific assessment guidance, and summative
10 offering a holistic perspective on students' overall skill development and performance. While formative
11 focuses narrowly on assessments, summative adopts a broader lens in evaluating and furthering skills.
12 Thus, it concludes how both feedback is essential in developing cognitive learning from students'
13 perspectives.
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15 **1.4 Providing helpful comments on academic work.**

16 Feedback facilitates in-depth understanding provided as a form of comments and information
17 concerning learning outcomes (Fong et al., 2017; McCarthy, 2017). Feedback is crucial for students to
18 identify their mistakes and improve. It should provide constructive criticism and suggestions for further
19 development of knowledge. The modern concept of feedback engages students with their learning
20 process, and they actively seek feedback to enhance their academic performance (Henderson et al.,
21 2019). In conclusion, all identifiable literature highlights the importance of constructive feedback for
22 academic achievement.
23

24 The NSS data identifies how assessment and feedback support was provided nationally. The
25 overall satisfaction level denotes a benchmark across HEIs on a minimum threshold that needs to be
26 underpinned by supporting assessment and feedback settings within the HE curricula. The systematic
27 framework would support evaluating the quality of their assessment procedures and feedback
28 mechanisms. Thus, the NSS is considered an indispensable tool for internal quality assurance to ensure
29 that issues are addressed, and standards are maintained to enhance the student learning experience.
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31 **3.0 Methodology**

32 A systematic approach is taken to collect data from different personnel within the HE
33 curriculum to develop drivers. A mixed-method approach is taken where 1.) a documental analysis of
34 Mid-Module-Reviews (MMRs), 2.) a documental analysis of VLE feedback, and 2.) semi-structured
35 interviews with academics were used in data collection. Quantitative data was collected from the
36 MMRs, while qualitative data was collected from the VLE feedback and semi-structured interviews.
37 The data from both the documental analysis (i.e. MMRs and VLE feedback) was used to identify critical
38 issues and overall perspectives from students. Data from the interviews addressed the critical issues
39 identified from the documental analysis and strategies for further improvement. Data from MMRs were
40 analysed by the frequency of occurrence and the importance of feedback, while data from the qualitative
41 instruments were analysed using thematic analysis to develop drivers. These drivers were further
42 analysed using interpretive structural modelling (ISM) to determine their influence and relationship
43 with each other. An overview of how these data collection instruments were developed, utilised, and
44 analysed is illustrated in Figure 1 and explained in the chapters below.
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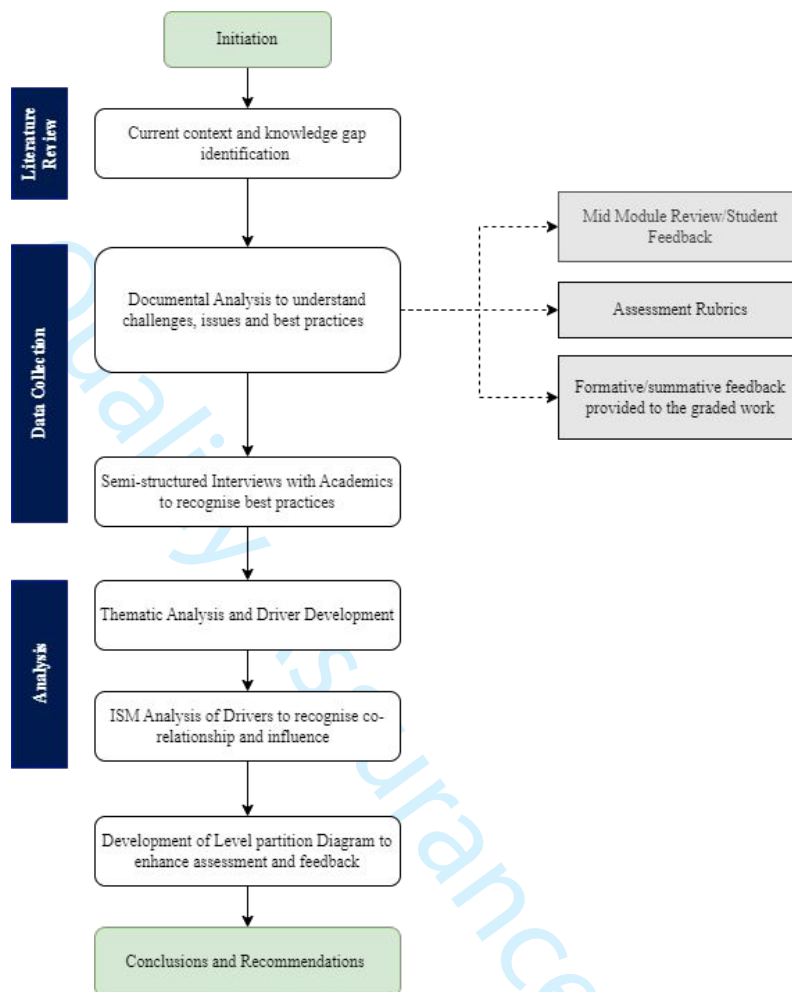


Figure 1 – Methodology of the study.

3.1 Participants and Materials

Students were given Mid-Module-Reviews (MMRs) focusing on these four questions reflecting the NSS section 3. A sample of 340 students across the built environment (BE) discipline was taken for the MMR documental analysis to understand the students' perspectives on assessment and feedback experience. From a 340 population with a confidence level of 95% and an error margin of 5%, the minimal sample size for the study needed to be more than 181. 230 students participated, making the sample size for the study well above the required size. To obtain a standardised data set, students were selected to represent each BE discipline, such as architecture, civil engineering, quantity surveying, building surveying, construction management and property and real estate.

Further documental analysis was carried out within a virtual learning environment (VLE), focussing on marking descriptors and Rubrics from selected modules. BE-specific modules were selected and evaluated to establish if the criteria used in marking were presented clearly. The selection of the modules was made due to the module availability and types of assessment settings, ensuring a minimum of 2 modules per discipline and level of study. 36 modules were selected for the study as per a minimum of 2 modules for six disciplines ranging from level 4 to 6. In addition, four generic modules were selected randomly across all levels to evaluate the assessment and feedback comprehensively. This brings the overall module count for the study to 40 modules. Within the 40 modules, 240 feedback documents were identified, averaging 60 feedback sheets per module. Overall evaluation was carried out on how development and support were provided on assessments, establishing the fairness of marking, timing on feedback, and how it has helped student progression. Data obtained from both research instruments were analysed thematically to identify potential critical issues and the best

practices. These themes were the underpinning aspects for the questionnaires sent to academics to develop drivers for the best practice in assessment and feedback in HE.

Twenty academics were selected for semi-structured interviews with a confidence level of 95% and an error margin of 5%. 3 academics were selected from each discipline with a minimum of 3 years of experience in HE. The selection criteria included an academic level, such as a programme lead, a senior lecturer, and a lecturer within the three selected academics. Furthermore, principal lecturers and a head of the school were selected to validate the data and facilitate the ISM analysis. Data from the semi-structured interviews addressed the issues raised by the documental analysis and established strategies for further improvement.

Data from the documental analysis and the semi-structured interviews were analysed under thematic analysis and grouped appropriately with the NSS themes identified.

3.2 Research Procedure

Firstly, a literature review is conducted to identify the current context of assessment and feedback in HE curricula. The reviewed literature underpins the current practice in the assessment setting, challenges, and perceived best practices within the HE context and are reflected during the documental analysis. The documental analysis contained three parts: 1.) Mid-Module Reviews/ student feedback 2.) Rubrics were used in the assessment. 3.) Formative/summative feedback was provided to the graded work. The documental analysis was further assessed with the themes under section 3 of the NSS. The identified challenges, issues and best practices were thematically assessed and fed into developing the semi-structured interview questionnaire aimed at academics. The academics' comments on best practices in the assessment setting and feedback were recorded. These were again thematically analysed to develop the drivers.

The developed drivers have been categorised independently within the separate NSS section 3 themes. To successfully enhance assessment and feedback, the relationship of each driver needs to be understood. ISM recognised each driver's co-relationship and influence to enhance assessment and feedback. ISM is predominantly used as a systematic and prevalent inter-relationship analysis technique for strategic decision-making (Gomis et al., 2022b). It was considered a popular analysis model for recognising such correlation and influence, improving interdisciplinary and interpersonal aspects within the BE discipline (Gomis et al., 2022a; Marak & Pillai, 2021). A systematic approach was taken in developing the level partitioning using ISM, where a reachability matrix was developed to carry out a structural self-interaction matrix (SSIM). This aided in identifying the influence and reliance of each driver in enhancing assessment and feedback. Also, the SSIM provided the binary coordinates that could be fed into the Matrice d'Impacts Croises-Multiplication Appliquée a Classement (or MICMAC) graph categorises the drivers into clusters depending on their influence and reliance. Developed drivers were categorised as linkage, independent, dependent, and autonomous, depending on their influence and reliance level. In addition to the above, the reachability matrix was developed to identify Antecedents and Intersection levels for each driver to develop the level partitioning diagram.

4.0 Data Analysis

4.1 Clear instruction given on marking criteria

The data presented here provide evidence for advancing assessments and feedback to the students in BE to explore ideas or concepts in depth. The study found additional aspects in developing assessments in reflection of findings from the literature review. Document analysis through the modules selected revealed that all the assessments were introduced within the first session of the module, and clear guidance was provided in explaining the assessment rubrics. One recurring finding from literature which reflected from interviewing academic staff is that *“students seldom improve on the feedback provided”*. Some students who participated in the survey highlighted *“how well tutors assist in addressing their academic development”*. However, the study further suggests that *“tutors need to understand the student's perspective on feedback”*. The significance of incorporating feedback as an

instrument was acknowledged as paramount. Another student suggestion is to “*address the importance of feedback and how feedback will be given at the lecture sessions*”. The academic staff agreed that these sessions “*should reflect both formative and summative feedback; discussing what aspects of these feedback needs to feedforward in academic development*”. Students and Tutors highlighted that only then will the students have a mindset to use the implications from the rubric to develop academic skills and promote academic achievement.

4.2 Fair Procedure in Marking and Assessment Setting.

The findings from this study also establish that a fair procedure in marking and assessment settings needs to adhere to advance student satisfaction. The academic staff and students agreed that “*including rubrics in assessments is very useful in creating ‘fair procedure in assessment marking’*”. Discrepancies in using these data in marking and presenting the marked assessments were highlighted. Contrary to such expectations, the study identifies critical discrepancies between using rubrics and achieving fair procedure. The data obtained from the study reveals that “*inconsistency has been observed between the comments and the grades*”. The academic staff emphasised that by default, “*there should be no deviation on accuracy with the use of rubrics reflecting the assessment requirement and the marking scheme (in curricula)*”. This malpractice was highlighted in the documental analysis that some academic staff agreed not to use the rubric in providing feedback. Students highlighted that “*feedback would be better understood if it was reflected more on the ‘familiar’ rubric generated*”. Hence, rubrics could have been better developed to provide feedback and achieve fair procedure. The study identifies the success of using rubrics within the curricula in achieving fair play. However, the data presented identifies a significant room for improvement in utilising rubrics to promote fair procedure when giving feedback.

4.3 Provision of feedback for improvement.

The study identifies the need for timely feedback as critical in enhancing the academic setting and providing feedback. Data from all the interviews identifies that academic improvement could only be achieved with proper guidance. The academic staff insists that “*feedback should be provided timely*” and further highlights “*formative and summative feedback being issued concisely focussing on key elements specific to each task*”. Most students indicated “*inconsistency in obtaining feedback*”. It was highlighted that some of the modules provided formative feedback, whereas others did not. Data obtained through documental analysis further proved this statement. Also, it was noticed that the modules that encountered formative feedback performed better than those that did not. Students further highlighted that “*some of the feedback was provided very near to the assessment submission, preventing major changes suggested by the tutor*”. These issues were raised with the academic staff, and it was agreed that the time management of some modules might vary in delivery due to diverse factors. The academic staff agreed that a robust framework and a session plan must be presented at the start of the lecture sessions, highlighting where the formative feedback is provided. Academic staff also highlighted the effort students need to make to obtain feedback and address issues with student engagement. Tutors recommended “*developing a session framework incorporating several formative feedback sessions*” and using “*VLE platforms to increase student engagement*”. As the data suggest, critical focus is needed on the consistency of the feedback provided and coherence obtained through feedback.

4.4 Providing helpful comments on academic work.

The data presented identifies the influence of helpful comments on improving students' academic work. One critical theme that recurred throughout academic staff interviews is “*a possible lack of enthusiasm in students to receive feedback*”. The academic staff and students agreed that this is due to the “*perception and the lack of understanding of how feedback could be used in developing and improving academic work*”. The student highlighted the additional use of supportive sessions in identifying and incorporating feedback in academic development. Furthermore, students stressed the “*use of innovation in providing feedback rather than paper-based feedback*”. The use of virtual

learning platforms and digitised student appointment platforms was proposed by academic staff as an innovative method of obtaining feedback.

Furthermore, students highlighted that explaining the comments made from formative feedback can be an immense help. The study concluded that involving students in such parameters would improve the quality of the feedback. The results yielded interesting facts through the data from the documentation analysis containing preliminary evidence that “*using the university marking descriptors for assessing inspires a quality assessment standard*”. The data also provide convincing evidence that there needs to be more “*student involvement in the feedback process*”. The group discussion and student feedback emphasise the inconsistency and appropriate level of feedback provided. Another noteworthy finding of this analysis is that many students need help understanding how to use feedback to improve their work.

4.5 Categorisation of Drivers to enhance assessment and feedback

Table 1 below presents the drivers developed by the data analysed through MICMAC. The driver categorisation comprises linkage, independent, dependent, and autonomous clusters. The categorisation was carried out, identifying each driver's influence and reliance. Drivers with both strong influence and reliance were categorised as linkage clusters (categorised as fundamental, E.g. D5), while drivers with both weak influence and reliance were categorised as autonomous clusters (categorised as insignificant). The drivers with a strong influence but a weak reliance were categorised as independent (categorised as significant, E.g. D1), and the drivers with a weak influence but a strong reliance were categorised as dependent (categorised as important, E.g. D9). Reflecting on each category, drivers are assessed and categorised significantly to enhance assessment and feedback. One critical finding in this study is that no drivers were categorised under the autonomous cluster, denoting all the drivers' significant role in enhancing assessment and feedback in HE curricula. The drivers listed here are further analysed to develop the level partitioning diagram.

Table 1 - Driver categorisation to enhance assessment and feedback.

Questions from NSS	Strategies identified through the study	Driver	Cluster Categorisation
Section 3: Assessments and Feedback			
1. The criteria used in marking have been clear in advance.	Use of theoretical frameworks or rubrics in explaining assessment requirements.	D1	Significant
	Using theoretical frameworks or rubrics to explain the assessment framework of how marks are awarded.	D2	Significant
	Providing context on what rubrics and feedback are and how they should be used in the curriculum framework for student performance and progression.	D3	Significant
	Using rubrics as an instrument in presenting feedback to students.	D4	Significant
2. Marking and assessment has been fair.	In-class detailed discussions on how the rubrics would be used in marking and assessment promoting 'fair play'.	D5	Fundamental
	Incorporating rubrics as a basis of feedback provided.	D6	Significant
	Use of other advice as secondary or within a separate section for further clarity in providing feedback.	D7	Significant

3. Feedback on my work has been timely.	Providing a clear session plan highlighting the feedback sessions planned.	D8	Fundamental
	Using several formative feedback sessions in appropriate timing, focusing on timely feedback provision.	D9	Important
	Use of consistency in providing feedback in relation to rubrics and assessment framework.	D10	Fundamental
	Using VLE in increasing student engagement and using innovative techniques in presenting feedback.	D11	Fundamental
4. I have received helpful comments on my work.	Use university descriptors and rubrics to produce quality and high feedback standards.	D12	Important
	Assimilate marking schemes and assessment requirements to produce more coherent guidance when providing feedback.	D13	Important
	Tutors should emphasise the importance of feedback and utilisation in improving academic performance by support sessions.	D14	Important
	Use of innovation such as VLE and focussing on student orientation in providing both formative and summative feedback.	D15	Important

5.0 Discussion

The literature analysis led to the need for advancing assessment settings to develop student academic performance. The findings from the literature point out several studies highlighting the current issues in assessment settings (Al-Kurdi et al., 2018; Cockett & Jackson, 2018). Some of the critical findings highlighted the tutors' misconceptions, lack of student support in the assessment setting and inadequacy in the discussion on assessment requirements. The conventional understanding of knowledge is outdated in current practice (Winstone and Carless, 2020). The assessments used in academia have more depth and range than previous measures. It is stressed that students tend to underperform in assessments not just due to a lack of knowledge but rather a lack of understanding of the assessment requirement (Cockett & Jackson, 2018; Day et al., 2018). The literature identifies the value added using a theoretical framework to explain the assessment requirement (Killingback et al., 2020). The findings from the study confirmed certain aspects stressed through the literature review. The document analysis further reinforced the use of rubrics in the assessment structure; however, tutors should have emphasised reflecting such rubrics in the feedback provided. The data gathered from the study stresses the current need for using rubrics as an instrument for improving student performance in curricula. It is identified that rubrics and adequately formatted feedback are eminent in advancing assessment settings and feedback reflecting academic development.

The literature identifies the importance of using rubrics in setting assessments and the function of the rubric in student academic development (Medland, 2014; Cockett & Jackson, 2018). However, previous studies lack correlation to the use of rubrics in developing assessments in a fair, transparent, and consistent manner reflecting academic development. The literature reviewed (Stevens et al., 2013; Marcuccio & Silva, 2019b) highlights the necessity of rubrics used to support the understanding of the theoretical framework. Emphasising the use of fair procedure in marking and assessment settings. The data obtained during the study indicated a need for changes in teaching strategies intended to promote fair procedure in marking and assessment protocol. The study revealed substantial inconsistency between feedback and the grades assigned by the rubric. The study further identifies critical

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3 discrepancies between using rubrics and achieving fair procedures in curricula. Most students insisted
4 that academic performance would be fruitful if the marking and assessment setting were based on the
5 rubric created and discussed in the classroom. Emphasising the need for rubrics was stressed in
6 achieving fair assessment and marking procedures.
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9 Timely provision of feedback is considered a critical aspect of student support and academic
10 development. Previous studies (Gomis et al., 2022a) identified that timely feedback could manifest
11 substantial support. Winstone and Carless (2020) and López-Pastor and Sicilia-Camacho (2015)
12 identify using formative feedback over summative feedback to enhance student performance. Feedback
13 could be ultimately used in two ways: developing an academic skill set and integrating coherent
14 academic skills to promote student progression. The data obtained from the study rebounded the themes
15 identified in the literature context. Most of the documental analysis and interviews by students led to
16 believe the lack of formative feedback used in modules. The data obtained highlights the need for more
17 emphasis on timely provision and consistency in feedback. The tutors highlighted the lack of student
18 engagement in obtaining and utilising feedback. In conclusion, formative feedback is vital for student
19 performance and progression; enhancing such function should be considered prominent in curricula.
20

21
22 Feedback provision is a skill in its form and denotes a strong influence over students' academic
23 achievement. Formative and summative feedback identified aspects of continuous improvement within
24 students' academic experience (Henderson et al., 2019). The literature identifies a significant
25 improvement in providing feedback, as the data evidenced out-of-date strategies in the current practice.
26 Even though the context of assessments might be different in each curriculum, the need for the strict
27 use of feedback policy is evident in academia. It further provides the benefit of using university
28 descriptors as rubrics in producing quality and high feedback standards. This feedback approach will
29 further assimilate the marking scheme and assessment requirement to produce more coherent guidance.
30 The documental analysis and interviews highlighted that incorporating the feedback received in
31 advancing student performance was not induced by students. The further need to accentuate feedback
32 and utilisation in improving academic performance through support sessions was recognised.
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5.5 Level partition of Drivers to enhance assessment and feedback

Figure 2 presents the level partitioning developed to enhance the assessment setting and provision of feedback in HE. The diagram is developed by thoroughly discussing the developed drivers and how they should be implemented to promote and enhance assessment and feedback. Antecedents and intersection functions in the ISM reachability set are used further to justify the driver positioning in the level partitioning diagram. The figure further explains how the drivers should be implemented and at what level to signify their reliance and influence to enhance assessment and feedback. The following figure could be a potential guideline for developing a dynamic framework, promoting the best practices in the assessment setting, and providing feedback in the HE context.

Figure 2 - Level partition of Drivers to enhance assessment and feedback.

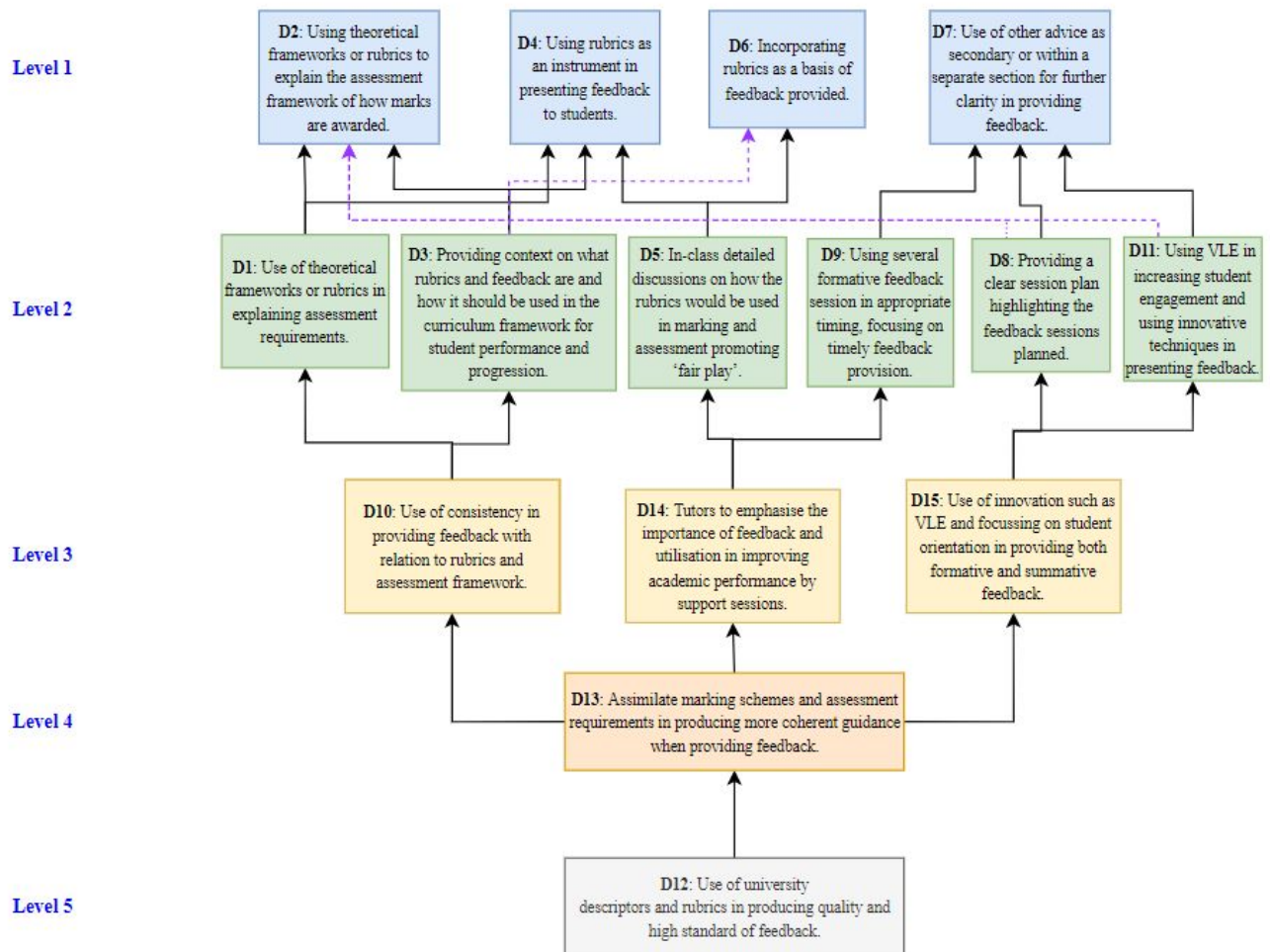


Figure 2 illustrates the Driver level of implementation and their relationship with other drivers (i.e. how next-level facilitation has occurred). The hierarchy is denoted by the levels, which are colour-coordinated to enhance visibility and readability, as highlighted on the lefthand side of the figure. The higher the level, the more significant; e.g., as the analysis, D12 is considered the foundation to enhance assessment and feedback in HE. The primary relationships are denoted with solid black arrows indicating the relationship between the facilitator and the dependent. Other sub-level relationships, which are not as strong as the primary relationships, are denoted with purple-dotted-arrows.

The study identifies that it is imperative that assessment setting and feedback provision needs to be aligned with the university policy (D12) as it is positioned as the lowest level 5. This must be facilitated in developing marking schemes and any guidance regarding assessment requirements (D13) at level 4. Doing so facilitates the quality setting and standards appropriate to the university policy. It

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3 should also be discussed that the marking scheme does reflect not only the traditional feedback or
4 rubrics used in assessment but also the formative/summative feedback provided and VLE
5 implementation (D15) to enhance student performance. Aligning with the university descriptors will
6 add a weighting to emphasise the importance of assessment and feedback to students (D14), facilitating
7 a much more proactive approach to feedback from students' perspectives. Also, having such alignment
8 promotes consistency in developing assessments and providing feedback (D10). All the above drivers
9 need to be carefully implemented as they are at level 3, which the level 4/5 drivers facilitate and as they
10 influence level 2 drivers.
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12 Each of the level 3 drivers will help to influence a vital element in the assessment setting and
13 feedback provision in the level 2 driver, as depicted in Figure 2. E.g., consistency influences the easier
14 implementation of assessment frameworks/rubrics (D1) and how they must be used to improve student
15 performance (D3). Emphasis on the importance of assessment and feedback will influence detailed
16 discussions and how it is a "fair procedure" in grading (D5), and students will benefit from a clear and
17 timely feedback provision (D9). The use of VLE influences clarity in how the assessment and feedback
18 will be provided during their learning and promotes further student engagement, catering to their
19 progression. From the above underpinning theories and drivers, the level 1 drivers are the drivers that
20 are "visible" and in the front line of assessment setting and feedback provision. The level partitioning
21 identifies that most level 2 drivers influence level 1 drivers either directly or indirectly. In a nutshell, a
22 successful implementation should consist of using theoretical frameworks/rubrics in explaining
23 assessment and grading (D2), using them in assessing and providing feedback (D4), having theoretical
24 frameworks/rubrics as the basis of feedback (D6), nonetheless using secondary means such as
25 annotations, recordings, etc. separately to provide further clarity to assessment grading and feedback
26 (D7). All the drivers below need to be implemented to enhance assessment and feedback setting in HE.
27 Some of these drivers may be already implemented, but with a strategic underpinning, as depicted in
28 Figure 2 above, the best practice may be achieved and sustained.
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31 NSS data was assessed before and after implementing the above drivers to validate the driver
32 and the level partitioning diagram. The NSS benchmark for Assessment and feedback across the UK in
33 2022 was 68.5%. This is an overall decline from the previous years of NSS data. However, the sector
34 benchmark for the BE-related courses was 64.0%, lower than the national average. The NSS score
35 before the driver implementation was higher than the national and the sector average. The NSS score
36 has improved to 77.7%, which is higher than the recorded percentiles of the national average, sector
37 average and the previous year's benchmarking.
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41 **6.0 Conclusions and Recommendations**

42 This study has shown that HEIs have yet to grasp the effectiveness of the concept of assessment
43 setting and the feedback provided. Data obtained indicate a strong relationship between academic
44 achievement, assessment setting and provision of effective feedback. Identifying critical challenges and
45 issues from the HE context, 15 drivers were developed to enhance assessment setting and feedback
46 provision. Of the 15 drivers, four drivers were considered fundamental (under the linkage category),
47 six were considered significant that has a significant impact on the quality of assessment and feedback
48 (under the independent category), and five were important that facilitated the other drivers to boost the
49 impact on enhancing the quality of assessment and feedback (under the dependent category). Notably,
50 no driver was identified as non-significant (under the autonomous category), ensuring that all the drivers
51 have a vital role in enhancing assessment and feedback in HE. Considering critical themes during driver
52 development, the study recognised two most crucial elements: a) the use of rubrics and b) inclination
53 towards VLE needs to be driven by the HEIs to facilitate quality assurance in HE that has a direct impact
54 on HE student progression.
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57 This study could be the first to develop a decisive guideline or a provisional framework in the
58 assessment setting and feedback provision under each question across the HE context. The level
59 partitioning developed is the novelty of the study, and it establishes that assessment and feedback need
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to be underpinned by the university policy and fed into the assessment regime and marking scheme. Although some of the drivers (e.g., level 1) could have already been incorporated into the HE context, the study asserts the use of all the drivers as illustrated in the level partitioning diagram. Therefore, the drivers developed and positioned under each level could be of utmost importance to academics, tutors, HE staff, HE policymakers, regulators and HEIs to identify how to improve assessment setting and feedback provision in HE curricula. Using the developed level partitioning as a tool for quality assurance is highly advised as it provides the best practice in assessment setting and feedback provision. This will ensure successful student progression, continuous educational improvement, and promotion of best practices within higher education academics and academic institutions. Employing the study's findings to enhance assessment and feedback across different sectors within higher education is also strongly recommended.

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Quality Assurance in Education

Figure 1 – Methodology of the study

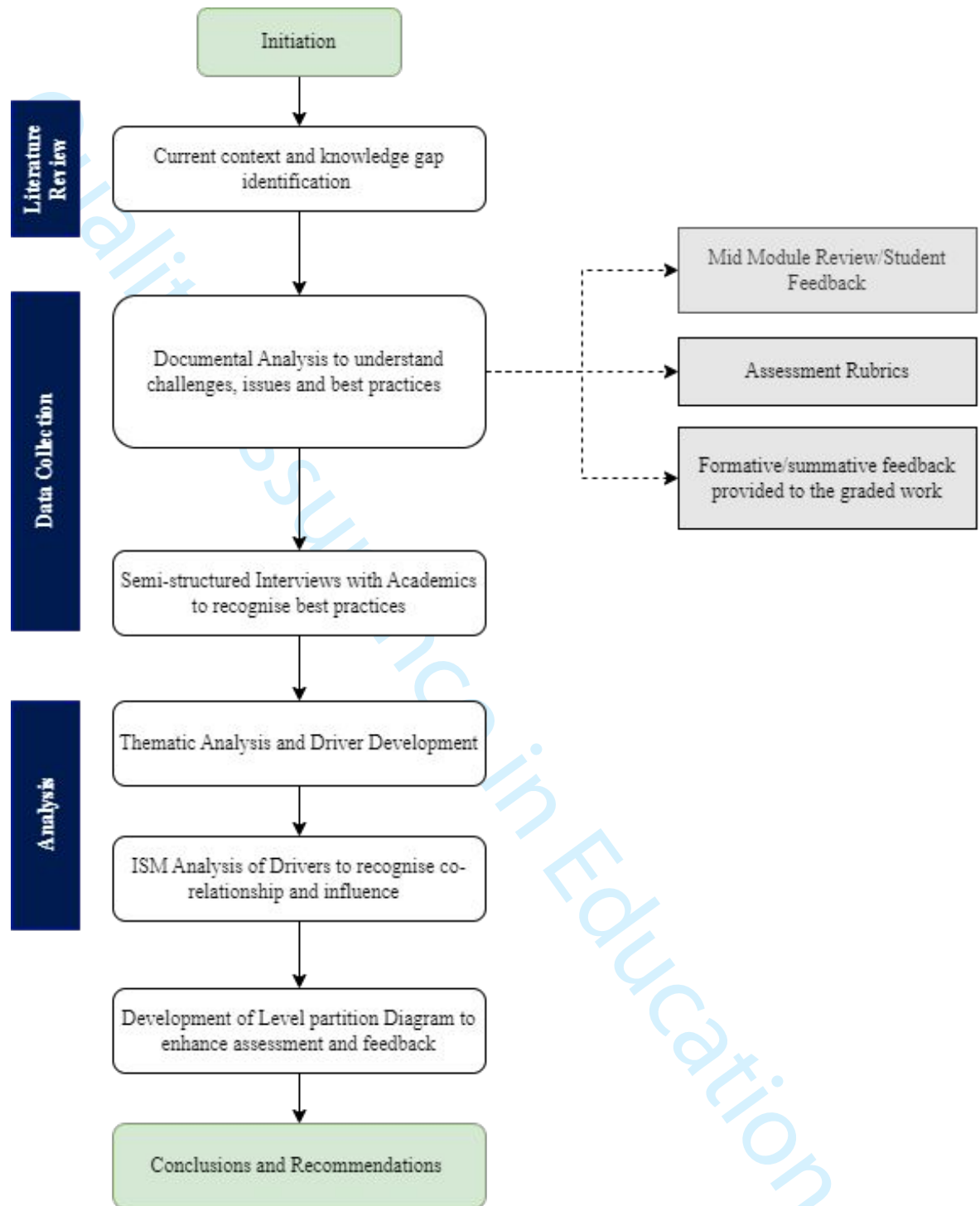
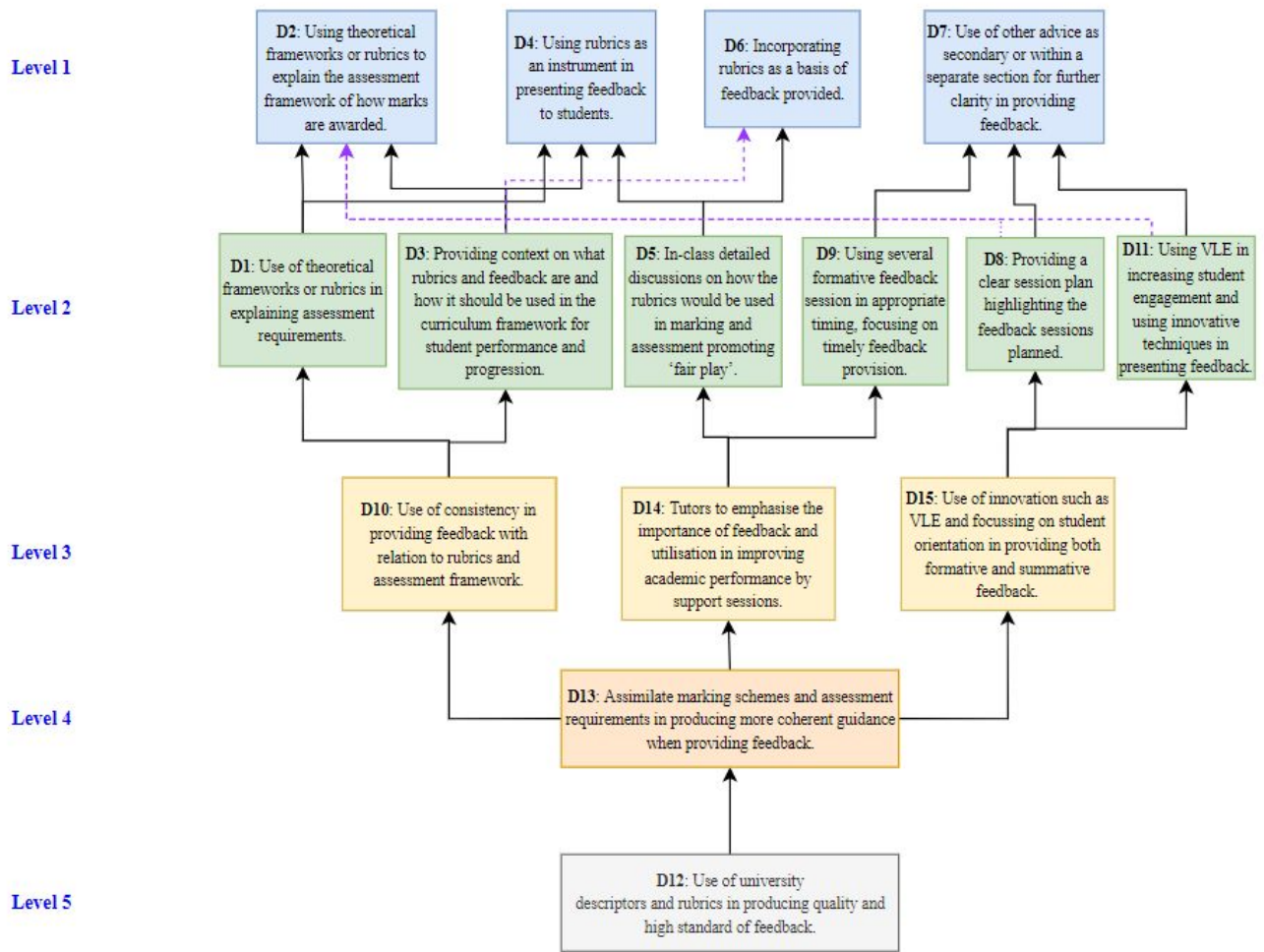


Figure 2 - Level partition of Drivers to enhance assessment and feedback



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Table 1 - Driver categorisation to enhance assessment and feedback

Questions from NSS	Strategies identified through the study	Driver	Cluster Categorisation
Section 3: Assessments and Feedback			
1. The criteria used in marking have been clear in advance.	Use of theoretical frameworks or rubrics in explaining assessment requirements.	D1	Significant
	Using theoretical frameworks or rubrics to explain the assessment framework of how marks are awarded.	D2	Significant
	Providing context on what rubrics and feedback are and how they should be used in the curriculum framework for student performance and progression.	D3	Significant
	Using rubrics as an instrument in presenting feedback to students.	D4	Significant
2. Marking and assessment has been fair.	In-class detailed discussions on how the rubrics would be used in marking and assessment promoting 'fair play.	D5	Fundamental
	Incorporating rubrics as a basis of feedback provided.	D6	Significant
	Use of other advice as secondary or within a separate section for further clarity in providing feedback.	D7	Significant
3. Feedback on my work has been timely.	Providing a clear session plan highlighting the feedback sessions planned.	D8	Fundamental
	Using several formative feedback sessions in appropriate timing, focusing on timely feedback provision.	D9	Important
	Use of consistency in providing feedback in relation to rubrics and assessment framework.	D10	Fundamental
	Using VLE in increasing student engagement and using innovative techniques in presenting feedback.	D11	Fundamental
4. I have received helpful comments on my work.	Use university descriptors and rubrics to produce quality and high feedback standards.	D12	Important
	Assimilate marking schemes and assessment requirements to produce more coherent guidance when providing feedback.	D13	Important
	Tutors to emphasise the importance of feedback and utilisation in improving academic performance by support sessions.	D14	Important
	Use of innovation such as VLE and focussing on student orientation in providing both formative and summative feedback.	D15	Important