

# RECONCEPTUALISING HIGH-RISK MODULES TO HIGH-PRIORITY MODULES:



## EXPLORING INDICATORS OF RISK AND IMPACT, AND CREATING A METHODOLOGY FOR IDENTIFICATION

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January 2026

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**UFS**  
CENTRE FOR TEACHING  
AND LEARNING (CTL)

# **Report: High-Priority Modules Project**

*Reconceptualising High-Risk Modules to High-Priority Modules: Exploring indicators of risk and impact, and creating a methodology for identification*

January 2026

## Executive summary

This report, *Reconceptualising High-Risk Modules to High-Priority Modules: Exploring Indicators of Risk and Impact, and Creating a Methodology for Identification*, presents an evidence-based framework for identifying and supporting modules that most significantly influence student success at the University of the Free State (UFS). It forms part of the institution's broader *Siyaphumelela* initiative, which aims to enhance student success through data-informed learning and teaching practices.

### Purpose and Rationale

Traditional approaches to identifying “high-risk” modules rely largely on low pass rates as indicators of academic difficulty. However, such a binary categorisation provides a limited view of the complex factors affecting student progression and success. This research reconceptualises the notion of “risk” by integrating both **risk** and **impact** indicators to define **high-priority modules**, shifting the focus from only success rates to also include modules that influence large student cohorts, multiple faculties, or serve as key prerequisites in programmes

By shifting from “at-risk” to “high-priority,” the project enables UFS to focus institutional resources and support on modules where targeted interventions can yield a better systemic benefit, improving both module-level success and overall throughput and success rates.

### Methodology

The research follows an evidence-based, multi-phased design aligned with the principles of scholarly teaching.

Phase 1 established and validated a new set of criteria and indicators for identifying high-priority modules and explored the traits of these identified high-priority modules. These included a combination of **indicators** (such as pass rate, repeat rate, enrolment size, cross-faculty reach, prerequisite importance and student progression pathways). Institutional data (PowerHeda, Peoplesoft from 2022–2024) were analysed using descriptive and inferential statistics to identify correlations, patterns, and clusters of risk and impact across all UFS faculties. Modules were then classified into low-, medium-, and high-priority categories, followed by faculty consultations to confirm and refine the results.

The first steps in phase 2 explored the trends and characteristics of these high priority modules and identified possible actions or practical interventions based on these findings.

## Key Findings

The study produced a validated list of 104 undergraduate high-priority modules based on combined *risk* (e.g., pass rate, repeat rate, dropout rate) and *impact* (e.g., enrolment size, service module status, prerequisite relationships) indicators. Across all seven faculties for all three campuses of the UFS, including Economic and Management Sciences, Education, Health Sciences, Humanities, Law, Natural and Agricultural Sciences, and Theology and Religion, comprehensive lists of high-priority modules were compiled, forming the foundation for targeted support and intervention planning. These modules collectively represent the areas where student bottlenecks most frequently occur.

Further mapping of these modules through staff surveys revealed the following key trends:

- **Lecturer Development:** Most lecturers have substantial teaching experience, but many have limited engagement with structured curriculum design and assessment alignment frameworks such as notional hours, backward design or Bloom's taxonomy.
- **Assessment Practices:** A large proportion of modules use both summative and formative assessments, contradicting self-reported continuous assessment use. Potential over-assessment and limited use of diagnostic assessment tools were observed, with limited formal backward design alignment strategy used.
- **Learning and Teaching Challenges:** Lecturers reported challenges such as poor class attendance, weak foundational or prerequisite knowledge, limited study skills, and limited motivation among students. Heavy content loads were also reported.
- **Support Mechanisms:** While lecturers access institutional supports such as A\_STEP tutorials and Teaching and Learning Manager consultations, these, as well as other support resources, are underutilised and unevenly distributed across faculties.
- **Positive Practices:** Many lecturers demonstrate commitment to real-world application, critical thinking development, and student engagement.

## Implications

Identifying high-priority modules provides a foundation for targeted interventions that can be scaled across faculties, such as:

- Classroom engagement diagnostics (e.g., CLASSE surveys);
- Focused professional development on assessment design and student motivation;
- Curriculum renewal and alignment workshops;
- Prioritisation of these modules in terms of support, including timetable design (including class-, test- and examination timetables) and enhanced collaboration between lecturers, faculty managers, and support units.

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# 1. Background and problem statement

## 1.1. At-risk modules and how they are identified at higher education institutions

Identifying high-risk modules has been a key consideration in higher education research in general, where researchers grapple with why they have modules that hinder students from being successful and what they can do to improve these modules' performance. The aim of these types of research is usually to focus on identifying "at-risk" or "high-risk" modules; thus, modules that have shown low success rates that hinder students from obtaining their degrees in an expected timeframe. Most researchers create binaries, categorising modules as either high-risk or low-risk. Some more nuanced research establishes a continuum of "riskyness" (sic) (Mutanga and Kadyamatimba, 2017), which is then used to develop interventions within these modules to improve success rates.

## 1.2. A need for more than "at-risk" identification

Through discussions at different University of the Free State (UFS) institutional forums, related project meetings and convenings such as the Siyaphumelela initiative and conference, advising reports, and faculty feedback, it had become evident that specific bottlenecks to student success seemed to recur. However, interpretation of various sources of data and evidence had not been formally integrated to identify trends and recurrences in an evidence-based manner.

The initial response was to consider and explore modules that could be deemed at-risk due to a recurrence in low pass rates over a period of time, as was the norm in most higher education institutions. However, merely looking at module pass rates would not provide a holistic and perhaps true reflection on whether these modules pose a risk for throughput and would exclude many other aspects that impact and reflect learning and teaching, curriculum design, and programme design. For this research, we thus decided to take it a step further, to include more and a variety of elements (or indicators) that could help us to identify a module as "at-risk" while also including what we deem "impact". The idea is to explore at-risk modules, but, simultaneously, a risk that significantly impacts many students, faculties, and degree programmes (for example, large enrolment numbers, or a module that serves the faculty of education as well as natural sciences). Identifying modules based on these criteria would mean we could thus *prioritise* our time and resources to these modules in terms of interventions and support measures, ultimately directing our resources where it has the most considerable impact. Therefore, these modules with significant risk and impact would be categorised as "high-priority modules". The first step in the research would thus be to create the

criteria to identify high-priority modules. Only then could one design and implement interventions that extensively support the modules' success rates.

If we could develop new criteria, measures and methodologies to identify what were commonly coined high-risk modules, these same approaches could be applied at various higher education institutions in South Africa to aid their student success.

Identifying our own UFS high-priority modules could serve faculties to support them in reviewing their entire programme offerings, as well as curriculum design at a departmental and modular level. It should also increase student success rates at a modular level and, with complete faculty buy-in and responsiveness, impact overall throughput rates of students within certain degree offerings.

Interventions at a modular level would impact the module design, assist the lecturers in becoming reflective practitioners, and create developmental opportunities for them. Ultimately, this research would improve the modules' overall module design, offering, and module pass rates, which have an impact on larger numbers of students, other modules and different departments and faculties.

## 2. Theoretical foundation: An evidence-based approach

We based this research on the principles of scholarly teaching, which posits that teaching practitioners should continuously be reflective and follow evidence-based approaches to their teaching (Emplit and Zhang, 2020). An evidence-based approach allows us to understand why we see certain outcomes in our teaching: "We need to 'know' – to have evidence about the performance of our students to support them to achieve high quality educational outcomes" (Bruniges, 2005: 102). Some ways in which evidence can be used are as a diagnostic tool, as well as to improve programme design. Both these approaches are followed in our research. The four components of evidence-based practice will also frame our research process (González, 2009); however, for the sake of this article, we will only focus on components 1 and 2:

**Table 1: An evidence-based approach to learning and teaching**

PHASE 1		PHASE 2	
Component 1: What's wrong (diagnostic)	Component 2: Why	Component 3: Intervention	Component 4: Evaluation and modification
Use disaggregated longitudinal cohort data to determine: 1) Which student groups are less successful	Collect, analyse, and use data from other sources (focus groups, surveys, literature reviews) to identify the	Use data from Component Two to design new interventions, or revise current ones, to	Collect, analyse, and use evaluation data to answer: 1) To what extent did the interventions (including

<p>than others (i.e., identify equity gaps in student success)? 2) Which high-enrolment courses have the lowest success rates?</p> <p><i>We do add additional aspects to this diagnosis as part of the conceptualisation process.</i></p>	<p>underlying factors (barriers or challenges) impeding student success.</p> <p><i>Our research would link this to why modules are high-priority modules in the first place.</i></p>	<p>address the underlying factors impeding student success effectively.</p> <p>Review and consider changes to existing college practices and policies that impact the underlying factors impeding student success.</p> <p><i>We collaborated closely with the faculties, faculty managers and relevant lecturers.</i></p>	<p>policy changes) effectively address the underlying factors impeding student success? 2) To what extent did the interventions increase student success?</p> <p>Make modifications.</p>
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Furthermore, to use evidence appropriately, we followed Peter Felten’s five principles of good SoTL practices, but also adjusted these to better fit the research design of this multi-layered project (Felten, 2013: 122): a) Our inquiry was focused on student learning *as well as academic staff development*; b) Our research was placed within the context of the UFS *and specifically considered the faculty context, all the way down to the nature of the modules*; c) We aimed to follow a sound research methodology; d) It was done in partnership with students *and staff members*; and e) Relevant data and results was made appropriately public *considering confidentiality in terms of lists of modules initially, but with the aim to provide a formal article publication in the end.*

### 3. Research questions

Our main research question posed: How do we identify high-priority modules based on bottleneck criteria, and design, develop and implement interventions to address these bottlenecks?

The secondary research questions aimed to answer this question were divided into phases as follows:

#### PHASE 1:

- a. What criteria should be used to define and identify high-priority modules based on risk and impact towards student success?
- b. What are the high-priority modules at the UFS?
- c. What learning and teaching support already exists within these high-priority modules?

## PHASE 2:

- d. What are the reasons why these high-priority modules are creating bottlenecks in student learning?
- e. How can we address these bottlenecks in selected high-priority modules through targeted learning and teaching interventions?

For the sake of this report, we only focus on the secondary research questions a, b, c and d as part of phase 1 and 2. (We, however, do include a discussion of the entire research design for better contextualisation and understanding of the reader.)

## 4. Research aims and objectives

This research project served to define high-priority modules and ultimately implement interventions within these modules. It formed part of a larger project focused on student success at the UFS, called the Siyaphumelela initiative, which is also a national initiative.

The following overarching aims refer:

### PHASE 1:

- a) To define and set criteria for high-priority modules within the UFS.
- b) To identify high-priority modules at the UFS (according to set criteria)
- c) To map current learning and teaching support within identified high-priority modules

### PHASE 2:

- d) To explore why high-priority modules create bottlenecks in student learning through various qualitative and quantitative measures.
- e) To create and implement various learning and teaching interventions to overcome these bottlenecks in high-priority modules (in collaboration with relevant stakeholders).
- f) To continuously monitor and evaluate implemented interventions and the impact thereof on high-priority modules.

In alignment with the secondary research questions, for this article our focus will be on the very first two aims within phase one of this project.

## 5. Research design: Data collection, sampling, and analysis

For the overarching project, data was collected in various steps in two phases (and mostly sequential), as the project progressed. The target population for this project were all UFS faculties and undergraduate students, and sampling progressed and evolved with each step of the project. For this report, **steps one to five** of the research process are relevant, as illustrated below:

**Table 2: Research design of the high-priority project**

Step in research design	Data collection	Sampling	Data analysis
<b>PHASE 1</b>			
STEP 1: Create definitions and criteria for high-priority modules approved by the Academic Committee (2024) Indicators: List of definitions and criteria	Literature review: we consider different previous definitions and approaches to high-risk work.  Institutional data: PowerHeda and Peoplesoft; Learning Management Systems (LMS): Blackboard. Data collected from 2023 and 2024.	We start with the entire UFS population and all module offerings within all 7 faculties.	Descriptive statistics: 1) Means, medians, standard deviations: To understand the central tendency and variability of the data 2) Frequencies and percentages: To see the distribution of categorical data
STEP 2: Identify high-priority modules and get faculty buy-in (2025) Indicators: List of approved high-priority modules	Institutional data: PowerHeda and Peoplesoft; Learning Management Systems (LMS): Blackboard. Data collected from 2023 and 2024.	We start with the entire UFS population and all module offerings within all 7 faculties.  This is then reduced to a sample (list) of identified high-priority modules.	Inferential statistics: 1) Correlation analysis: To identify relationships between variables 2) Regression analysis: To predict outcomes based on multiple factors 3) t-tests or ANOVA: To compare means between groups 4) Weighting, scoring and classification
STEP 3: Map current learning and teaching support within identified high-priority modules. (2025) Indicators: Completed mapping documents	QUANT and QUAL - Staff questionnaire shared with lecturers of the specific modules; review module documents (study guides, assessments, etc.)	Modules chosen to participate = Purposive sampling: Only include modules deemed high-priority, and which faculties approve: relevant TLMs, vice-deans, assistant deans, subject-heads and lecturers. Questionnaire then circulated to lecturers only.	Descriptive statistics, thematic analysis, document analysis
<b>PHASE 2</b>			
STEP 4: Explore and establish reasons that modules are high-priority modules (2025)	QUANT: use institutional and module data to identify trends (correlations) QUAL: staff questionnaire; staff interviews	Purposive sampling: Only include modules deemed high-priority and which faculties approve using	Paired sample T-tests; Descriptive statistics; thematic analysis

		interventions. Only relevant lecturers included.	
STEP 5: In consultation with lecturing staff and faculties, develop an intervention plan for each identified high-priority module (2025). Indicators: Documented intervention plans	N/A	N/A	N/A
STEP 6: Implement interventions to address bottlenecks (2025, 2026)	N/A	N/A	N/A
STEP 7: Implement various monitoring and evaluation measures to determine the impact of implemented interventions on the high-priority modules (2025, 2026)	Staff questionnaires; student module evaluations and questionnaires; staff interviews.	Purposive sampling: Only include modules deemed high-impact and which faculties approve undergoing interventions. Only relevant lecturers and students included.	Paired sample T-tests; Descriptive statistics Thematic analysis

## 6. Ethical considerations

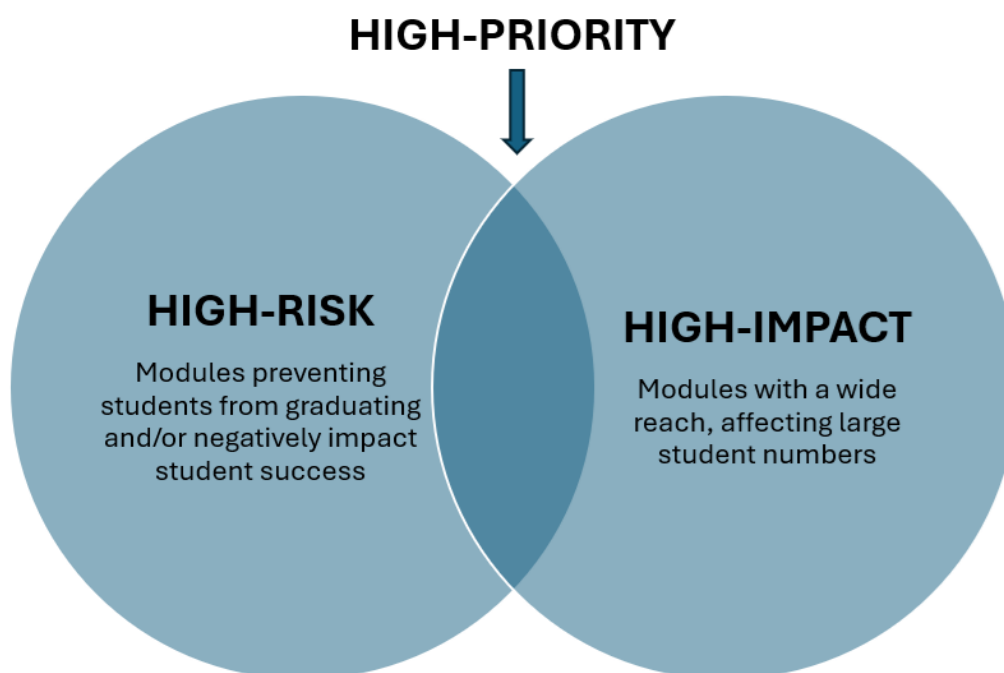
Approval to identify modules based on different criteria was granted at the UFS Academic Committee (AC) of November 2024, which included representatives of all faculties. Any additions, concerns or adjustments proposed could be raised at this AC discussion. Ethical approval was also obtained for the project (UFS-HSD2025/0020). Informed consent was gathered from staff who teach the identified modules when they completed the questionnaires online. Lecturer participation was thus voluntary.

## 7. Findings to question (a): A nuanced methodology and a new set of criteria to identify high-priority modules

This section aims to answer the question: “What criteria should be used to define and identify high-priority modules based on risk and impact towards student success?”.

## 7.1. Defining high-priority modules

Firstly, based on our university context and needs, and our aim with this project, an intentional shift was made from high-risk modules to what we coined high-priority modules, as illustrated below:



**Figure 1: Defining high-priority modules**

We thus pose a definition for high-priority modules, at the intersection of high-risk and high-impact: “High-priority modules at the University of the Free State are modules with a large reach that prevent students from graduating and/or negatively impact their success”.

## 7.2. Method of identifying high-priority modules

This section outlines the algorithmic approach used to identify academic modules classified as “High Priority.” The objective of this algorithm is to utilise historical and current operational data to quantify risk and impact factors, allowing for targeted intervention and resource allocation. The model utilises a composite scoring index based on comparative faculty performance. Raw data was sourced directly from the Operational Data Store (ODS) to ensure data integrity and real-time relevance, considering data of modules from all faculties for a three-year period (longitudinal).

The high-risk indicators were based on quantitative academic metrics we analysed. The specific academic metrics used in this model were selected based on the following validation framework:

1. **Predictive validity:** Selected metrics must have a strong historical correlation with student attrition or delayed completion.
2. **Standardisation:** Metrics must be consistently definable and capturable across all faculties to ensure the algorithm remains department-agnostic.
3. **Actionability:** The metrics must point to risk factors that can be mitigated through academic intervention.

The high-impact indicators were based on how consequential a module is to the faculty, e.g. larger class size, bigger modules and prerequisite modules have different contexts that need to be taken into account.

An extensive process was followed to identify indicators to determine high-priority modules. A draft list of modules was identified, and meetings were held with faculties to discuss the lists. Feedback from the meetings was used to refine the indicators.

The algorithm follows a five-step process to transform raw data into an actionable priority score. An explanation of this process follows:

**Step 1: Indicator selection and normalisation**

To ensure the model accounts for varying class sizes (e.g., comparing a class of 15 students to a class of 500), all raw counts were converted into rates (normalised percentages). The indicators that were selected can be seen below:

**Table 3: High-priority module indicators**

<b>High-risk indicators</b>	<b>High-impact indicators</b>
<ul style="list-style-type: none"> <li>• <b>Pass rate:</b> The percentage of students who do not complete the module. A <u>low</u> rate signals higher risk.</li> <li>• <b>Pass with distinction:</b> The percentage of students who pass the module with distinction. A <u>low</u> rate signals higher risk.</li> <li>• <b>Incomplete:</b> The percentage of students who do not complete the course. A <u>high rate</u> signals higher risk.</li> <li>• <b>Discontinued:</b> The percentage of students who drop out of the module. A <u>high rate</u> signals higher risk.</li> <li>• <b>Repeat rate:</b> The percentage of students who are repeating the</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Number of students enrolled:</b> The more students enrolled, the wider the reach, the higher the impact.</li> <li>• <b>Cross-faculty modules (service modules):</b> When students from multiple faculties are enrolled in the module, the more qualifications are affected, and the higher the impact.</li> <li>• <b>Is a prerequisite:</b> This metric counts the number of modules that depend on the successful completion of this module. A higher count indicates greater impact, as this module acts as a gateway to further studies. Delays or failures in this module can create a bottleneck,</li> </ul>

<p>module. A <u>high rate</u> signals higher risk.</p> <ul style="list-style-type: none"> <li>• <b>No admission to exam:</b> The percentage of students who do not gain admission to the exam (if relevant). A <u>high rate</u> signals a higher risk.</li> <li>• <b>Reassess exam:</b> The percentage of students who need to write a reassessment exam (if relevant). A <u>high rate</u> signals higher risk.</li> <li>• <b>Special exam:</b> The percentage of students who need to write a special exam (if relevant). A <u>high rate</u> signals higher risk.</li> </ul>	<p>potentially hindering student progress.</p> <ul style="list-style-type: none"> <li>• <b>Has prerequisites:</b> This metric indicates how many modules students must successfully complete before they can enrol in this module. A higher number of prerequisites may signify a more advanced module or one with specific knowledge dependencies. This can influence the time it takes for students to reach and complete this module.</li> <li>• <b>Module credits:</b> A proxy for academic weight; failure here disproportionately damages a student's average.</li> </ul>
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### **Step 2: Contextual benchmarking (faculty percentile ranking)**

A raw rate (e.g., a 20% failure rate) holds different meanings in different academic contexts (e.g., Theology vs. Humanities). To correct for this discipline-specific variance, the algorithm calculates the percentile rank of each module within its specific faculty. This determines how a specific module compares only to its peers within the same discipline. A module is not penalised for the general difficulty of its subject matter, but rather for being an outlier compared to similar modules.

### **Step 3: Composite index calculation**

The algorithm generates a mathematical aggregation of “Risk” and “Impact”. The final scores are derived by summing the average weighted scores of the normalised indicators, resulting in a single “priority score” for every module.

### **Step 4: Discretisation (binning)**

To translate the composite scores into management categories, modules are sorted into distinct “priority tiers” based on the following distribution:

1. High Priority: 95% – 100% (intervention required)
2. Medium Priority: 65% – 94% (monitoring required)
3. Normal Priority: 35% – 64%
4. Low Priority: 0% – 34%

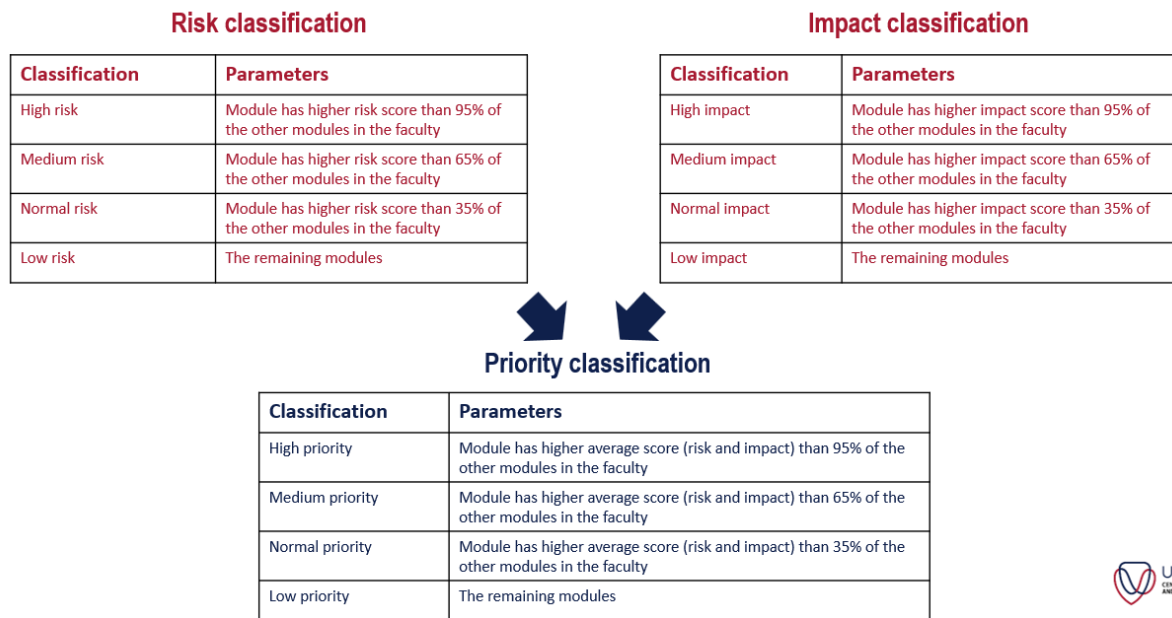
### **Step 5: Faculty verification**

The quantitative outputs of the algorithm serve as a decision-support tool, not a final judgment.

1. Draft lists are generated based on the bins above.

2. Lists are presented to faculty management for qualitative review.
3. Contextual nuances (e.g., new lecturers, curriculum changes) are discussed to validate the final “High-Priority” list.

The image below summarises the classification process:



**Figure 2: Priority module classification**

## 8. Findings to question (b): List of high-priority modules identified

This section aims to answer: “What are the high-priority modules at the UFS?”.

Using the analyses as indicated in the previous section, all modules across the UFS were ranked based on priority and included in a faculty list (low-, medium- and high-priority). However, the focus was on those in the high-priority range. The modules were first identified based on the chosen refined analysis. After meetings with the relevant faculties and inputs from the TLMs, these lists were finalised. (Some reasons for excluding modules from the final lists include the following: modules are already part of a re-circulation process; modules are already part of a larger intervention or project; modules are being phased out; all modules across all campuses should be included for alignment). In some instances, modules were added based on certain challenges indicated by the TLM. All initial modules identified are included in the tabled lists below, with those modules added afterwards highlighted in blue, and those that were removed stricken through. **In the end, a 3-year longitudinal data exploration was done,**

analysing 2779 modules from seven faculties across all three campuses, with 129 modules identified as high priority.

High-priority list 1: Economic and Management Sciences

ModuleCode	ModuleCampus	Multi_Class_Risk	Multi_Class_Impact	Multi_Class_Priority
EECF1614-QQ	Qwaqwa	Medium risk	High impact	High priority
EECF1624-Bfn	Bloemfontein	High risk	High impact	High priority
EACC2608-QQ	Qwaqwa	High risk	High impact	High priority
EACC3708-Bfn	Bloemfontein	High risk	High impact	High priority
EACG3708-Bfn	Bloemfontein	High risk	High impact	High priority
EMFM3708-Bfn	Bloemfontein	High risk	High impact	High priority
EFIN2708-Bfn	Bloemfontein	Medium risk	High impact	High priority
EFIN3708-Bfn	Bloemfontein	High risk	High impact	High priority
ETAX3708-Bfn	Bloemfontein	Medium risk	High impact	High priority
EMAC2714-Bfn	Bloemfontein	Medium risk	High impact	High priority
EMNF2724-Bfn	Bloemfontein	High risk	High impact	High priority
EFEC2624-South	South	High risk	Medium impact	High priority
EMAC2724-QQ	Qwaqwa	Medium risk	High impact	High priority
EACC2608-Bfn	Bloemfontein	High risk	High impact	High priority
EACC3708-QQ	Qwaqwa	High risk	Medium impact	High priority
EECF1614-BFN	Bloemfontein	Medium risk	High impact	High priority
EECF1624-QQ	Qwaqwa	High risk	High impact	High priority
EFEC2624-QQ	Qwaqwa	High risk	Medium impact	High priority
EFES2714-BFN	Bloemfontein	Medium risk	Medium impact	Medium priority
EHRM1514-BFN	Bloemfontein	Medium risk	Medium impact	Medium priority
EHRM1514-QQ	Qwaqwa	Medium risk	Medium impact	Medium priority
ELRM2624-BFN	Bloemfontein	Medium risk	Medium impact	Medium priority
EMFM3708-BFN	Bloemfontein	High risk	High impact	High priority

High-priority list 2: Education

ModuleCode	ModuleCampus	Multi_Class_Risk	Multi_Class_Impact	Multi_Class_Priority
AGAE1508	Bloemfontein	Medium risk	Medium impact	High priority
EALT1508	Qwaqwa	Medium risk	High impact	High priority
TEGC1614	Bloemfontein	High risk	Medium impact	High priority
TEGC1624	Bloemfontein	High risk	Medium impact	High priority
TEGC2714	Bloemfontein	Medium risk	Medium impact	High priority
TEGC2724	Bloemfontein	High risk	High impact	High priority
MTCF1604	Qwaqwa	High risk	Medium impact	High priority

NSTC2614	Qwaqwa	High risk	Medium impact	High priority
MTHI1614	Qwaqwa	Medium risk	High impact	High priority
MTHI1624	Bloemfontein	High risk	Medium impact	High priority
SSCI2624	Bloemfontein	High risk	Medium impact	High priority
HITV4705	Bloemfontein	Medium risk	Medium impact	High priority
WILF3606	Bloemfontein	Medium risk	High impact	High priority
WILI3606	Bloemfontein	Medium risk	High impact	High priority
WILI4700	Bloemfontein	Medium risk	High impact	High priority
WILV3606	Qwaqwa	Medium risk	High impact	High priority
WILV4700	Bloemfontein	Medium risk	High impact	High priority

### High-priority list 3: Health Sciences

<b>ModuleCode</b>	<b>ModuleCampus</b>	<b>Multi_Class_Risk</b>	<b>Multi_Class_Impact</b>	<b>Multi_Class_Priority</b>
ANBG1524	Bloemfontein	Medium risk	High impact	High priority
OCTC3708	Bloemfontein	Medium risk	Medium impact	High priority
PHBG2616	Bloemfontein	High risk	High impact	High priority
PHBG3716	Bloemfontein	High risk	High impact	High priority
PHBG2626	Bloemfontein	Medium risk	High impact	High priority
ANBG2616	Bloemfontein	Medium risk	High impact	High priority
PHBG3726	Bloemfontein	Medium risk	High impact	High priority
ANBG2626	Bloemfontein	Medium risk	High impact	High priority
NNUR3716	Bloemfontein	High risk	Medium impact	High priority
PHBN3712	Bloemfontein	High risk	Normal impact	High priority
NVRT2626	Bloemfontein	High risk	Normal impact	High priority
ANBP1608	Bloemfontein	Medium risk	Medium impact	High priority
PHBE3722	Bloemfontein	Medium risk	Medium impact	High priority
CSUR5810	Bloemfontein	High risk	Normal impact	High priority
NNUR3726	Bloemfontein	Medium risk	Medium impact	High priority
CSUR5820	Bloemfontein	Medium risk	Medium impact	High priority
MSUR4810	Bloemfontein	Medium risk	High impact	High priority
BIKG1508	Bloemfontein	Medium risk	Medium impact	High priority
SCAN1514	Bloemfontein	High risk	Normal impact	High priority
CIAM5820	Bloemfontein	Medium risk	Medium impact	High priority

### High-priority list 4: Humanities

<b>ModuleCode</b>	<b>ModuleCampus</b>	<b>Multi_Class_Risk</b>	<b>Multi_Class_Impact</b>	<b>Multi_Class_Priority</b>
POLS1514	South	High risk	Medium impact	High priority
POLS1524	South	Medium risk	Medium impact	High priority
POLS2614	Bloemfontein	Medium risk	High impact	High priority

POLS2624	Bloemfontein	High risk	High impact	High priority
POLS2634	Qwaqwa	High risk	High impact	High priority
POLS2644	Bloemfontein	High risk	High impact	High priority
POLS3714	Bloemfontein	High risk	Medium impact	High priority
POLS3734	Bloemfontein	High risk	Medium impact	High priority
ENGL3718	Qwaqwa	Medium risk	High impact	High priority
ENGL3728	Qwaqwa	Medium risk	High impact	High priority
SOCT3718	Qwaqwa	Medium risk	High impact	High priority
ENGL2614	Qwaqwa	High risk	High impact	High priority
AFRL1624	Bloemfontein	High risk	High impact	High priority
HKGK2724	Bloemfontein	High risk	Medium impact	High priority
ENGL2724	Bloemfontein	Medium risk	High impact	High priority
HKGK3728	Bloemfontein	Medium risk	Medium impact	High priority
HKGK3718	Bloemfontein	Medium risk	High impact	High priority
HKGK2614	Bloemfontein	Medium risk	Medium impact	High priority
ANTC1624	Bloemfontein	Medium risk	Medium impact	High priority
SOCR3728	Qwaqwa	Medium risk	Medium impact	High priority
CRIM2724	Bloemfontein	Medium risk	High impact	High priority
ENGL1624	Bloemfontein	High risk	Medium impact	High priority

#### High-priority list 5: Law

ModuleCode	ModuleCampus	Multi_Class_Risk	Multi_Class_Impact	Multi_Class_Priority
LFS1500	Bloemfontein	Medium risk	High impact	High priority
LHUM2613	Bloemfontein	Normal risk	High impact	High priority
LPRO3724	Bloemfontein	High risk	Medium impact	High priority
LEVD2624	Bloemfontein	High risk	Medium impact	High priority
EALL1508	Bloemfontein	Medium risk	High impact	High priority
LTHE4804	Bloemfontein	Medium risk	Medium impact	High priority

#### High-priority list 6: Natural and Agricultural Sciences

ModuleCode	ModuleCampus	Multi_Class_Risk	Multi_Class_Impact	Multi_Class_Priority
ACSF2716	Bloemfontein	Medium risk	High impact	High priority
ACSM3708	Bloemfontein	High risk	Medium impact	High priority
ACSS3708	Bloemfontein	Medium risk	Medium impact	High priority
GENE2616	Bloemfontein	Normal risk	High impact	High priority
GENE2626	Bloemfontein	Medium risk	High impact	High priority
GRAS3714	Bloemfontein	Medium risk	Medium impact	High priority
ZLGY2616	Bloemfontein	High risk	High impact	High priority
ZLGY2626	Bloemfontein	High risk	High impact	High priority

PHYS1514	Bloemfontein	High risk	Medium impact	High priority
PHYS1624	Bloemfontein	Medium risk	High impact	High priority
PHYS2614	Bloemfontein	Medium risk	High impact	High priority
PHYS2624	Bloemfontein	Medium risk	High impact	High priority
PHYS3714	Bloemfontein	High risk	Medium impact	High priority
PHYS3724	Bloemfontein	High risk	Medium impact	High priority
MATM1534	Bloemfontein	High risk	High impact	High priority
MATM1644	Bloemfontein	High risk	High impact	High priority
MATM2614	Bloemfontein	Medium risk	Medium impact	High priority
MATM2624	Bloemfontein	High risk	Medium impact	High priority
MATA2654	Qwaqwa	High risk	Medium impact	High priority
MATM3734	Qwaqwa	Medium risk	Medium impact	High priority
STSA3716	Bloemfontein	Medium risk	High impact	High priority
STSA3726	Bloemfontein	Medium risk	Medium impact	High priority
STSM2626	Bloemfontein	Medium risk	High impact	High priority
BTNY2616	Bloemfontein	High risk	High impact	High priority
BOCB2616	Bloemfontein	Medium risk	Medium impact	High priority
BOCE2626	Bloemfontein	Medium risk	High impact	High priority
CHEM1623	Bloemfontein	Medium risk	Medium impact	High priority
EBCS1524	Bloemfontein	Medium risk	Medium impact	High priority

#### High-priority list 7: Theology and Religion

<b>ModuleCode</b>	<b>ModuleCampus</b>	<b>Multi_Class_Risk</b>	<b>Multi_Class_Impact</b>	<b>Multi_Class_Priority</b>
TNTT2623	Bloemfontein	High risk	High impact	High priority
TOTT2613	Bloemfontein	Medium risk	Medium impact	High priority
THMC1524	Bloemfontein	Medium risk	Medium impact	High priority
TPIP1514	Bloemfontein	Medium risk	High impact	High priority
TOTT1513	Bloemfontein	Medium risk	Medium impact	Medium priority

## 9. Findings to questions (c) and (d): Trends and characteristics of modules based on the module mapping exercise

This section aims to answer: “What learning and teaching support already exists within these high-priority modules?” and “What are the reasons why these high-priority modules are creating bottlenecks in student learning?”.

As part of this initiative, once the high-priority module lists were created, lecturers who present and coordinate these modules were identified. All lecturers that teach a specific module were invited to complete a survey which would create a map of the module and

the lecturer characteristics, in order to explore what initiatives are already in place in these modules, how the lecturers have been developed in terms of learning and teaching, and ultimately, what support would thus be best suited to address possible issues in these modules (as phase two of this project). Lecturers could also provide their inputs around challenges they experience, what they think could assist them, and the student behaviours in the modules. Lastly, they could opt to share the module guide, which we would analyse, specifically to explore the activities, assessments and outcomes, alignment between these three, and possible improvements in the guides.

The survey instrument comprised 32 items, including multiple-choice questions and open-ended questions. Data was analysed through descriptive statistics and thematic analysis. On an individual level, data for each module was integrated into a mapping document, and these datasets were again aggregated into a summary document to ultimately comment on the module, the main challenges, and possible suggested solutions. Lecturers then received an email with a very focused summary of the challenges we could identify, and key possible interventions they could opt to assist them. While compiling these interventions, some would be developmental in nature, but most would mean that resources are directed to assist these lecturers and modules (for example, prioritising space for a lecturer to attend a Curriculum Renewal Program, ensuring they get first option to participate in the institutional tutorial program, or contacting them directly to complete a CLASSE survey).

Before surveys were circulated, meetings were arranged with all faculties and lecturers on the lists to explain the process and nature of the project, and to reiterate again that the project is not an at-risk module identification, but a means to direct resources to modules who have a large impact across departments, faculties and student numbers, while performing perhaps below what other modules in the same faculties perform at. Because this first phase of the project was placed within a research project approach and ethics, lecturers could opt not to complete the module mapping survey. In the end, 45% (thus 51) of participants accessed the mapping survey link, of which 88% (thus 45) opted to complete it in the end.

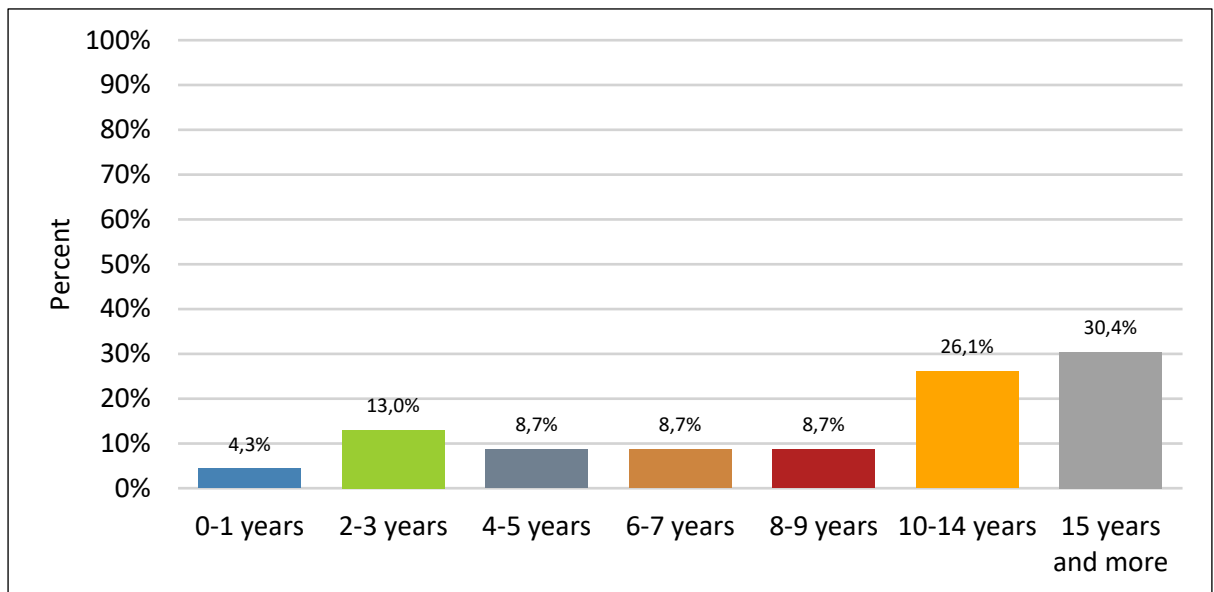
To follow is a discussion of the results of the Questback survey feedback.

## 9.1. Lecturer characteristics in general

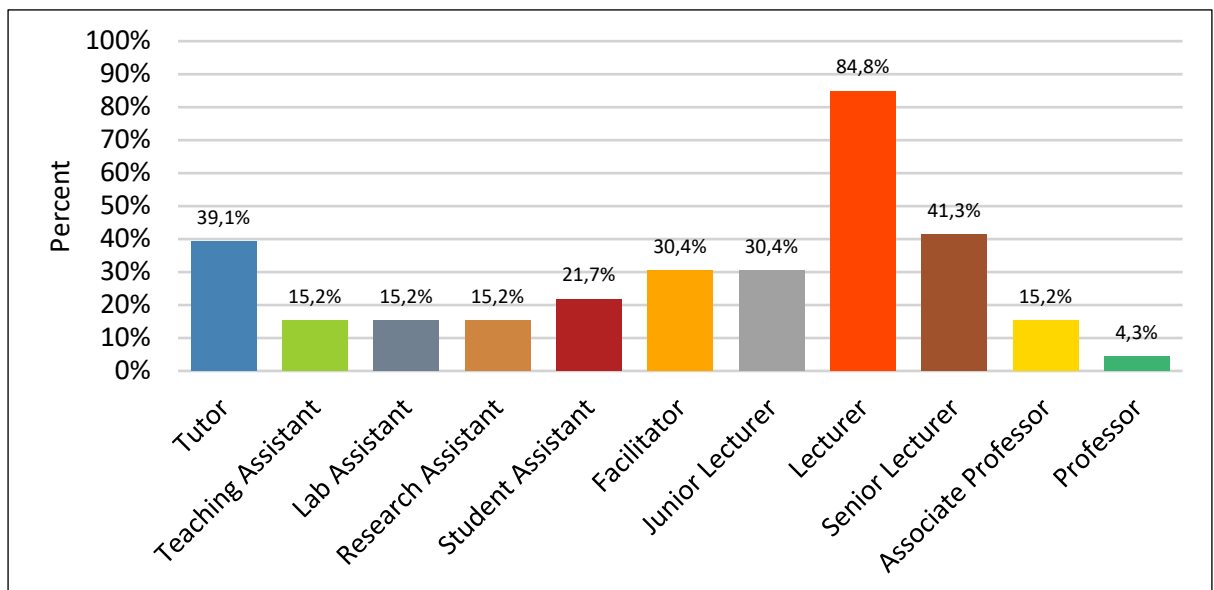
- Lecturers' experience in learning and teaching

Most lecturers have more than ten years of experience in teaching at the UFS, are currently appointed at the level of lecturer, and most have been appointed only as lecturers and senior lecturers during their careers. Almost 40% have been teaching the

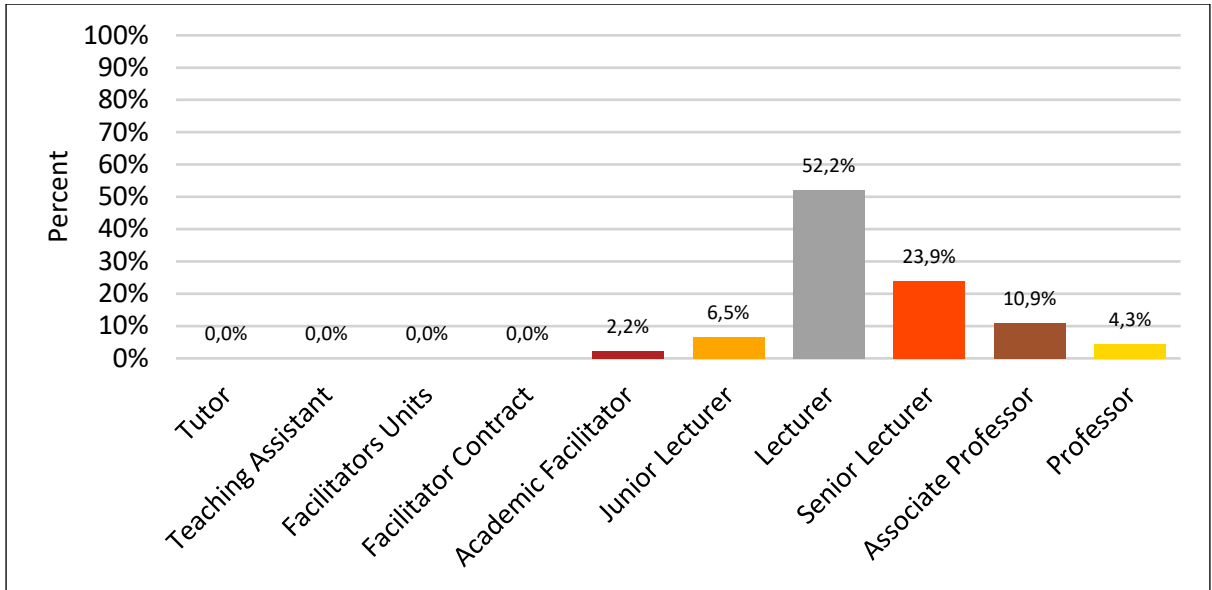
identified high-priority modules for only 0-3 years. Almost 70% of these modules are shared between two or more lecturers:



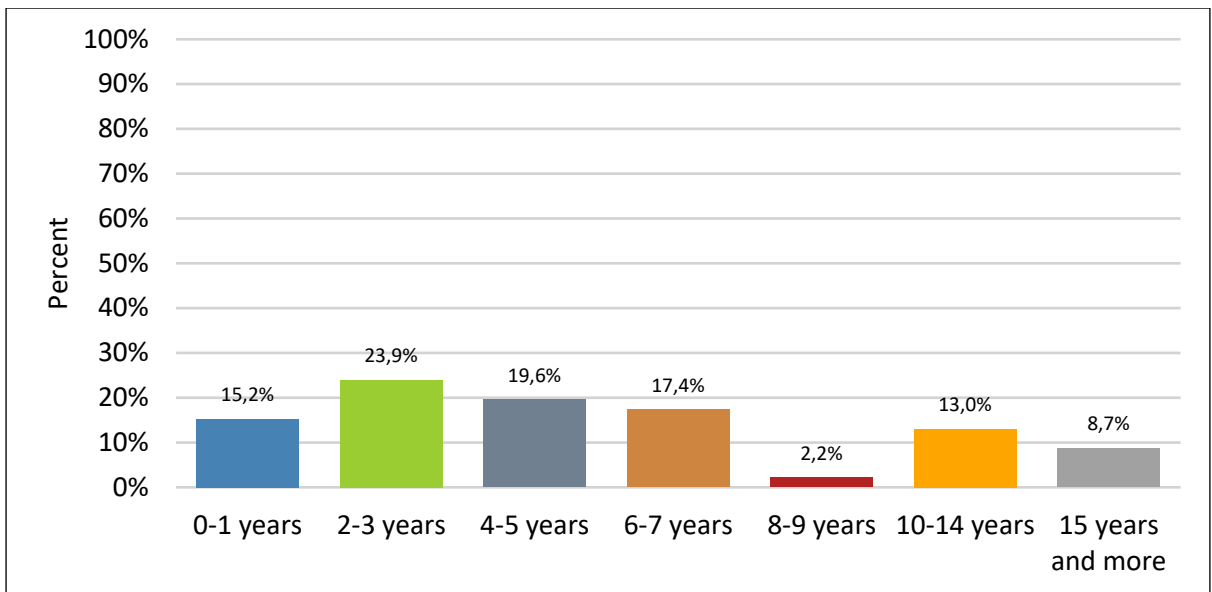
**Chart 1: Lecturers' experience in teaching at the UFS**



**Chart 2: Positions in which lecturers have served at university level**

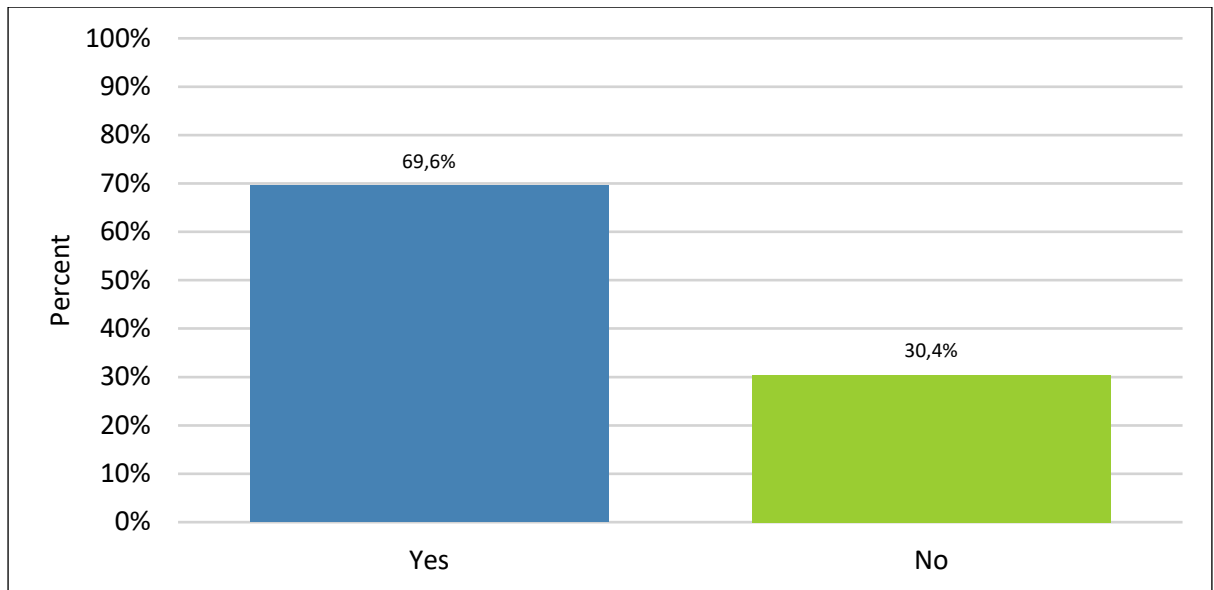


**Chart 3: Current level of appointment of participants**



**Chart 4: Years teaching this high-priority module**

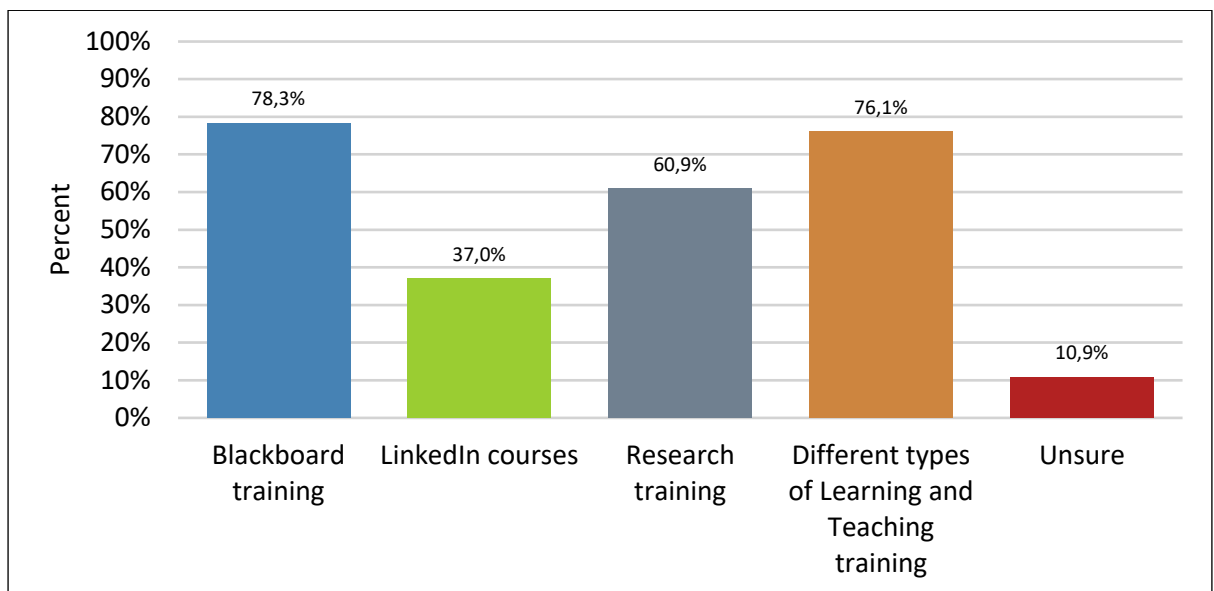
Lastly, 69,6% of these modules are co-teaching modules (thus shared between lecturers):



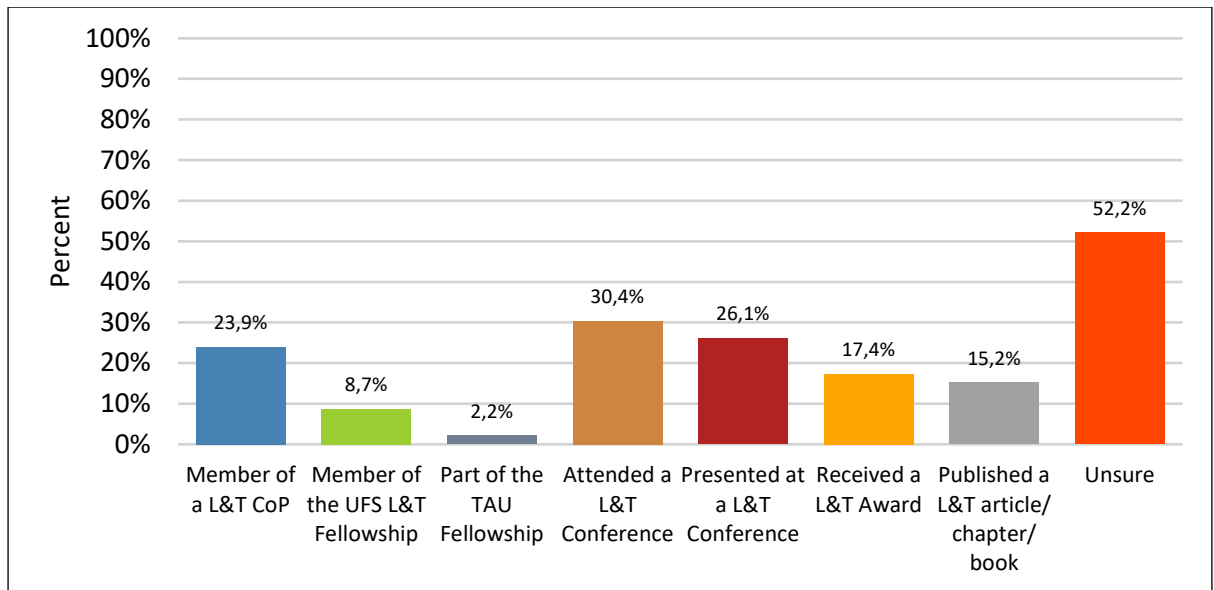
**Chart 5: Co-teaching of the module**

- Lecturer L&T development and SoTL participation in the past three years

Most of the lecturers of these modules seem to self-develop in a variety of ways, including attending training:



**Chart 6: Training attended by lecturers in the past three years**

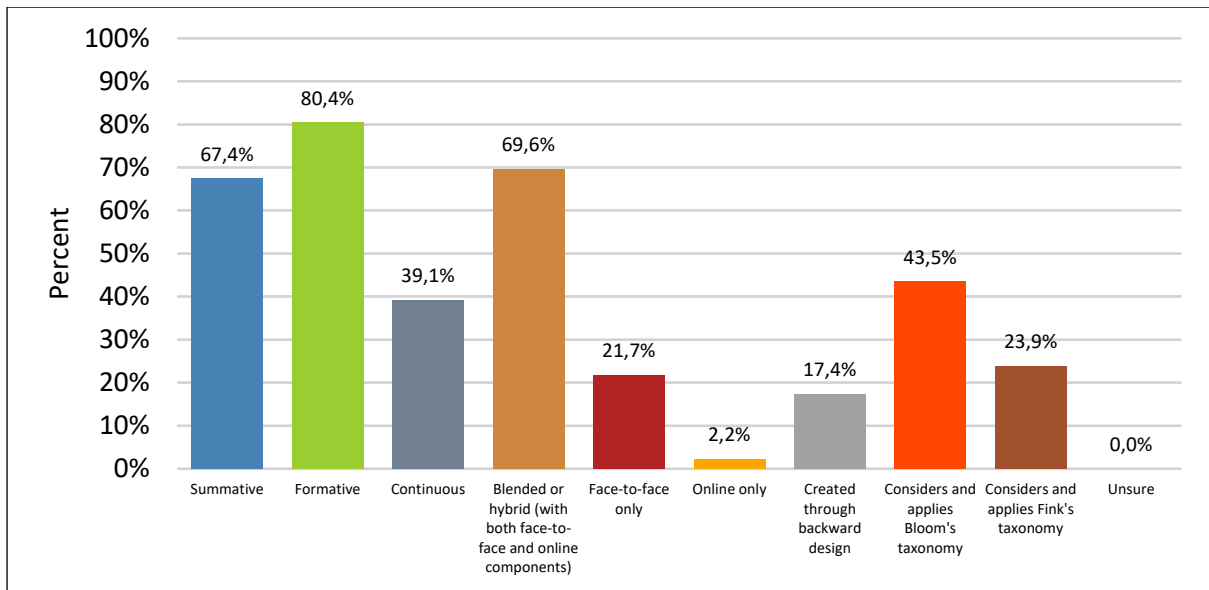


**Chart 7: Lecturer SoTL participation in the past three years**

Additionally, the open-ended responses showed attendance of the following types of L&T training and workshops: “Curriculum Renewal Programme, Graduate Attribute Workshop, Teaching Portfolio Workshop”, “Role of AI in teaching and learning”, “Online teaching methodology and assessment, teaching large classes, engagement tools in education”.

## 9.2. Assessment design of the modules

Most modules (80,4%) use formative assessments, 67,4% make use of summative assessments, and 39,1% continuous assessments. 69,6% indicate they are blended, with 21,7% online only, and 2,2% face-to-face (which means around 6% have not indicated a mode of delivery). 43,5% use Bloom’s taxonomy and 23,9% consider Fink’s taxonomy of significant learning. Only 17,4% create their assessments using a backward design approach, as indicated in the graph below:



**Chart 8: Assessment design of high-priority modules**

The results illustrate the following: Most lecturers indicate that they use summative and formative assessments, with almost 40% indicating a continuous assessment approach. This data is mismatched, because if 40% use a continuous assessment approach, no more than 60% should indicate using summative assessments, as continuous assessments exclude using summative assessments, but rather a variety of formal and informal formative assessments. This means that either the terminology is not well-known or not well understood. There is also a strong possibility that assessments, activities and outcomes are not aligned for more than 80% of modules as they are not planned through a backward design approach. Just less than 45% use Bloom's taxonomy to consider the level of difficulty of their assessment questions to align them to the year or NQF level, and 2% are presented fully online.

Through the open-ended responses, the following themes emerged:

- a) A variety of assessment types are used, which include tutorials, online quizzes, reports, essays, tests, exams, diagnostic assessments, test reflections, portfolios of evidence, class presentations, online group discussions, and practical reports.
- b) A variety of question types are used during assessments, such as multiple-choice questions, essay-type questions, feedback fruits for discussions, matching definitions to explanations, fill-in-the-blank, and oral presentations.
- c) Most of these modules expect students to complete many assessments, which poses the question of over-assessment. To follow are some examples:

**Table 4: Examples of assessment designs in high-priority modules**

Example module 1:	Example module 2:	Example module 3:	Example module 4:
<ul style="list-style-type: none"> <li>• Theoretical Test 1 (30% Multiple-choice questions, 70% formal questions)</li> <li>• Theoretical Test 2 (30% Multiple-choice questions, 70% formal questions)</li> <li>• Project Proposal</li> <li>• Practical Test</li> <li>• Practical Project</li> <li>• Practical Continuous Assessment (Blackboard)</li> </ul>	<ul style="list-style-type: none"> <li>• Online tests: Multiple choice questions</li> <li>• Class tests: We create multi-level questions that test and combine foundational concepts, ranging in difficulty. These questions are often more challenging, but are structured with enough guidance and scaffolding that students can complete them and gain a confidence boost.</li> <li>• Semester tests: Mixture of multiple choice and written questions</li> <li>• Feedback fruits: Discussions, quizzes, students are asked to perform certain tasks and compare answers and methods</li> </ul>	<ul style="list-style-type: none"> <li>• A weekly tutorial test (10 marks each) to keep them 'up-to-date'.</li> <li>• Two semester tests of 2 hours each.</li> <li>• One 3-hour examination.</li> </ul>	<ul style="list-style-type: none"> <li>• Start of semester - diagnostic assessment, 10 Multiple Choice Questions (online) (gauge students' general knowledge on political theory at the beginning of the semester)</li> <li>• Discussion boards - 4 throughout the semester (online) based on class discussions and work covered in learning units, students reflect on a short prompt in 4 sentences to apply the theory (-ies) covered in class.</li> <li>• Semester tests - 2 throughout the semester (multiple choice questions and essay questions based on selected learning units and their readings/prescribed materials)</li> <li>• Assignment - 1, essay based, application of theories covered throughout various units.</li> <li>• Examination - 1, face to face, multiple choice questions and essay questions (similar to the semester tests, but larger in scope and weight)</li> </ul>
<p>Total number of assessments: 6+</p>	<p>Total number of assessments: Unclear (at least 8)</p>	<p>Total number of assessments: 17</p>	<p>Total number of assessments: 9</p>

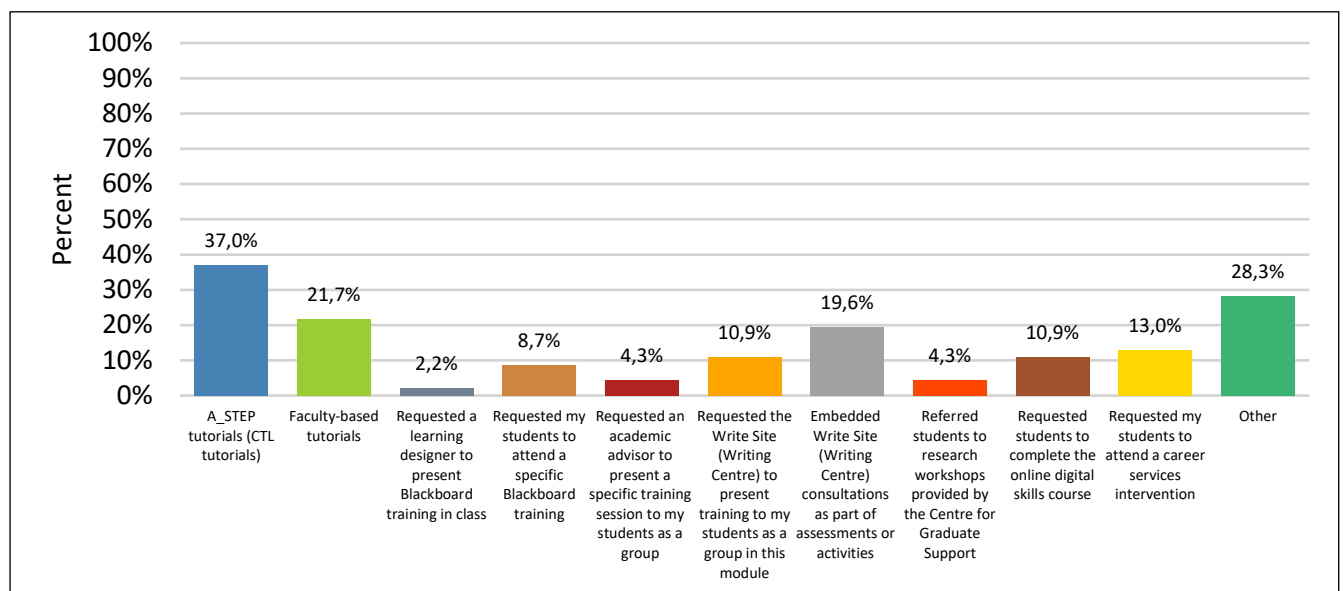
When only considering examples 1, 3 and 4: if a student was registered for all three of these modules, they would need to complete 31 assessments in a semester. Doubling this to average six modules in a 14-week semester would mean a student must complete 62 assessments per semester, or on average, 4.4 assessments per week.

When considering the quantitative results, these open-ended responses do triangulate with the fact that most lecturers make use of summative and formative assessments. However, it seems as if large formal final assessments are combined with traditional continuous assessment approaches, creating a multitude of assessments for students.

### 9.3. Support applied to the modules in the past three years

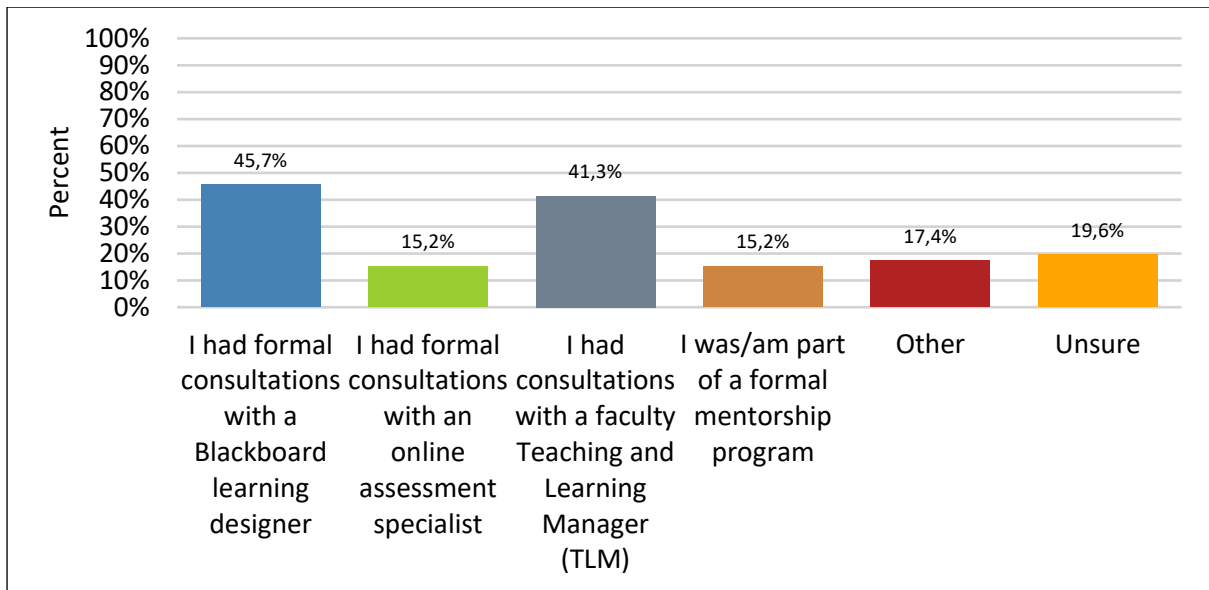
- Initiatives and support used for students and in the modules

Institutional (A\_STEP) and faculty tutorials seem to be the predominant support mechanism used to assist students in the modules. The Writing Centre is also consulted and used. Yet, these types of external support are used at a lower rate:



**Chart 9: Support that lecturers consulted for this module**

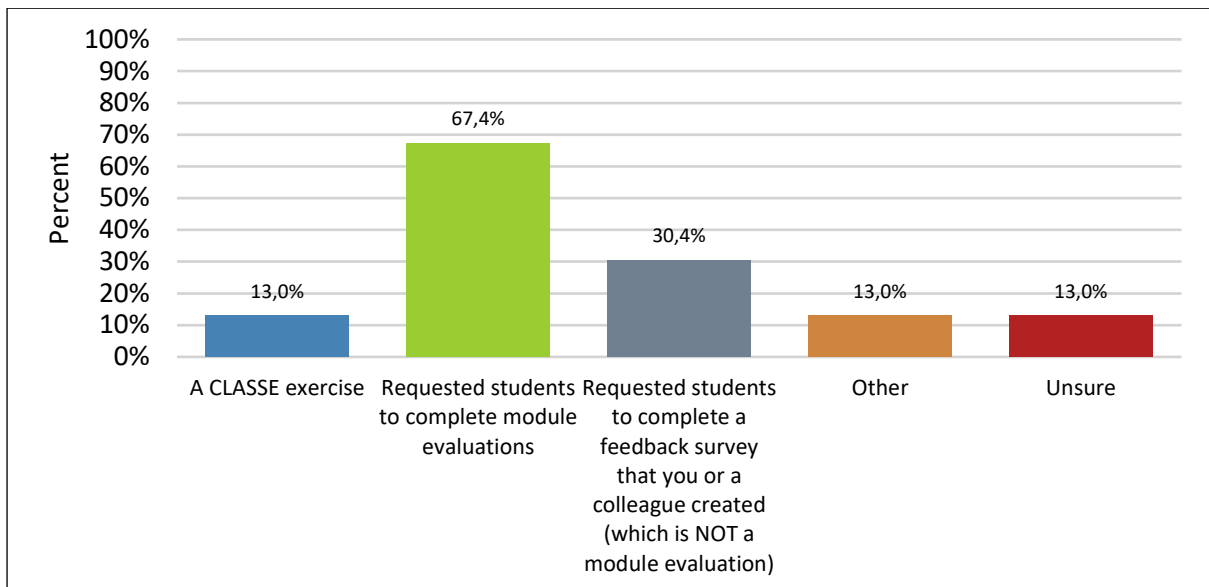
Teaching and Learning Managers and Blackboard Learning Designers seem to be popular consultation methods. Within the open-ended responses, other support sought included consulting several staff members at CTL and communities of practice (although to a lesser degree).



**Chart 10: Support sought in the past three years**

- Student data used to understand students and modules

Lecturers were asked how they used student data in the past three years to address student challenges and module changes in these modules. Most modules do seem to make use of module evaluations:

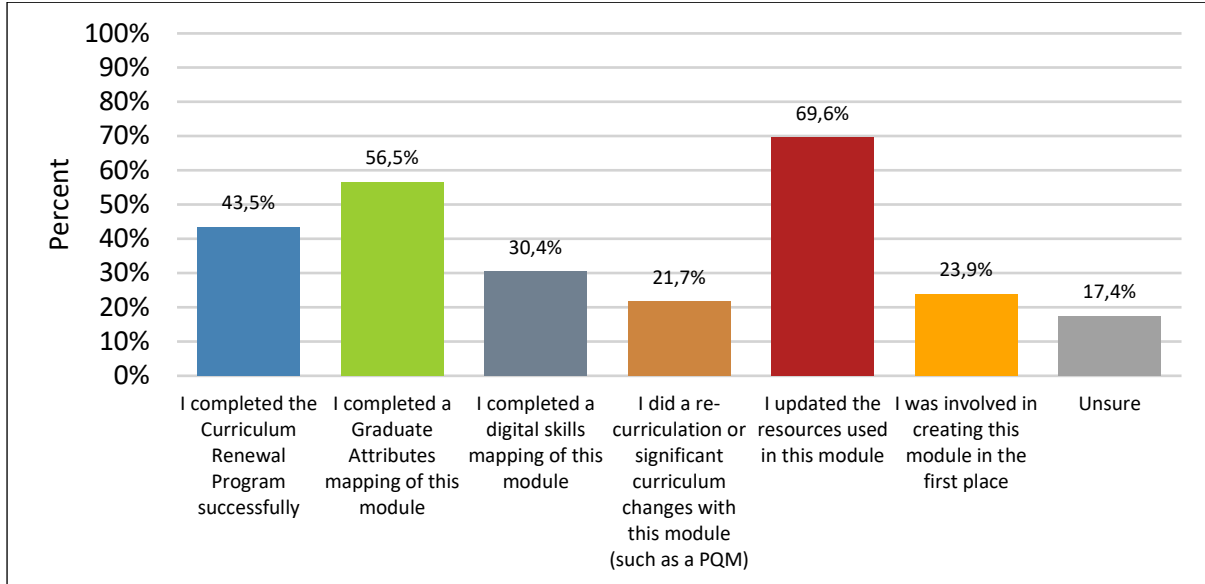


**Chart 11: Using student data**

Other data mentioned in the open-ended responses include: Slido feedback in class, analysing MCQ data to gauge what content they are struggling with, focus groups, and student reflection classes.

- Curriculum renewal and change in the module

Almost 70% of modules' resources have been updated in the past years, 43,5% of the lecturers have attended the CRP and 56,5% have completed a graduate attributes mapping of the modules:



**Chart 12: How the lecturer adapted and renewed the module in the past three years**

#### 9.4. Overall experience of presenting the module

Respondents were asked the following open-ended question: “How have you experienced presenting this module?” Many indicated some type of emotive response, with a mixture of frustration and enjoyment in the teaching process. The following themes emerged. (Please note that quotes have been adjusted to de-identify modules.)

- Theme 1: Enjoyment and satisfaction when presenting the module

Lecturers expressed a strong sense of fulfilment and enjoyment in teaching their modules, deriving satisfaction from students' engagement, understanding, and application of complex concepts. The sense of purpose and visible student growth contributed significantly to their teaching motivation.

“I enjoy presenting this module, since it introduces 1st year students to the most basic concepts in [NAS sub-discipline]. This course forms the basis on which the 2nd and 3rd year modules are built. It is a challenge to explain new concepts to the students, but always a pleasure when I can see that they understand and when they are able to apply the knowledge to complex problems.”

“I thoroughly enjoy presenting [this] section of this module. Few things compare to the thrill of seeing a student grasping the concept and being able to apply that insight to other contexts.”

“My experience presenting the [NAS] module has been incredibly positive and fulfilling. I find it to be a good and genuinely enjoyable module to teach...Witnessing students grasp these concepts and then apply them, whether in lab work or future research, is truly gratifying. It’s a module where you can see the direct impact of the knowledge being shared, making it very rewarding to present.”

“I love presenting this module. The students are receptive to my teaching style.”

- **Theme 2: Demotivating to present the module**

Some lecturers found the experience demotivating due to large class sizes, varying student motivation levels, and inadequate background knowledge among students, which hindered effective teaching and progress. The mismatch between lecturer effort and student engagement often led to frustration and fatigue.

“It has been very demotivating. Myself and other lecturers have put in incredible effort to no avail. With the number of students we have, and the level of their comprehension and background knowledge, it feels impossible to catch up.”

“Some years students are motivated to learn, other years it is really draining to present class to them as there is no motivation to participate, nor to learn.”

- **Theme 3: A challenge to present the module**

Teaching certain modules presented considerable challenges, including issues of content accessibility, class size, student diversity, and limited resources. Lecturers also faced difficulties when teaching outside their areas of expertise or when modules lacked clear departmental ownership.

“Taking over this module was very much a case of learning on the job. Although teaching materials such as the study guide, lecture slides, and past assessments existed, I could not access them. Without clear content guidance and given my inexperience, the module became quite content-heavy, which I believe may have overwhelmed the students.”

“It is exciting and challenging at the same time due to diverse group who are registered in the module. The students’ goals are not the same and it is challenging to motivate them to attend classes.”

“The numbers have been increasing a lot, so having a more hands-on approach has been difficult.”

“Facilities is always a challenge. Over-enrolment into this module is problematic.”

“This module is difficult to present because it falls outside of my area of expertise, with content aligning more closely with [the EMS] programme content. Attempts to update content and restructure (sic) have helped bring the module closer to the field of [HUM discipline], but overall, this is the ‘stepchild’ module of the [HUM] department (nobody wants to teach it).”

- **Theme 4: Enriching / I learned through the experience**

Despite initial difficulties, lecturers described their experiences as enriching, emphasising personal and professional growth. These modules provided opportunities for reflective practice and for connecting academic theory with practical, real-world applications.

“While the early years were challenging, they were also deeply formative.”

“I think presenting the [EDU] module has been an enriching experience that allowed me to bridge academic concepts with real-world applications. It was rewarding to see students engage with practical scenarios and reflect on their professional development through workplace experiences.”

- **Theme 5: A combination of enjoyment and challenging**

For some lecturers, module presentation was both enjoyable and demanding, as passion for the subject was tempered by the need to adapt content to diverse student backgrounds and maintain high academic standards. Balancing enthusiasm with pedagogical complexity was a recurring theme.

“I love presenting any content on labour/industrial relations, so it really is a passion of mine. However, the presentation of the module becomes a bit challenging. We are dealing with students whom we are mostly servicing from all faculties in the university so it means the way in which it’s presented must be less in less technical terms so they can understand. We do not have many [EMS programme] students of our own.”

“This is a challenging module (and programme) for both students and lecturers. Auditing is a foreign concept that students have not yet encountered. It is a [EMS-related professional body] accredited programme, which automatically means it is a high-level module that requires higher-order thinking. I love the module and helping students better understand it - it is fundamental to what most of them will be doing in practice once they leave the UFS.”

## 9.5. Self-reported positive traits of the modules

Respondents were asked the following open-ended question: “What do you think are the positive elements of this module, and why do you say so?” Overall, the responses indicated a clear understanding of the nuances in each module and how it could benefit the students. Themes that emerged are preparing students for the real world or world of work, preparing them for other modules, developing a variety of necessary knowledge and skills, when students participate and engage, they learn quite well, and opportunities are created for applying knowledge.

- **Theme 1: Prepares students for the world of work or the real world**

Lecturers highlighted the module’s strong alignment with real-world contexts and professional relevance. By connecting theory to practice – through authentic assessments, practical experiences, and exposure to professional settings – students are effectively prepared for future careers and societal engagement.

“One of the module’s key strengths is its grounding in real-world relevance. I consistently link the content to urgent global challenges such as biodiversity loss, helping students understand the broader significance of what they’re learning and why it matters beyond the university setting.”

“I regularly design and test authentic assessments that require students to use their knowledge in meaningful, real-world contexts.”

“The module connects with the foundation phase subjects offered in South African schools. Many of the topics taught align with the School Curriculum Assessment Policy for Grade R-3.”

“[EDU final year module] offers students an opportunity to engage in teaching practice to gain valuable skills such as classroom management while improving their pedagogical skills and reflective practices.”

“The module prepares students well for their expected roles as future history teachers. We even invite history experienced teachers and subject advisors to present guest lectures to our students.”

“The hands-on practicals allow students to work with cadaveric specimens and see the real-life version of what they are taught in class.”

- **Theme 2: Prepares students for other modules**

This theme underscores the module’s foundational role in supporting academic progression. Lecturers emphasised how the content builds essential knowledge and

skills that students draw upon in subsequent, more advanced modules across their programmes.

“This course builds a solid foundation for the 2nd and 3rd year modules.”

“It covers topics used later on in other modules.”

“Together with the [NAS first-year] module it creates a solid foundation for second year physics.”

“We try to equip students as soon as possible with skills such as finding legal sources online, which they need for all their subjects.”

- **Theme 3: Develops certain necessary skills or knowledge**

Lecturers viewed the module as central to cultivating critical, analytical, and technical competencies. It fosters intellectual growth and practical proficiency, developing problem-solving, collaboration, and digital fluency that are essential for both academic success and professional adaptability.

“We are developing students’ critical thinking skills, since they are challenged to apply concepts in complex problems.”

“This module equips scientists with the ability to understand, design, and build their own experimental setups or modify existing equipment.”

“During this course students are challenged to reach new heights in deeper understanding and application in [NAS discipline].”

“Students gain critical skills like collaboration, problem-solving, communication, digital fluency, and adaptability—all essential for thriving in modern workplaces and innovation-driven environments.”

“Critical Thinking and Analytical Skills Development – [NAS module discipline], by its nature, demands rigorous logical deduction and systematic analysis. Troubleshooting a circuit requires formulating hypotheses, testing them, and identifying the root cause of a problem.”

- **Theme 4: Engaged students learn a lot**

Active engagement emerged as a key factor influencing learning outcomes. Lecturers noted that students who participate consistently, interact with feedback, and engage in class activities achieve deeper understanding and better performance.

“Notably, students who actively participate in the learning process – such as engaging with feedback tools like Feedback Fruits – tend to demonstrate a significantly better understanding of the material.”

“Students who attend class and engage with the learning material are really showing a lot of progress, as can be seen in their various assessments.”

“Students who attend the classes and follow along when I do the examples find the work both stimulating and insightful.”

- **Theme 5: Provides opportunities for application of concepts**

This theme reflects how the module enables students to apply theoretical knowledge in tangible ways. Through demonstrations, hands-on exercises, and practical applications, students are able to connect classroom learning to real-world practice, reinforcing conceptual understanding.

“It is a very comprehensive module and the demonstration presentations provide hands-on application of the learning and an opportunity to practice teaching in an engaging manner, explaining scientific concepts using everyday equipment.”

“The content can be used practically.”

## 9.6. Trends: Challenges in the modules

Respondents were asked the following open-ended question: “What do you think are the main challenges and concerns in terms of this module, and what are the reasons for these challenges?” Most respondents provided detailed and rich data to support the identification of the challenges. Although module maps were used individually to provide specific feedback to each module, as a collective, the following themes emerged: lecturers feel their modules are in nature more difficult than other modules, students are underprepared for the modules (whether at school or from previous years at university), this is not a module of choice for students therefore they are not dedicated, poor class attendance, poor study skills and behaviour, and workload.

- **Theme 1: My module is more complex / more difficult than other modules**

Lecturers described their modules as inherently more complex due to abstract content, high cognitive demands, or the need to bridge theory and practice. These challenges often stemmed from the nature of the discipline, requiring advanced reasoning and problem-solving skills that students found difficult to master.

“Unlike mechanics, where forces and motions are tangible, electricity involves invisible phenomena like current, voltage, and electromagnetic fields. Students can’t ‘see’ electrons flowing, which makes it harder to build an intuitive understanding.”

“Bridging the gap between theoretical understanding and practical application is a significant hurdle. Students might understand Kirchhoff’s Laws on paper but struggle to apply them when debugging a physical circuit. The hands-on aspect requires a different type of reasoning and problem-solving skill.”

“The module focuses on procedural knowledge and less on conceptual knowledge, which could assist in developing mathematical reasoning in students. Mathematical reasoning and acting are challenging for students.”

- **Theme 2: Lack of foundational skills / the prerequisite is not sufficient / students are not prepared at school / students do not retain knowledge from the previous year**

Many lecturers reported that students enter modules without adequate foundational knowledge or skills, particularly in mathematics, science, and language proficiency. Weak prior preparation and poor retention of earlier content create ongoing learning gaps that hinder progression and deepen over time.

“...a significant portion of the student body lacks the foundational skills required to meaningfully engage with the course content. This is not limited to a mathematical background alone; many students struggle with basic reading comprehension, concentration, and the ability to study or problem-solve independently.”

“While the official prerequisite for entry into the course does require 60% in Grade 12 mathematics, this benchmark does not adequately reflect readiness. Given the well-documented issues in the school system, a 60% pass does not equate to a functional understanding of high school mathematics. The mismatch between admission criteria and course expectations is a structural issue that significantly impacts outcomes.”

“The scientific background/foundation of most current students is not solid. We rely heavily on certain concepts that were supposed to be taught in school (e.g. the gas laws). I found that many of the students have limited background i.t.o. these concepts.”

“Lastly, it is common knowledge that mother-tongue education work best with the learning of difficult concepts and complex methods. UFS modules are taught in English only, even though less than 10 % of students have it as a first language. Students are thus not performing at their best levels due to this...”

“A weak grasp of early concepts cascades into significant difficulties later. If a student misses a key concept early on, they can quickly fall behind. Catching up becomes incredibly difficult as each new topic presumes mastery of previous ones.”

“I found out that some of my students come into this module without a solid background in geography in the Senior Phase.”

“In general, students are not equipped in schools to think mathematically. They mostly do ‘sums’ that they have seen before, and learn the rules of the language of mathematics (such as  $1/a + 1/b = (a+b)/ab$ ), mostly without knowing why these rules apply.”

“...them not retaining information from earlier modules (i.e., first-term [NAS module] and first-year [NAS] modules, which are required for this module) - it is as if they ‘reset’ after each exam. This requires me to spend time recapping simple information that they ‘should’ know by the time they come to my module, and them struggling much more.”

- Theme 3: Students are not dedicated to my module / my module is not their first choice / my module is not a main subject as part of their degree

This theme reflects low levels of student motivation and commitment among those who take certain modules as service or secondary subjects. Lecturers observed that lack of genuine interest and misplaced enrolments negatively affected engagement, consistency, and overall performance.

“Those few students who enrol in this module solely for a credit upgrade face various challenges, primarily due to commitment issues and scheduling conflicts, leading to inconsistent attendance.”

“Students are not really dedicated to legal studies.”

“The main challenges are English students often end up registering for the module by mistake - leading to confusion and more than average deregistration.”

“Motivation of students: Many students that register for this module do not consider it their first choice. Many have failed other second year modules twice and are not allowed to register for those modules again, so they are registered for [NAS second-year module].”

“It is a service module for a large number of students so they are not really interested in the subject matter.”

- Theme 4: Poor class attendance

Lecturers identified poor attendance as a pervasive problem, with students frequently missing lectures, tutorials, and interventions designed to support learning. This absence undermines academic progress, as those who attend regularly tend to perform significantly better in assessments.

“The students who really need to make use of the interventions are not bothered at all to even participate.”

“Students are late for lectures or do not attend lectures at all. Many repeater students have clashes and rather attend 2nd year and 3rd year module lectures...The attendance of tutorials are poor.”

“Students do not attend class or catch up through the recordings of the classes.”

“Classes are too big, which makes it difficult to enforce attendance. Students do not attend tutorials.”

“The other challenge is student attendance of lectures. As most demonstrations and clarifications are done during the sessions those not attending miss out and end up not performing well during assessments.”

“Attendance registers [of tutorials] also showed that the academically strong students (who did not really require additional support) were attending the tutorials while the students that were struggling academically did not attend tutorial sessions.”

“Poor attendance: Class attendance by students has been a problem for many years. In 2019 we found that only 30% of students attended the tutorial sessions and only 78% completed the Write Site assignments. Class attendance is also generally poor, especially during the latter part of the semester. When NAS implemented and strictly enforced the 80% attendance rule in 2022 the pass rate for [NAS second-year module] rose to 68% and 88% of students who complied with the 80% attendance rule passed the module.”

“I often use examples and practical applications in class that students would not otherwise get. I can see during the assessment of tests when students used the examples I gave in class as opposed to those that did not attend. Students who attend class usually perform better during tests and examinations.”

“I think the main challenge is that students are not attending lectures regularly, and this creates a learning gap.”

- Theme 5: Poor study skills / Poor learning culture / Attitude towards learning

A lack of effective study habits, discipline, and intrinsic motivation was seen as a major barrier to learning. Lecturers noted that many students adopt a passive approach to their studies, relying on minimal effort and showing limited accountability for their own academic success.

“This goes hand-in-hand with committed, disciplined time management, where it appears that students don’t have the ability to execute a strict regime of timed focus on learning.”

“The main challenge is definitely the students’ mindset... Students are simply not interested. They only want to do the bare minimum instead of striving for excellence.”

“Many students don’t want to take the responsibility for their own success in this module. Students have directly told us in the past: ‘I didn’t think the mathematics tutorials are important, so I didn’t even attend the tutorials.’ Even though they are compulsory.”

“...they do not make an effort to read the prescribed book, come to class, or prepare for assessments.”

- Theme 6: Workload / Content load / Students are working on other modules when they should be working on mine / Clashes with my module

Heavy workloads and content-dense modules pose additional challenges for both students and lecturers. Students often struggle to balance competing academic demands across modules, leading to time pressures, fatigue, and reduced focus on individual subjects.

“It is a lot of work because I’ve made it such a comprehensive module. I could have got away with only 2 tests and an exam - which was how the module was assessed before I took it over. So it is a lot of work for the students and lecturers.”

“Students struggle to handle the workload associated with the combination of [NAS sub-discipline 1] and [NAS sub-discipline 2] in one module.”

“Students are not used to the huge volumes of work.”

“Time pressure to juggle various challenging modules at once. Content load.”

## 9.7. A word or two about the module guides

Most participants were able to either upload a module guide onto the survey platform or shared it with the research team via email after completing the survey. These module guides were explored, especially in terms of module outcomes, assessments, activities, module schedules and overall motivation elements embedded in the manner of communication. Some modules have excellent outcomes, whereas others have no outcomes, or as many as 17 outcomes per module. Some module guides seemed more like information pieces, although in some instances, very clear and helpful; others follow the specific module guide template, but vaguely and with a sort of copy-and-paste component (especially in terms of the graduate attributes section).

## 9.8. Trends in terms of possible solutions or interventions suggested for the modules

Due to the overlapping nature of many of the module challenges, similar suggestions were posed as solutions or as a starting point for an intervention. Modules that indicated poor class attendance, poor engagement, or overall workload were suggested to complete a Classroom Survey of Student Engagement, so as to understand exactly what the student perceptions are and how they might differ from the lecturers' expectations. Attendance of the Curriculum Renewal Programme was also suggested, as motivation plays an underlying role throughout the design of the modules and module guides, while reviewing one's module outcomes and how it aligns with assessments. Attendees would also learn more about assessment design. Other suggestions included a consultation with a Teaching and Learning Manager, a specifically designed survey to collect class attendance data and behaviour, and attendance of a specific workshop, such as large class teaching. A number of module lecturers were also willing to meet with the research team to discuss the findings together and to ascertain where the focus would need to lie. In other instances, module mapping feedback was received, with no notable next step in mind from the lecturers. A list of all training and possible interventions was also shared with the respondents so that they could explore other possibilities that seemed appealing to them. Any and all interventions or next steps are voluntary, and remain suggestions that the lecturers could depart from.

## 10. Conclusion

### **A new framework to identify high-priority modules for the UFS**

This research report represents a step toward rethinking how higher education institutions conceptualise and address modules that hinder student success. By shifting from the traditional notion of *high-risk modules* to a more inclusive and analytically grounded framework of *high-priority modules*, this research demonstrates that focusing solely on pass rates or binary success measures provides an incomplete understanding of the complexities influencing student outcomes. Instead, a multidimensional diagnostic process – integrating both *risk* and *impact* indicators – provides a more meaningful lens through which to prioritise modules for institutional support and intervention.

The framework not only aids in identifying modules that pose systemic barriers to student progression but also guides the strategic allocation of resources. Through the combination of quantitative data analysis, qualitative insights from lecturers, and faculty-level engagement, this project illustrates the power of triangulated evidence to inform teaching and learning policy and practice. The integration of institutional data systems (PowerHeda, Peoplesoft) with staff perceptions and curriculum analysis created a nuanced understanding of module-level dynamics and their cumulative influence on throughput and retention.

The concept of high-priority modules also fosters a shift from one of accountability for failure to one of shared responsibility for success. Faculties and departments are encouraged to use these findings to engage in reflective curriculum renewal processes, supported by the Centre for Teaching and Learning (CTL) and other institutional partners. Interventions such as the Classroom Survey of Student Engagement (CLASSE), Curriculum Renewal Programme (CRP), and partnerships with Teaching and Learning Managers (TLMs) provide practical avenues for such development. Furthermore, this project underscores the importance of sustained collaboration between academic staff, professional support services, and data analytics teams to maintain a coherent and evolving understanding of learning and teaching needs.

### **Research findings for this cohort**

The research revealed that many lecturers teaching these modules demonstrate a strong sense of dedication and commitment to their students' learning. However, widespread challenges persist, including heavy content loads, limited student preparedness, weak foundational skills, poor attendance, and possible over-assessment practices. These findings highlight that issues of student success are multifaceted – rooted not only in student behaviours but also in curriculum design, assessment structures, and institutional systems of support.

The challenges indicated in this report furthermore align with our findings from the first phase of the class attendance study which suggest that one of the reasons students skip

class is because they are preparing for assessments or completing work for other modules.

The findings and methodology outlined in this report not only provide a foundation for Phase 2 of the research, focused on targeted interventions, but also lay the groundwork for a sustainable culture of evidence-based practice and scholarly teaching.

### **Replication of the framework beyond the UFS**

Beyond the immediate UFS context, the framework and methodology established through this project hold promise for replication across other South African higher education institutions. The identification of high-priority modules through a balance of statistical rigour and contextual insight provides a scalable model for enhancing student success nationally. As the higher education sector continues to grapple with issues of access, equity, and throughput, the application of evidence-based, data-informed strategies such as this becomes increasingly critical.

## **11. Recommendations**

The following recommendations are proposed:

Institutionally:

1. A longitudinal high-priority module identification and support exercise to be completed every two or three years
2. A collaborative programme-level review of content- and workload (time spent on task per student per programme) to establish actual content- and workload of students
3. Continued provisioning of the CRP and assessment workshops
4. End-of-module, mid-semester or other diagnostic data-collection across modules (including the CLASSE) at least every-other year, with a plan to impact changes based on data
5. Prioritisation of high-priority modules in terms of test- and exam timetable design to ensure a fair spread for students
6. Continued study skills and time management development and support to students through central academic advising, whether as in-class presentations, student publications, or individual advising sessions
7. Intentional acknowledgement of the efforts of the lecturers at the UFS to ensure that they remain motivated and feel valued

This project:

8. For high-priority modules that opted out of the module mapping exercise: a follow-up email (and the option of a meeting with the research team) to faculties with a list of possible support they can make use of, and including them in the

prioritisation of large-scale institutional support, such as CLASSE, CRP and A\_STEP. Ownership and leadership move to faculties.

9. For high-priority modules that opted out of the module mapping exercise: a discussion / focus group / short survey to understand the reasons for opting out of the research.
10. For high-priority modules that completed module maps: Follow-up meetings and communication around interventions underway, and data support to evaluate impact of changes or interventions.
11. Follow-up data collection – \*A hypothetical-conclusion and way forward

When considering the challenges indicated, the following could be surmised as a hypothetical flow of L&T events between lecturers and students: considering the underpreparedness of the students, the lecturers create more activities and formative assessments (in an effort to bridge the knowledge gap of students while keeping them on track with new content). This possible over-assessment together with the added activities and workload, lead students to miss classes in an effort to prioritise assessments (if we consider the data and feedback of students from our class attendance study findings). This flow of events and responses is illustrated below:



In order to conclusively prove this, an additional study could be completed with its own set of research questions and data collection instruments.

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