Holistic 360° Teaching Evaluation Toward a Teaching Effectiveness Index (TEX)

Mohd Idzwan Mohd Salleh[1]*, Suriyani Ariffin[2], Zainuddin Ibrahim[3], Ahmad Razi Ramli[4] & Sharifah Aliman[5]

[1]Faculty of Information Science, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia
[2&5]Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA, Shah Alam, Malaysia
[3]Faculty of Art and Design, Universiti Teknologi MARA, Shah Alam, Malaysia
[4]Faculty of Business and Management, Universiti Teknologi MARA, Shah Alam, Malaysia
*Corresponding author: idzwan201@uitm.edu.my

Abstract

This article reported teaching evaluations from three viewpoints: students, teaching colleagues, and self-evaluations. The data was gathered from Malaysia's largest public institution, Universiti Teknologi MARA (UiTM), including contributions from diploma, foundation, undergraduate, and postgraduate students, together with their lecturers, during two consecutive semesters (20232 and 20234). We employed statistical analysis software to scrutinise the dataset for a comprehensive descriptive analysis of demographic information and three separate teaching evaluation scores across colleges, faculties, academic centres, and branch campuses. The Teaching Effectiveness Index (TEX) analysis demonstrated a slight enhancement in the 20234 semester relative to the 20232 semester. This dataset offers critical insights for higher education institutions, both public and private, aiming to develop, improve, and execute comprehensive 360° teaching evaluation systems through a wider comparison of teaching evaluation effectiveness across various faculties and campuses nationwide.

Keywords: 360° teaching evaluation, inspiring educators, values-based education, higher education

INTRODUCTION

Teaching evaluation is vital for effective education, professional growth, and enriching student learning. Globally renowned universities like Massachusetts Institute of Technology (MIT), Cambridge, and leading ASEAN institutions like the National University of Singapore (NUS) employ 360° evaluations (Movafaghpour, 2019; Zondo, 2018). Malaysian universities predominantly focus on student feedback through systems like Universiti Malaya's Course and Teaching Evaluation (CTES), Universiti Kebangsaan Malaysia's Teaching and Supervision Assessment System (SPPP), and Universiti Teknologi Malaysia's Online Teaching Evaluation (ePPP). This narrow approach limits comprehensive teaching improvement (Effendi et al., 2020).

Like Taylor's University, private institutions adopt diverse feedback methods from students, peers, and management, yielding more effective evaluations (Effendi et al., 2020). However, UiTM's current evaluation system remains outdated. It relies solely on student input and lacks depth to measure teaching efficacy. It also fails to distinguish between new and experienced lecturers, offer constructive feedback, or foster collaboration.

To address these gaps, UiTM introduced the Teaching Effectiveness Index (TEX) under EDUCATION 5.0@UiTM's 2025 strategic plan (Academic Affairs Division, 2019; Mohd Salleh et al., 2020). TEX was developed by adopting the Remote Learning Model (Salleh et al., 2023) for measuring

course impression, learning activities, lecturer professionalism, and facilitating conditions through the perspectives of students and lecturers and their self-reflection. Implemented since 2021, the TEX utilises 360° evaluations, integrating SuFO (50%), PRO-PENS (30%), and TESA (20%) (Figure 1).
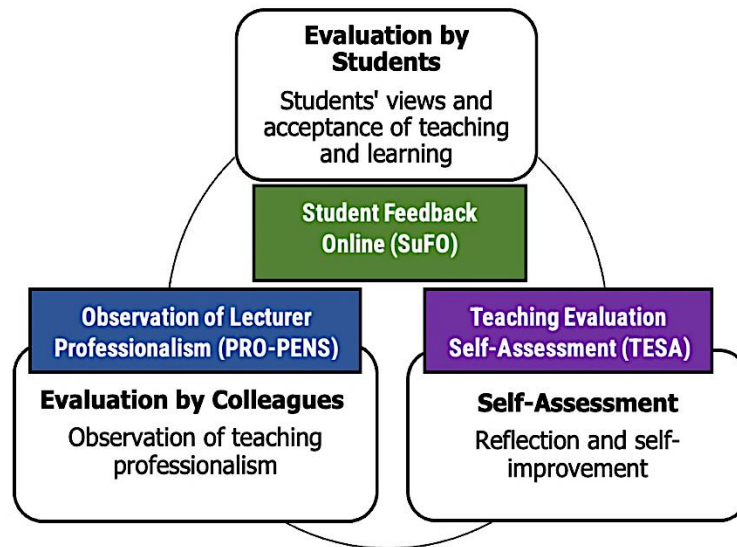

Figure 1 *UiTM Holistic Teaching Evaluation Framework*

These weighting metrics yield a comprehensive TEX score, rated from poor (<60%) to excellent (90–100%), facilitating the identification of effective teaching practices and further improvement (Figure 2). For instance, Dr Ali Ahmad's TEX score of 84.7% places him in the "Good" category.
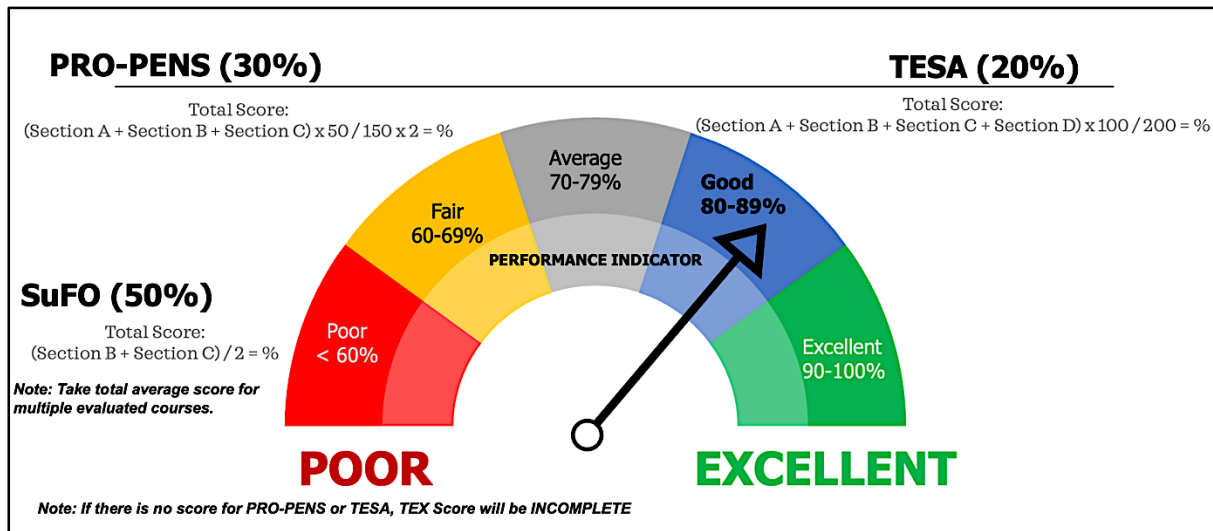

Figure 2 TEX Calculation Score

Since April 2022, UiTM's UFUTURE dashboard has displayed TEX scores to enhance transparency and better teaching performance assessment, job satisfaction, and professional growth of lecturers (Figure 3). This initiative underscores UiTM's commitment to inspiring educators and boosting teaching effectiveness.
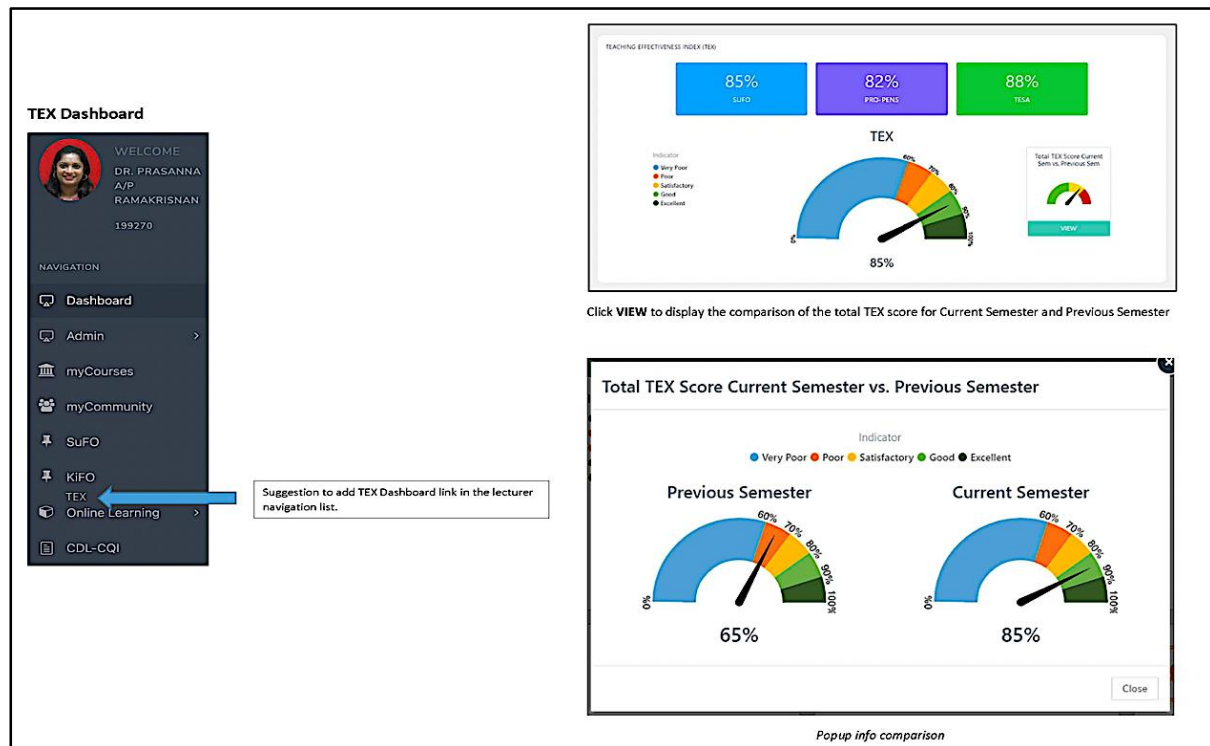
Figure 3 User Interface Design in UFUTURE System

The dataset offers comprehensive insights into teaching effectiveness from students', lecturers', and academic colleagues' perspectives, promoting semester-wise improvements in student satisfaction. It aids university leaders in updating teaching and learning policies, optimising budgets, and enhancing facilities. Additionally, it showcases trends across faculties and campuses, supporting flexible learning and upholding ethical professional teaching standards. Comparative analyses of teaching methods, technologies, and learning outcomes across UiTM's diploma-to-master programmes reveal opportunities for academic innovation. Policymakers can leverage this data to refine educational systems for lifelong learning and sustainable education. Researchers, students, and academics can benefit from the supplied teaching evaluation instruments and their measuring dataset if they measure the related teaching components to explore new research avenues for enhancing educational practices.

METHODS

SuFO Evaluation Procedure

The SuFO online evaluation questionnaire includes four sections with 24 questions on a four-point forced Likert scale ranging from "strongly disagree" (1) to "strongly agree" (4). Section A contains four questions about the overall impression of the courses; Section B has seven questions on the professionalism of the lecturers; Section C includes 11 questions related to teaching and learning activities; and Section D consists of two questions about learning infrastructure. We created this evaluation instrument using the teaching framework theory by Danielson (2007) and the Remote Learning Acceptance Model by Salleh et al. (2023). After the evaluation, lecturers receive scores ranging from less than 59%, indicating very poor performance, to 90% or higher, indicating excellent performance. SuFO respondents were UiTM students in diploma, foundation, undergraduate, and postgraduate programmes. Each semester, students must log in to SuFO (https://ufuture.uitm.edu.my/home) and evaluate every lecturer who taught their courses over five weeks (weeks 12–16). Every student evaluates at least five lecturers per semester, depending on the courses and the credit hours they have registered for. Students not completing the SuFO evaluation

cannot access their exam results (Salleh et al., 2023). This method follows established educational assessment practices, highlighting the importance of structured feedback for achieving adequate learning outcomes (Zhang, 2024). Additionally, ensuring lecturers recognise the collected evaluation feedback can improve students' engagement (Evans et al., 2022).

PRO-PENS Evaluation Procedure

The PRO-PENS evaluation aims to assess the effectiveness of the lecturers' teaching and observe their professionalism. The PRO-PENS instrument concentrates on the planning and execution of teaching, encompassing the arrangement of content, the quality of lecturers' presentations, and their interactions with students. The PRO-PENS instrument comprises 30 questions, which are divided into three parts: Part A consists of five questions that cover teaching and learning planning; Part B, which covers teaching and learning implementation, comprises three sections with eight questions on teaching methods, five questions on content arrangement, and six questions on interaction; and Part C, which includes six questions that assess lecturer professionalism. The scoring for the questions is from 1 (very poor) to 5 (excellent). In the end, lecturers get scores that can be less than 59%, which is very poor, or 90% and higher, which is excellent.

A relevant field senior lecturer appointed as the PRO-PENS observer by the Teaching and Learning Committee will do the PRO-PENS evaluation once per semester and assess lecturers between the 3rd and 12th week of the semester. The lecturers are required to upload and share teaching documents such as course information, teaching or lesson plans, and other teaching materials in the specified drive folder. They will participate in the face-to-face or online lecture session during the first or last 30 minutes or instruct the observed lecturer to record the entire lecture and upload it to the designated drive folder. After the evaluation, the observers should provide suggestions for improvements.

TESA Evaluation Procedure

To enhance learning outcomes and students' performance, the TESA assessment looks at how lecturers view their skills and reflect on their teaching effectiveness and professionalism. The TESA instrument evaluates four key areas: knowledge curation, pedagogical knowledge, value development, and professionalism (Abdullah et al., 2022). It contains about 45 questions that assess these areas, with scores from 1 (not relevant and low impact) to 4 (regular practice and significant impact). After completing the evaluation, lecturers will receive scores from below 25%, marking them as novices, to 76% and above, identifying them as experts (Zhang, 2024). All UiTM lecturers must assess their teaching for self-reflection using the TESA evaluation form from the 15th to the 18th week via the UFUTURE system. Following the assessment, they can view their TESA scores and work to improve their teaching based on those results.

Data Description

Table 1 Details of the Dataset

Data source location & DOI	Repository name: Mendeley Data Data identification number: 10.17632/9zgzj8rmjm.4 Direct URL to data: https://doi.org/10.17632/9zgzj8rmjm.4 Instructions for accessing these data: Not applicable
Creator	Mohd Idzwan Mohd Salleh
Published Date	20.12.2024
Format	Portable Document Format (pdf) Excel (xlsx)

During the 20232 and 20234 semesters, 360° teaching evaluations at UiTM revealed clear patterns across the three primary assessments: SUFO, PRO-PENS, and TESA, as depicted in Table 2. Lecturers at state branches typically teach diploma, degree, and master's students, depending on the specific campus. The SUFO evaluation saw a significant increase in feedback among diploma students, rising from 365,961 responses in the 20232 semester to 502,204 responses in the 20234 semester. Meanwhile, feedback from foundation students decreased slightly, from 16,719 responses in 20232 to 14,091 in 20234, while responses from degree and master's students remained relatively steady, increasing marginally from 590,112 in 20232 to 591,016 in 20234. Due to the enforced sampling strategy, the total response rate for SUFO evaluation reached 162,328 students in the 20232 semester. It increased to 178,221 students in the 20234 semester, reflecting enhanced student engagement and compliance with the evaluation process.

Table 2 Descriptive Statistics of 360° Teaching Evaluations in 20232 & 20234 Semesters

	SuFO Evaluation			PRO-PENS Evaluation		TESA Evaluation	
Semester	Study Level	Total Response	Total Student	Study Level	Total Lecturer	Study Level	Total Lecturer
20232	Diploma	365,961	57,752	Diploma, Foundation Degree & Master's	2,775	Diploma, Foundation Degree & Master's	6,290
	Foundation	16,719	124				
	Degree & Master's	590,112	104,452				
20234	Diploma	502,204	71,289	Diploma, Foundation Degree & Master's	2,974	Diploma, Foundation Degree & Master's	6,598
	Foundation	14,091	3,352				
	Degree & Master's	591,016	103,580				

FINDINGS

We used SPSS software to process and analyse all collected data. The results are shown based on evaluations from SuFO, PRO-PENS, TESA, and finally, TEX at colleges, faculties, academic centres, and branches during the 20232 and 20234 semesters.

SuFO Overall Scores by Academic Entities and State Branches

The average score for SuFO in the 20232 semester across colleges, faculties, and academic centres is 92.5%, with 21 entities achieving a score of at least 90% (Figure 4). The Faculty of Pharmacy (PH) had the highest score of 95.1%.
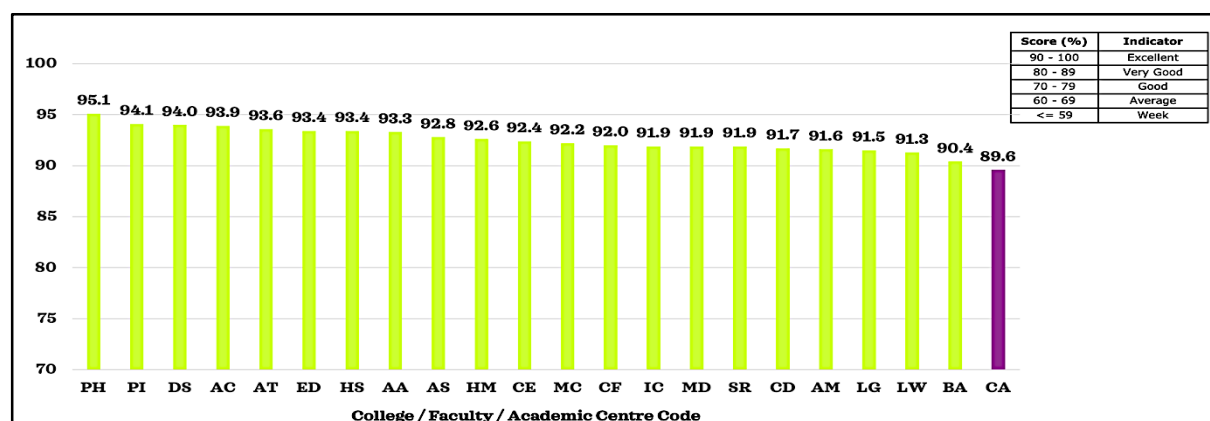

Score (%)	Indicator
90 – 100	Excellent
80 – 89	Very Good
70 – 79	Good
60 – 69	Average
<= 59	Week

Figure 4 Overall SuFO Scores in College/Faculty/Academic Centre by Academic Semester of 20232

The average SuFO score for all colleges, faculties, and academic centres in the 20234 semester was 92.6%, with 21 academic entities reaching an excellent score of at least 90% (Figure 5). The Centre of Foundation Studies (PI) had the best score, 95.4%.
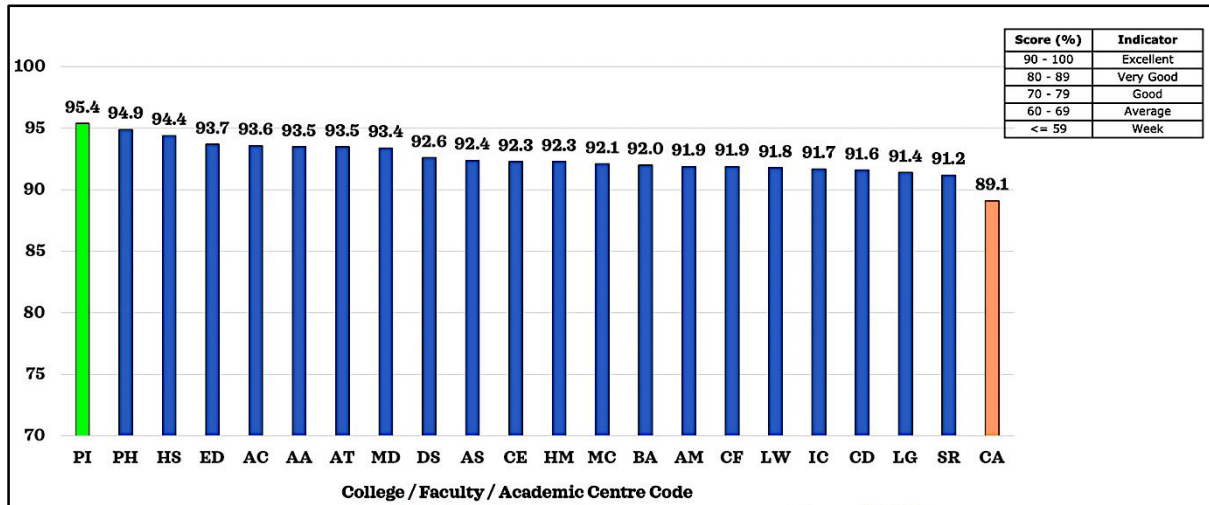

Figure 5 Overall SuFO Scores in College/Faculty/Academic Centre by Academic Semester of 20234

The average SuFO score for the state branches in the 20232 semester was 92.0%, with 11 branches earning at least 90.0% (Figure 6). UiTM Negeri Sembilan Branch had the highest score, at 93.6%.
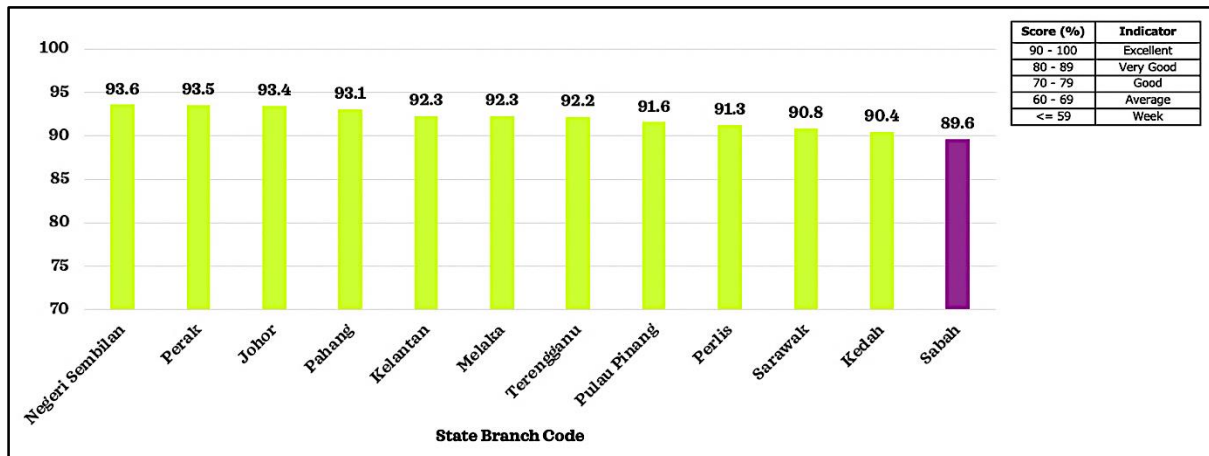

Figure 6 Overall SuFO Scores in State Branch by Academic Semester of 20232

In the 20234 semester, the average SuFO score at UiTM branches was 91.5%, with 11 branches scoring at least 90.0% (Figure 7). The UiTM Johor Branch scored the best, at 93.4%.
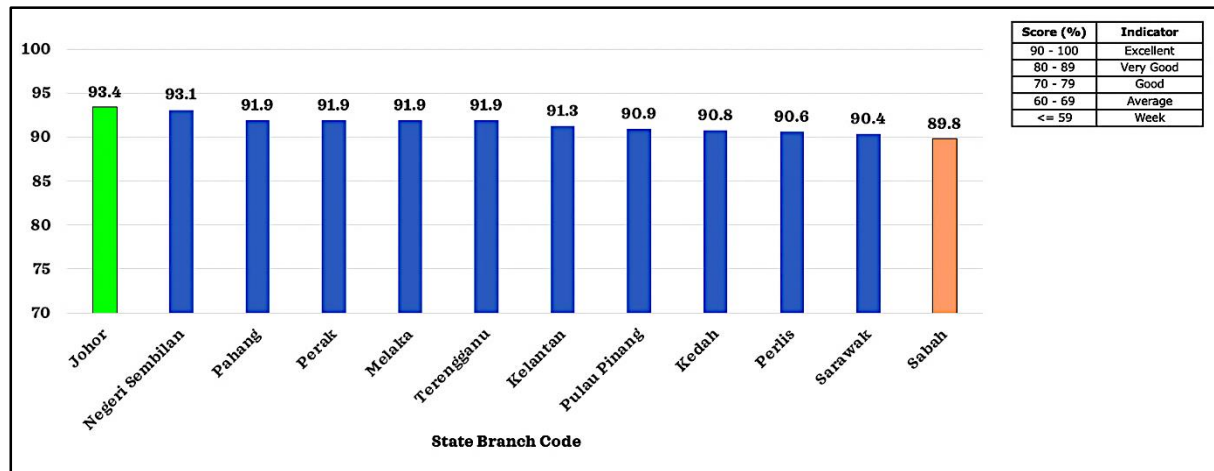

Figure 7 Overall SuFO Scores in State Branch by Academic Semester of 20234

PRO-PENS Overall Scores by Academic Entities and State Branches

The average overall score for PRO-PENS across colleges, faculties, and academic centres in semester 20232 is 91.2%. A total of 16 academic entities obtained a score higher than 90%, considered excellent (Figure 8). The Faculty of Dentistry (DS) achieved the top score of 95.4%. Unfortunately, faculties with incomplete status, like the Faculty of Communication and Media Studies (MC) and the Faculty of Medicine (MD), did not perform the PRO-PENS evaluation in the 20232 semester.
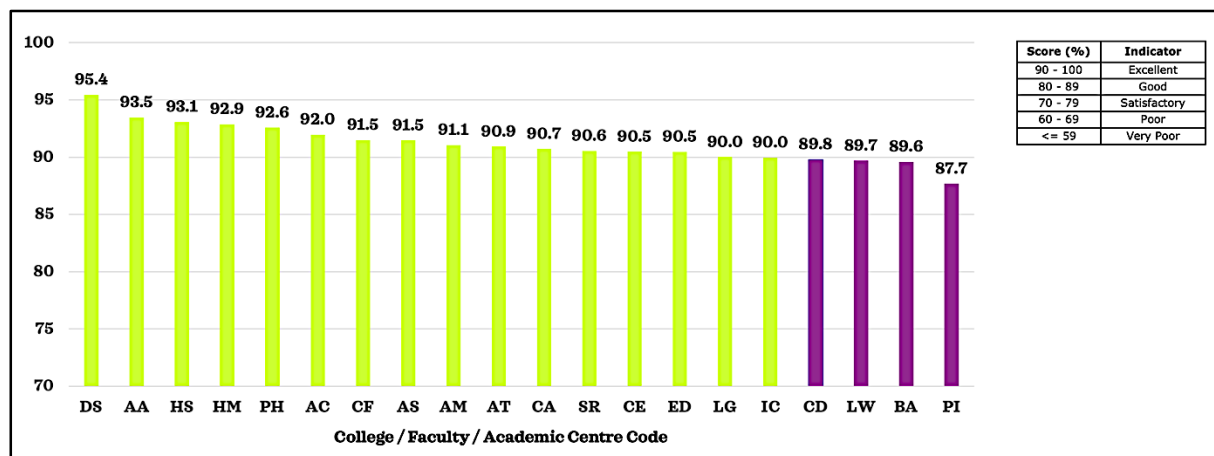

Figure 8 Overall PRO-PENS Scores in College/Faculty/Academic Centre by Academic Semester of 20232

In semester 20234, the average PRO-PENS score across colleges, faculties, and academic centres remained at 91.2% (Figure 9). Again, 16 academic entities earned an excellent score of at least 90%. The Faculty of Communication & Media Studies (MC) saw the highest score at 95.5%.
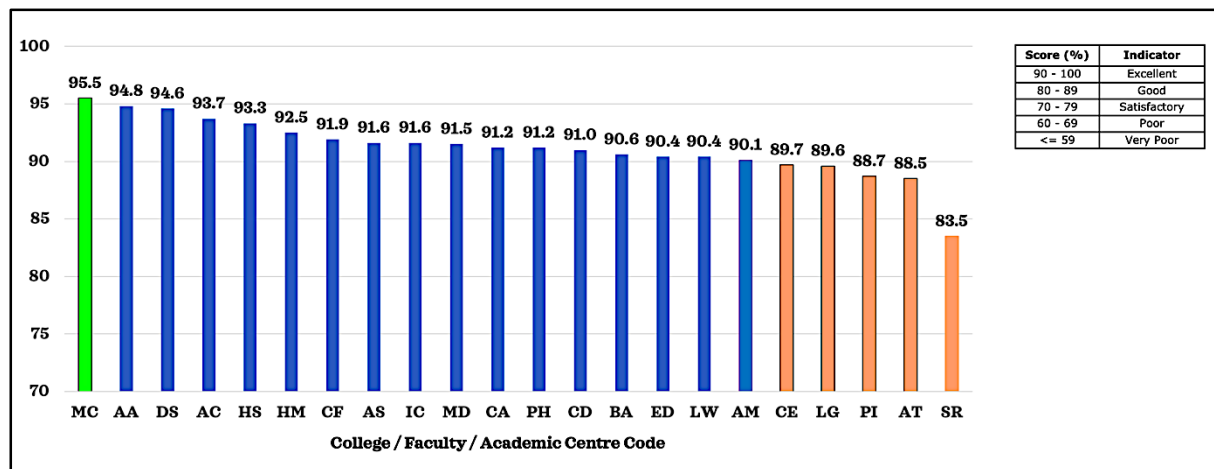

Figure 9 Overall PRO-PENS Scores in College/Faculty/Academic Centre by Academic Semester of 20234

For UiTM branches in semester 20232, the overall average PRO-PENS score was 90.8%, with ten branches showing excellent scores of at least 90% (Figure 10). The highest score was from the UiTM Kedah Branch, which earned 93.8%.
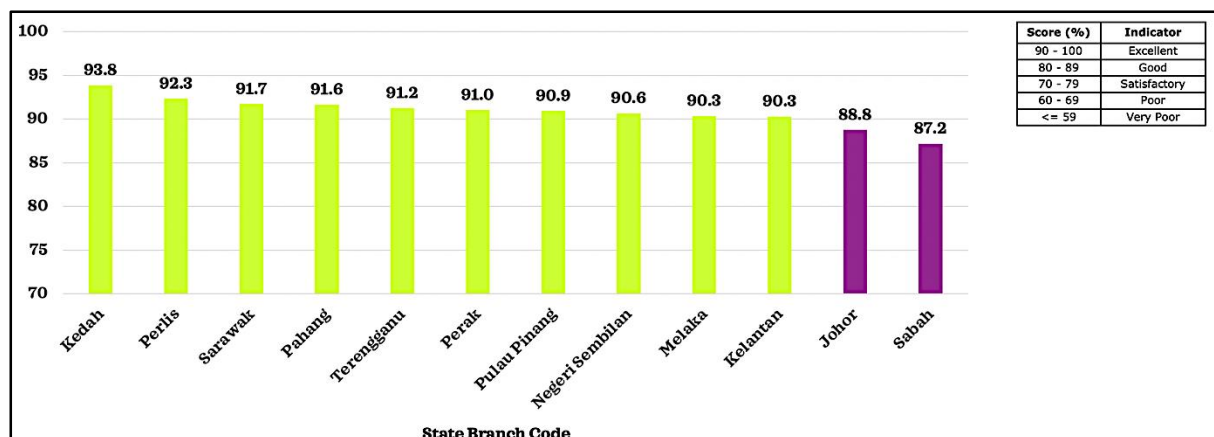

Figure 10 Overall PRO-PENS Scores in State Branch by Academic Semester of 20232

In semester 20234, the average PRO-PENS score for UiTM branches was 91.0%, with nine branches achieving excellent scores of at least 90% (Figure 11). UiTM Kedah Branch again had the highest score, reaching 94.2%.
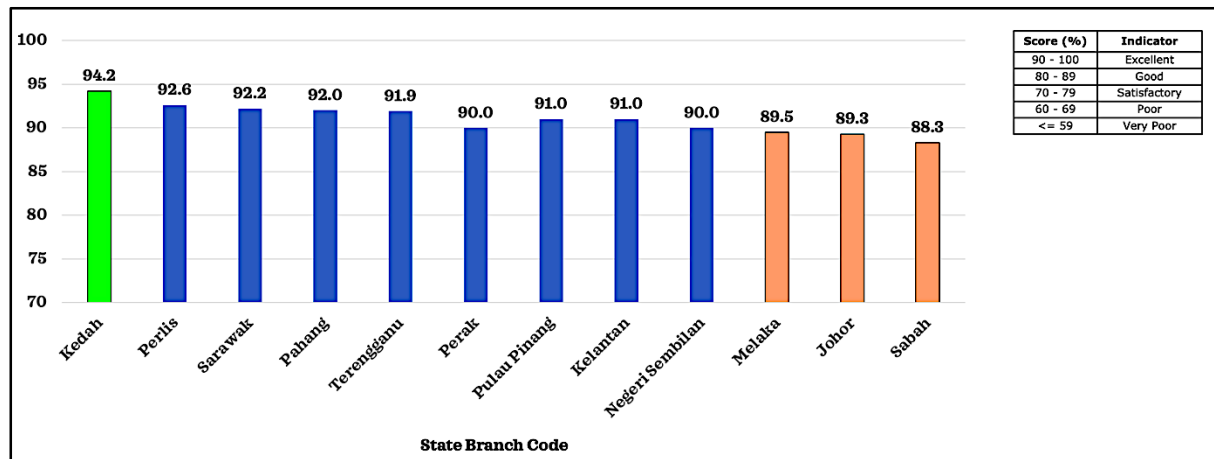
Figure 11 Overall PRO-PENS Scores in State Branch by Academic Semester of 20234

TESA Overall Scores by Academic Entities and State Branches

In semester 20232, TESA's average score for colleges, faculties, and academic centres was 88.0%, and five of these entities got an excellent score of at least 90% (Figure 12). The Arshad Ayub Graduate Business School (AA) had the best score at 91.5%.
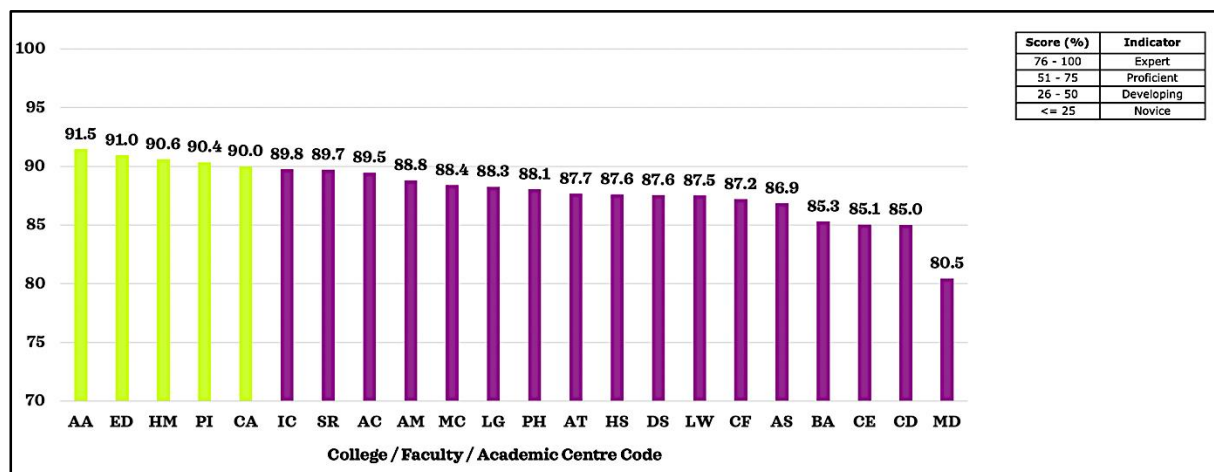

Figure 12 Overall TESA Scores in College/Faculty/Academic Centre by Academic Semester of 20232

In semester 20234, the average TESA score across colleges, faculties, and academic centres was 90.2%, with 16 achieving an excellent score of at least 90% (Figure 13). The Centre of Foundation Studies (PI) had the highest score at 93.1%.
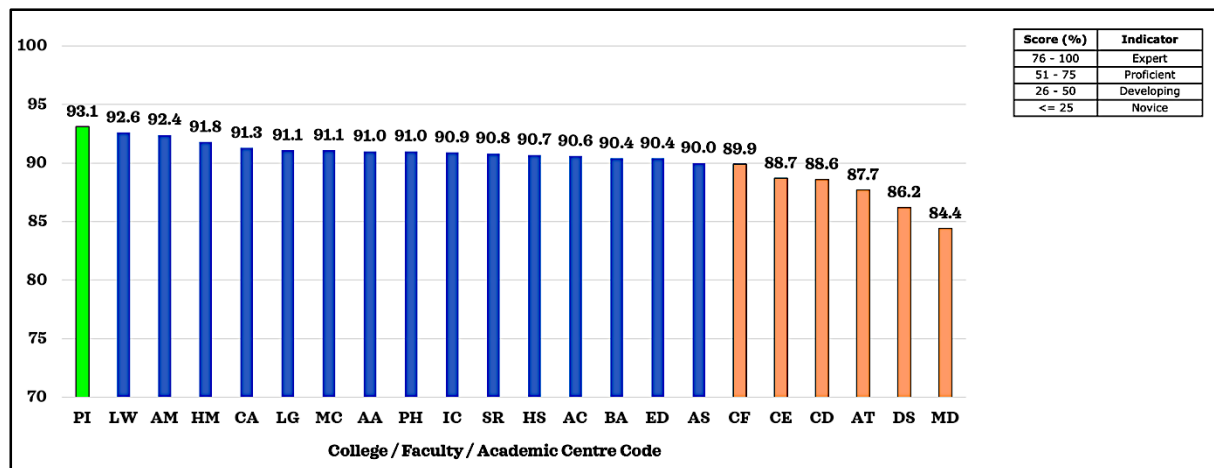
Figure 13 Overall TESA Scores in College/Faculty/Academic Centre by Academic Semester of 20234

The average TESA score for UiTM branches in 2023 was 87.9%, with the Sarawak Branch receiving the highest score at 89.7% (Figure 14).
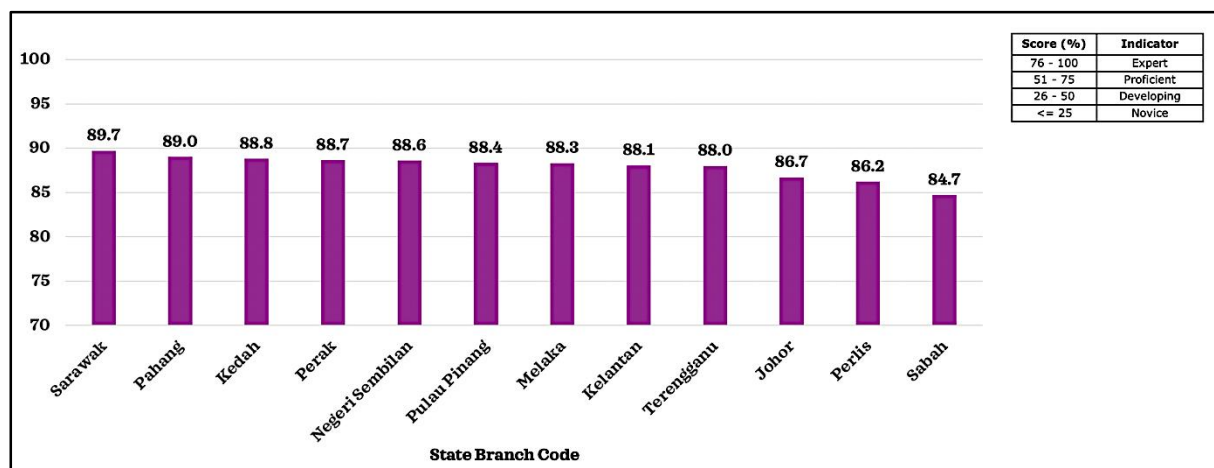

Figure 14 Overall TESA Scores in State Branch by Academic Semester of 20232

In semester 20234, UiTM branches had an average TESA score of 91.1%, with 11 branches getting an excellent score of at least 90% (Figure 15). UiTM Pahang Branch achieved the highest score at 93.0%.
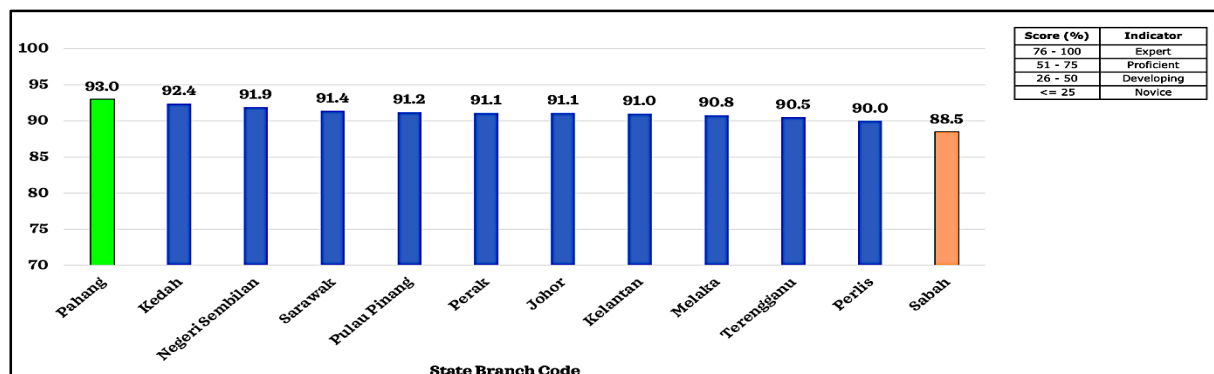

Figure 15 Overall TESA Scores in State Branch by Academic Semester of 20234

TEX Overall Scores by Academic Entities and State Branches

Ultimately, the average TEX score among academic entities, such as colleges, faculties, and academic centres, in the 20232 semester was 91.3%. Eighteen study colleges, faculties, and academic centres scored excellently, achieving at least 90% (Figure 16). The Faculty of Dentistry (DS) scored the highest at 93.1%.
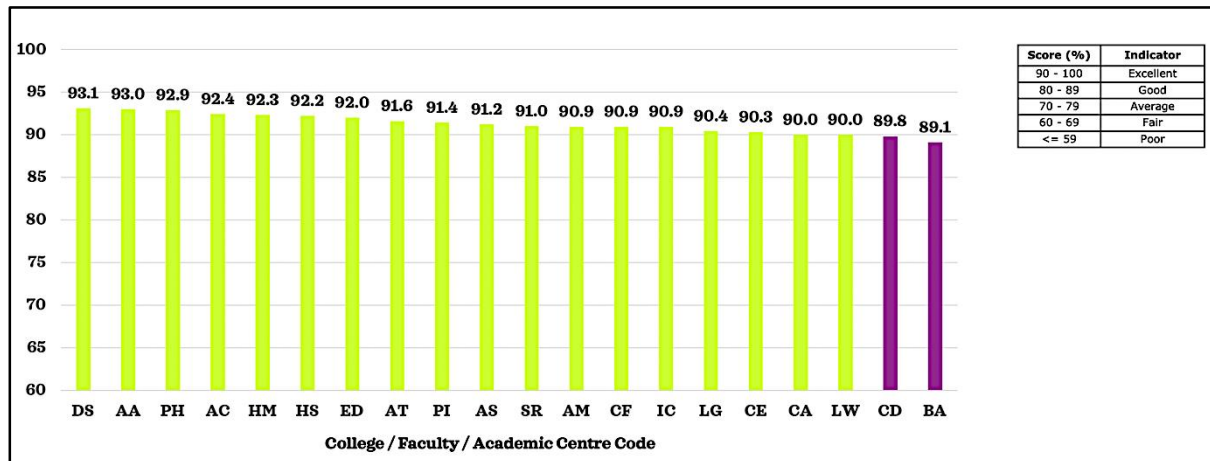

Figure 16 Overall TEX Scores in College/Faculty/Academic Centre by Academic Semester of 20232

Then, for semester 20234, the average TEX score across colleges, faculties, and academic centres was 91.7%, with 21 academic entities earning excellent scores of 90% or more (Figure 17). The Arshad Ayub Graduate Business School (AA) had the highest score of 93.4%.
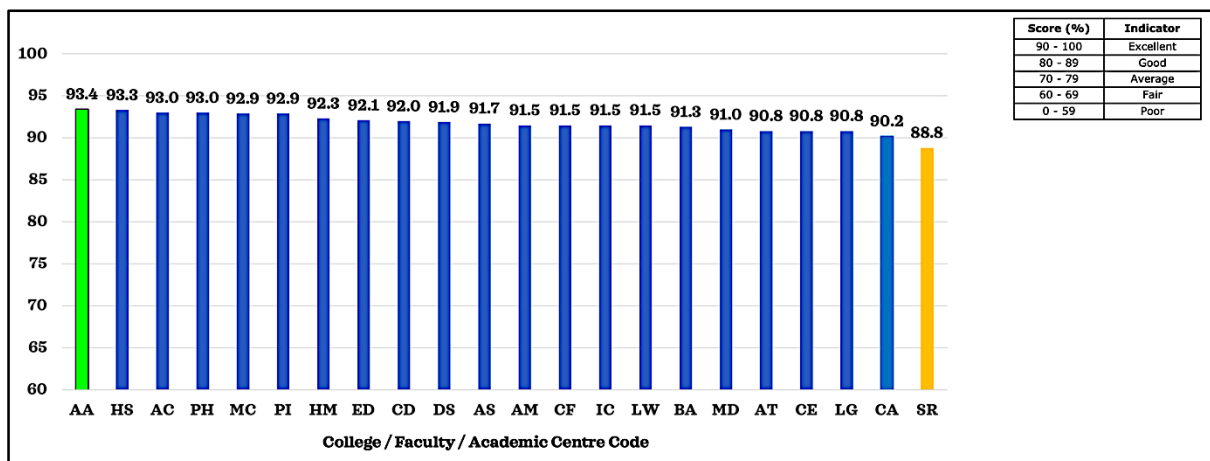
Figure 17 Overall TEX Scores in College/Faculty/Academic Centre by Academic Semester of 20234

During the 20232 semester, UiTM branches had an average TEX score of 90.8%, with 11 state branches reaching excellent scores of at least 90% (Figure 18). UiTM Perak Branch scored the highest at 91.8%.

Figure 18 Overall TEX Scores in State Branch by Academic Semester of 20232

Subsequently, in semester 20234, the average TEX score at UiTM branches increased to 91.3%, with 11 state branches again achieving at least 90% (Figure 19). The UiTM Pahang Branch reported the highest score, 92.2%.

Figure 19 Overall TEX Scores in State Branch by Academic Semester of 20234

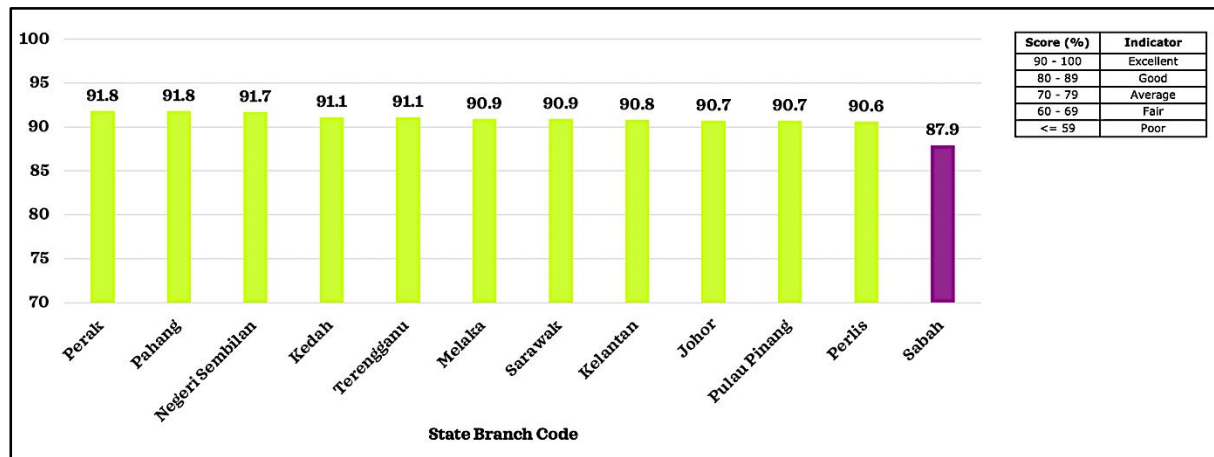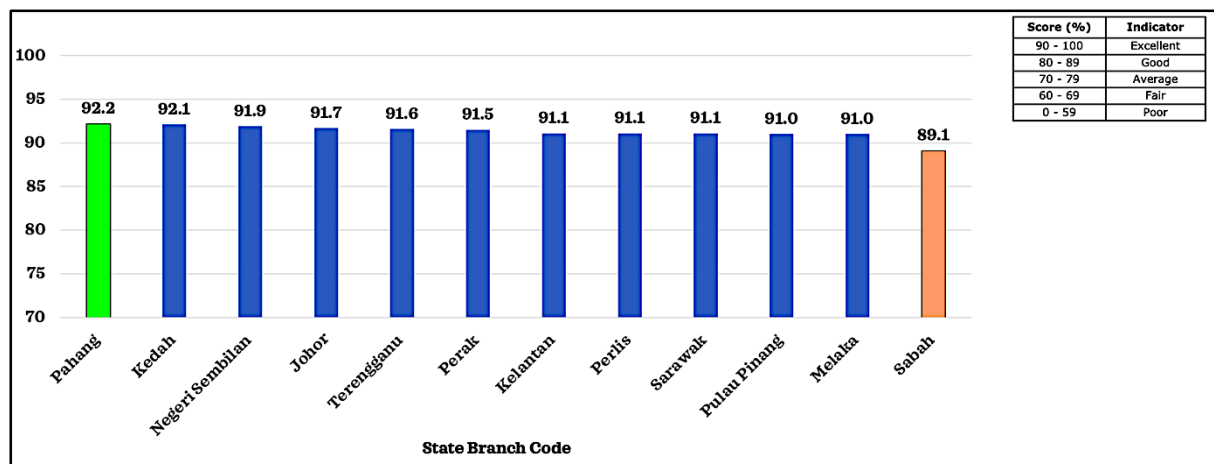## SuFO, PRO-PENS & TESA Overall Scores by Sections

The overall scores from the 360° teaching evaluations show that the SuFO evaluation maintained an Excellent rating across all four evaluation aspects in the semesters 20232 and 20234 (Figure 20).

Student Feedback Online (SuFO)					
No.	Academic Entity	Section A *(Course Impression)*	Section B *(Lecturer Professionalism)*	Section C *(T&L Activities)*	Section D *(Infrastructure)*
1.	Colleges / Faculties / Academic Centres	92.4%	92.8%	92.6%	92.1%
2.	State Branches	91.8%	92.3%	92.0%	91.9%

Observation of Lecturer Professionalism (PRO-PENS)						
No.	Academic Entity	Section A *(Teaching Planning)*	Section B *(Delivery Method)*	Section B *(Content Organization)*	Section B *(Interaction)*	Section C *(Professionalism)*
1.	Colleges / Faculties / Academic Centres	90.5%	91.2%	90.3%	88.8%	95.0%
2.	State Branches	88.0%	89.6%	90.0%	90.4%	96.3%

Teaching Evaluation Self-Assessment (TESA)					
No.	Academic Entity	Section A *(Curator of Knowledge)*	Section B *(Pedagogical Knowledge)*	Section C *(Fostering Values)*	Section D *(Professionalism)*
1.	Colleges / Faculties / Academic Centres	87.1%	87.3%	88.4%	89.2%
2.	State Branches	86.3%	88.0%	88.1%	89.2%

Figure 20 360° Overall Scores by Evaluation Sections in Academic Semester of 20232

The Lecturer Professionalism section recorded the highest Excellent score compared to other sections in the SuFO, PRO-PENS, and TESA assessments (Figure 21); thus, to verify that UiTM colleges, faculties, academic centres, and the state branches have highly ethical and professional lecturers to instil values-based learning among their students.

Student Feedback Online (SuFO)					
No.	Academic Entity	Section A *(Course Impression)*	Section B *(Lecturer Professionalism)*	Section C *(T&L Activities)*	Section D *(Infrastructure)*
1.	Colleges / Faculties / Academic Centres	92.3%	92.9%	92.7%	92.3%
2.	State Branches	91.3%	91.9%	91.6%	91.2%

Observation of Lecturer Professionalism (PRO-PENS)						
No.	Academic Entity	Section A *(Teaching Planning)*	Section B *(Delivery Method)*	Section B *(Content Organization)*	Section B *(Interaction)*	Section C *(Professionalism)*
1.	Colleges / Faculties / Academic Centres	90.4%	89.3%	90.4%	90.0%	96.3%
2.	State Branches	90.4%	88.7%	89.8%	90.4%	96.5%

Teaching Evaluation Self-Assessment (TESA)					
No.	Academic Entity	Section A *(Curator of Knowledge)*	Section B *(Pedagogical Knowledge)*	Section C *(Fostering Values)*	Section D *(Professionalism)*
1.	Colleges / Faculties / Academic Centres	89.6%	89.2%	90.6%	91.3%
2.	State Branches	89.8%	91.0%	91.5%	92.8%

Figure 21 360° Overall Scores by Evaluation Sections in Academic Semester of 20234

Limitations and Conclusion

The data presented is beneficial because it gives an overall look at how lecturers teach from the viewpoint of students, their academic colleagues, and themselves. This can help make required improvements each semester to boost student satisfaction. The dataset is vital for university leaders to update current policies and regulations on teaching and learning. The infrastructure and information office can also use the analysed data to review classrooms, lecture halls, laboratories, studios, and learning areas to fix or replace outdated and faulty facilities. The analysed data gives valuable insights into teaching effectiveness trends across various faculties and state branches each semester. Knowing these patterns aids university leaders in planning necessary budgets and resources for teaching materials and facilities that match the university's curriculum. The data also shows the high standards of ethics and professionalism that lecturers follow according to the university's academic rules, regulations, and code of ethics to sustain values-based teaching and learning. The dataset enables comparative studies across various UiTM faculties and campuses, from diploma to master's-level studies in multiple areas and states in Malaysia. This information can be a starting point for exploring similarities and differences in teaching methods, facilities, technologies, and student learning experiences and outcomes.

Educational policymakers at the ministry level can analyse the data to evaluate various teaching methods, including in-person, online, and hybrid. They can then improve the educational system and standards, making learning more accessible for lifelong learners. Students and academics may use this data to assess or evaluate teaching. It provides a concrete example for measuring teaching effectiveness across different subjects at UiTM, leading to new research paths and avenues for undergraduate and postgraduate studies. Education researchers can also use this data again to study the effectiveness of UiTM teaching materials, methods, delivery, facilities, and technologies.

We excluded SuFO evaluation data for research or mixed-mode programmes directed toward individual supervisors in postgraduate studies from our analysis and dataset.

CONFLICT OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

AUTHOR CONTRIBUTIONS

The authors confirm contribution to the paper as follows: Introduction: MIMS, SUA and ZI; Methods: ARR, SUA and SHA; Data collection: ARR, SUA and SHA; Data analysis and interpretation: MIMS, SUA and SHA; Draft preparation: MIMS, ZI and ARR; Writing and review: MIMS, SUA, ZI, ARR and SHA. All authors read, edited and finalised the manuscript.

DECLARATION OF GENERATIVE AI

The authors declare that no generative AI was used in the writing of the manuscript.

REFERENCES

Abdullah, M. H. T., Roslim, N., & Roslim, N. (2022). Open and distance learning during the COVID-19 pandemic: University students' learning experiences and academic achievements. *Asian Journal of University Education*, *18*(1), 106–117. https://myjms.mohe.gov.my/index.php/AJUE/article/view/17177

Academic Affairs Division, U. T. M. (2019). *Education 5.0: UiTM Academic Compass, Navigating the Future*. UiTM Press. https://doi.org/10.1007/s40196-013-0016-5

Danielson, C. (2007). *Enhancing professional practice: A framework for teaching* (2nd ed.). Association for Supervision and Curriculum Development.

Effendi, M., Matore, E. M., Noh, M. F. M., Zainal, M. A., Muktar, M., & Matore, E. R. M. (2020). The 360-degree teaching evaluation preferability with gender among TVET teachers using chi-square test for independence. *Proceedings of Mechanical Engineering Research Day*, 243–244.

Evans, T., Mejía-Ramos, J. P., & Inglis, M. (2022). Do mathematicians and undergraduates agree about explanation quality? *Educational Studies in Mathematics*, *111*(3). https://doi.org/10.1007/s10649-022-10164-2

Mohd Salleh, M. I., Ibrahim, Z., Othman, K. I., Yusoff, H., & Ariffin, S. (2020). Educator acceptance of Education 5.0@ UiTM framework and initiatives: a descriptive analysis. *International Journal of E-Learning and Higher Education (IJELHE)*, *12*(1), 99–108. https://ir.uitm.edu.my/id/eprint/65919/

Movafaghpour, M. (2019). Developing 360 degree performance evaluation method for school teachers. *International Journal of Research in Industrial Engineering*, *8*(1).

Salleh, M. I. M., Alias, N. A., Ariffin, S., Ibrahim, Z., Ramli, A. R., & Aliman, S. (2023). The sudden transition to remote learning in response to COVID-19: lessons from Malaysia. *Humanities and Social Sciences Communications 2023 10:1*, *10*(1), 1–10. https://doi.org/10.1057/s41599-023-01751-6

Zhang, J. (2024). A Study on English Teachers' Behavior and Teaching Effectiveness in Universities Based on Big Data Technology. *Applied Mathematics and Nonlinear Sciences*, *9*(1). https://doi.org/10.2478/amns.2023.2.00456

Zondo, R. W. D. (2018). The influence of a 360-degree performance appraisal on labour productivity in an automotive manufacturing organisation. *South African Journal of Economic and Management Sciences*, *21*(1). https://doi.org/10.4102/sajems.v21i1.2046