

Original Article



Design, implementation, and evaluation of management dashboards in the Vice-Chancellorship of Education, Tabriz University of Medical Sciences

Raana Gholamzadeh Nikjoo¹, Fatemeh Abbasi Amandi², Milad Khodavandi², Parisa Yoshari²

¹Health Policy and Management Department, Tabriz Health Services Management Research Center, Faculty of Management and Medical Informatics, Tabriz University of Medical Sciences, Tabriz, Iran

²Student Research Committee, Faculty of Management and Medical Informatics, Tabriz University of Medical Sciences, Tabriz, Iran

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Abstract

Background: Evaluation is a crucial factor in transforming education from a static state to a dynamic, high-quality process. Management dashboards facilitate accurate evaluation and assessment, enabling evidence-based decision-making. This study aimed to design, implement, and evaluate management dashboards in the Vice-Chancellorship of Education at faculty of management and medical informatics of Tabriz University of Medical Sciences.

Methods: This action research study was conducted in three phases: design, implementation, and evaluation. Management indicators for the Vice-Chancellorship of Education were identified through focus group discussions and finalized using the Delphi technique. The dashboard was designed using Excel 2018 software and subsequently evaluated by stakeholders through a standard questionnaire.

Results: A focus group discussion lasting 75 minutes involved 12 stakeholders, during which 20 management indicators for the Vice-Chancellorship of Education were identified. Following two rounds of the Delphi study, 18 indicators were confirmed, leading to the construction of the final dashboard. According to feedback from 14 users, the dashboard significantly improved educational management and planning (mean score: 3.2 ± 0.9 , relatively high level), faculty evaluation (mean score: 3.5 ± 0.9 , high level), the performance of educational departments (mean score: 3.07 ± 0.7 , medium level), and the continuous improvement of educational quality (mean score: 3.3 ± 0.9 , relatively high level).

Conclusion: The management dashboard for the Vice-Chancellorship of Education enhances educational management processes and improves various performance indicators. Users reported that the dashboard effectively identified the strengths and weaknesses of educational programs, contributing to continuous improvement in educational quality. Given the growing adoption of dashboards across various fields, universities should leverage management dashboards as essential tools for accurately measuring and evaluating the performance of their Vice-Chancellorships of Education to enhance the quality of education.

Introduction

Evaluation is a crucial factor that can transform education from a static state into a dynamic and high-quality process.¹ Evaluation is a systematic method for collecting, analyzing, and interpreting information that assesses the achievement of program objectives.² In the Vice-Chancellorship of Education at universities, the management, evaluation, and supervision of the academic performance of students and faculty hold significant importance.³ Given the vast amount of data

and information available, there is a pressing need for efficient tools to analyze and visualize this data clearly and understandably. One such tool is management dashboards, which can enhance decision-making and management processes.⁴

Management dashboards are robust instruments that assist managers in making informed decisions based on up-to-date data and in-depth analytics. These dashboards are specifically designed to monitor performance, assess program effectiveness, and improve educational

*Corresponding author: Milad Khodavandi, Email: milad.fm78@gmail.com

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processes.^{5,6} To effectively utilize management dashboards, it is essential to identify key performance indicators (KPIs) that measure the success and effectiveness of educational programs. These indicators may include the status of conditional students, academic progress and failure rates, student participation in faculty evaluations, average faculty evaluation scores from the students' perspective, requests for remedial years, average academic years, graduation rates, student satisfaction, faculty performance, and other relevant criteria.⁷

To identify KPIs for management dashboards, methods such as group meetings and nominal group techniques can be employed. Implementing and utilizing management dashboards requires several stages, including defining requirements, designing a model, development, implementation, and evaluation of results. This process involves extracting data from learning management systems and analyzing it to enhance educational processes and related decision-making.^{6,8} Continuous evaluation and updates to dashboards based on users' changing needs and new data are essential to ensure their effectiveness. This evaluation can be conducted through user surveys and feedback analysis. The results of these evaluations can help optimize dashboards and ensure they meet users' information needs.⁹⁻¹¹

Various studies have demonstrated that designing and implementing a management dashboard enables educational institution managers to analyze defined indicators. Through the management dashboard, progress towards established goals can be monitored, allowing for continuous performance evaluation and timely, relevant decision-making. After implementing the dashboard, the management team can execute data strategies and allocate resources, enabling them to monitor, manage, and intervene effectively, thereby creating conditions for process improvement.¹² Utilizing dashboards that incorporate KPIs aids in analyzing and evaluating the performance of higher education institutions, leading to improved decision-making processes and increased efficiency in higher education management.¹³

Based on the above points, management dashboards in the Vice-Chancellorship of Education are essential tools for enhancing performance and real-time monitoring of faculty and student activities. These dashboards promote transparency in management processes, build trust in the system, and allow managers to regularly evaluate indicators and thoroughly assess system performance. Designing and utilizing a dashboard in an educational environment requires collaborative research and group discussions. Therefore, this study employs an action research approach. Action research studies aim to generate knowledge, create change, and improve performance by involving all stakeholders in efforts to enhance existing quality.^{14,15} This research aims to design, implement, and evaluate management dashboards in the Vice-Chancellorship of Education, Faculty of Management

and Medical Informatics at Tabriz University of Medical Sciences, to improve decision-making and management quality in the educational affairs of the institution.

This study was an intervention research project utilizing the action research approach, conducted in three phases: design, implementation, and evaluation at the Faculty of Management and Medical Informatics, Tabriz University of Medical Sciences. The study involved stakeholders, including the Vice-Chancellorship of Education, educational departments, the Educational Council, and the Education Development Office (EDO), over four consecutive semesters in the years 2022-2024.

Methods

Phase 1: Design

The design phase of the management dashboard was carried out in two stages.

Stage 1: To identify the management indicators of the Vice-Chancellorship of Education, a focus group discussion was held with 12 experts for 75 minutes. Participants were selected through purposive sampling and included managers from the study involved stakeholders, including the Vice-Chancellorship of Education, educational departments, the Educational Council, and EDO, the dean of the school, and four expert faculty members. During this session, the management indicators and their calculation methods were identified. At the beginning of the session, the researcher provided explanations to ensure a common understanding of the session's purpose. The main question posed was: "In your opinion, what are the most important indicators for improving the quality of decision-making and management in the educational affairs of the faculty?" Subsequent questions were based on participants' responses. With the attendees' consent, all discussions were recorded. Two researchers facilitated the focus group: one acted as the interviewer, while the other took notes. At the end of the discussion, the main points were summarized and read back to the attendees for confirmation and any necessary amendments. The collected data were analyzed immediately after the focus group discussions using qualitative content analysis, which allows researchers to interpret data subjectively yet scientifically.¹⁶ The results of the analysis were shared with participants to enhance the study's reliability, allowing them to make amendments and provide final confirmation.

Stage 2: After identifying the management indicators through focus group discussions, the Delphi technique was employed to validate and select these indicators for dashboard design. The Delphi method is widely used in research for formulating and validating frameworks and models, particularly when knowledge is limited. Participants in the Delphi study were selected using purposive sampling. An electronic questionnaire with a 9-point Likert scale (1 = not important to 9 = highly important) was used to gather consensus among

participants regarding demographic characteristics and the identified indicators. The median method was applied to confirm the components: indicators with a median score of 7 or higher were confirmed, those with a median between 3 and 7 were included in the next round, and those below 3 were excluded. In the subsequent round, indicators with a median of 7 or higher were confirmed, while the remaining indicators were removed. There are no strict rules regarding the number of experts in a Delphi study; this number typically depends on factors such as sample homogeneity, study objectives, decision quality, research team management capabilities, internal and external validity, data collection time, available resources, and issue scope. Typically, the number of participants is less than 50, often ranging between 15 and 20.¹⁷⁻¹⁹

In the final stage, based on the selected management indicators, a data storage file was created using Excel 2018 software. Input data for each indicator were defined separately, and a medical informatics specialist wrote the formulas for each indicator in the software. The educational specialist regularly transferred data produced in the school to the software, which displayed the output in various formats, including bar charts, pie charts, line charts, numbers, and percentages. The dashboard presented three performance levels using colors: green (appropriate range), yellow (warning range), and red (critical range). Additionally, the dashboard allowed users to compare indicators over specific time intervals and among different groups.

Phase 2: Implementation

Initially, three training sessions were conducted to familiarize users with the dashboard's interface. During these sessions, the research team engaged participants by posing challenging questions, drawing on their knowledge and experience to refine the dashboard. The data collection process was outlined and provided to the training specialist. Throughout the four semesters (2022-2024), the training specialist continuously entered data related to the indicators into the data storage system. The status of the indicators was reviewed during meetings of the educational councils and academic departments, and strategies for improving the indicators were discussed at the end of each session.

Phase 3: Evaluation

The evaluation phase was conducted in two parts. To assess the effectiveness of the dashboard, we used a researcher-developed questionnaire that included demographic information and four main questions examining the dashboard's impact and usefulness from users' perspectives. These questions focused on improving:

1. Educational Management and Planning
2. Faculty Evaluation
3. Performance of Educational departments

4. Continuous Improvement of Educational Quality

Each question used a 5-point Likert scale. The questionnaire was distributed to all dashboard users via a census method.

Additionally, to evaluate the effectiveness of the dashboard implementation, we compared the status of the indicators from September 23, 2022 to September 21, 2024. Descriptive statistics, including means, standard deviations, percentages, and frequencies, were employed to analyze the data.

Results

A focused group discussion lasting 75 minutes was held with 12 process owners, including managers of four Educational departments, research and educational deputies, the head of the educational development office, the dean of the faculty, and four expert professors. During this session, 20 educational management indicators and their collection methods were identified, as shown in Table 1.

The Delphi study was carried out in two rounds. In the first round, out of 21 invited individuals, 16 participated, yielding a response rate of 76%. The demographic characteristics of the Delphi study participants are presented in Table 2. Fourteen indicators identified in the first round were confirmed. In the second round, six indicators were sent to the 16 participants, resulting in a 100% response rate. In this round, four indicators were confirmed, while two were removed from the study (see Table 3). Based on the findings from the Delphi study, the final dashboard was designed and made available to users, who utilized it over four semesters.

To evaluate the dashboard's effectiveness, a questionnaire was sent to 14 users. The results indicated that the dashboard positively impacted educational management and planning (mean score: 3.2 ± 0.9 , moderately high level), faculty evaluation (mean score: 3.5 ± 0.9 , high level), performance improvement of Educational departments (mean score: 3.07 ± 0.7 , medium level), and continuous improvement of educational quality (mean score: 3.3 ± 0.9 , moderately high level).

Finally, a comparison of the indicator statuses from September 23, 2022 to September 21, 2024 revealed several findings. The number of requests for grace semesters decreased across all levels and groups. Additionally, the number of undergraduate students on academic probation fell. However, indicators such as the average faculty evaluation score, average student study duration, and requests for instructors from outside the faculty remained relatively unchanged. Conversely, other indicators, including the percentage of students on probation and the graduation rate, showed an increase.

Discussion

In the first phase of this study, key indicators for evaluating the quality and performance of the educational deputy of

Table 1. Identified indicators in focus group discussion

Indicator Title	Formula for calculating the indicator	Source of information	Descriptions
Percentage of Students on Probation	Number of students on probation based on Hamava system output divided by the total number of students in the mentioned semester multiplied by 100	Hamava System (Probation and Consecutive Probation Reports Section)	After all grades are recorded and probation is determined, the student is warned, and the advisor and the students are informed. The student is referred to the Counseling and Guidance Department to resolve the problem and improve their academic status.
Rate of Student Academic Decline	Number of students with academic decline based on Hamava system output divided by the number of students in the previous semester multiplied by 100 (Note: Students' academic decline in the mentioned semester is compared to the previous semester)	Hamava System (Academic Decline and Progress Report Section)	After all grades are recorded, students whose semester GPA has dropped by two points or more compared to the previous semester are considered to have academic decline (the amount of change is considered to be two points according to the council and the educational deputy of the faculty). Students with academic decline are referred to their academic advisor and the Counseling and Guidance Department to resolve the problem and improve their academic status.
Rate of Student Academic Progress	Number of students with academic progress based on Hamava system output divided by the number of students in the previous semester multiplied by 100 (Note: Students' academic progress in the mentioned semester is compared to the previous semester)	Hamava System (Academic Decline and Progress Report Section)	After all grades are recorded, students whose semester GPA has increased by two points or more compared to the previous semester are considered to have academic progress (the amount of change is considered to be two points according to the council and the educational deputy of the faculty). Students with academic progress are encouraged on Student Day.
Number of Requests for Instructors from Outside the Faculty	Number of courses with instructors from outside the faculty divided by the total number of courses offered in the faculty multiplied by 100	Hamava System (Course Offering Section)	After defining all instructors and courses in the Hamava system, after the examination period, a report of all offered courses is extracted from the Hamava system, and instructors are categorized based on instructors within the faculty and instructors from outside the faculty. Also, among instructors from outside the faculty, a distinction is made between those from within the University of Medical Sciences and those from outside the University of Medical Sciences.
Student Participation Rate in Faculty Evaluation	Calculated by the Hamava system	Hamava System (Faculty Evaluation Section)	At the end of each academic semester, after the relevant settings for courses and instructors are made in the Hamava system by the Education and EDO, students evaluate their instructors by referring to the Hamava system.
Average Faculty Evaluation Scores from Students' Perspective	Calculated by the Hamava system	Hamava System (Faculty Evaluation Section)	The average of faculty evaluation scores in the Hamava system, which is evaluated and recorded by students.
Number of Requests for Grace Period Extension for Postgraduate Students	After the students' academic years are completed, according to the postgraduate education regulations, the number of student semesters is extracted from the Hamava system (from the student transcript section). Then, the student's remedial courses are reviewed, and if the number of remedial courses is 12 units (Master's level) or 8 units (PhD level), a remedial semester is considered for them by the faculty, and for the rest of the students (students whose remedial units are less), a grace period extension is requested.	Hamava System (Student Transcript Section)	According to the educational regulations, after the completion of 6 semesters for Master's and 8 semesters for PhD, the students' academic status is reviewed from the Hamava system, and for every 12 remedial units for Master's students and 8 remedial units for PhD students, a remedial semester is considered. For students who do not have remedial units and their academic years have ended, a grace period extension is requested. It should be noted that the decision-making process for students who entered in 1399 or 1398 is different due to the COVID-19 regulations.
Average Academic Years of Postgraduate Students	From the "Student Records Modification" section in the Hamava system, view the transcripts of each student on the list (Research Unit list and Hamava system) and count their academic semesters. Sum the academic semesters of all students on the list and divide by the number of students on the list. Finally, multiply by 100 to extract the indicator percentage. (Note: Each level is calculated with students of the same level (separately for Master's, PhD, and MPH programs)).	Research Unit statistics and Hamava system statistics (Graduates section and Student Records Modification section)	Obtain the statistics of students who have defended in the mentioned semester from the Research Unit and compare them with the list of postgraduate graduates in the Hamava system for that semester and calculate their average academic years. (Note: A student may have defended but not graduated, and the Hamava system may not provide accurate statistics. Therefore, we compare the Hamava system and Research Unit data and add any data not present in either system to the final list.)
Percentage of Graduates	Extract the number of graduates in the mentioned semester from the "Graduates List" section and then divide the resulting number by the total number of students in the mentioned semester and multiply by 100.	Hamava System (Graduates List Section)	Students who have completed the required educational stages and have graduated after obtaining degrees and scientific qualifications. It should be noted that the higher the percentage of graduates in the faculty, the better the performance of the faculty.
Submission of Course Budget	Ratio of submitted budgets to all taught courses in the semester	Budgets submitted through automation, etc.	For a course, potentially many questions can be considered. However, during the exam, we face a limitation in the number of questions due to practical considerations, and we must select a certain number of questions. The important issue is to select questions that are well representative of the course. Therefore, instructors should prepare their exams based on the course budget and send them to the Educational Development Office each semester before the exams begin.

Table 1. Continued.

Indicator Title	Formula for calculating the indicator	Source of information	Descriptions
Use of new teaching methods based on lesson plans	The ratio of new teaching methods used in the instruction of courses to the total courses taught by the instructor in the semester.	Based on a review of the content and teaching methods mentioned in the lesson plans uploaded by professors on the faculty website	The use of new teaching patterns (active methods) can lead to deep and lasting learning in learners. The use of new teaching methods includes methods such as team-based teaching, simulation-based teaching, small and large group teaching, PBL, discussion-based teaching, participatory teaching methods, etc. and professors are encouraged to use these methods more in their classroom teaching.
Regular holding of classes	The report provided by the education unit is compared with the report provided by the class representatives, and the number of class sessions is finalized. The total number of sessions held for the courses within the faculty is divided by (16 * the number of courses within the faculty) multiplied by 100	Data from the checklist of the class affairs expert and class representatives (educational liaisons)	During the academic semesters, the formation or non-formation of classes is regularly reviewed and recorded by the class officer and class representatives (educational liaisons). It should be noted that a form has been designed for representatives of the classes to check the status of class formation, in which the formation or non-formation of classes, the reasons for not forming classes, the status and type of class formation, and the date of make-up sessions for classes that were not formed are specified.
Percentage of professors' attendance at the exam session	The report provided by the exam proctors and the exam expert is matched (cases where the professor was absent or present part-time with prior and valid notice are taken into consideration and changes are made to the submitted report) and the number of attendances, absences or part-time attendances of professors is extracted. The calculation method is as follows: First, we divide the number 100 (full percentage) by the number of exam courses to obtain the percentage for each exam. Then, in case of full attendance of the professor, we allocate the full percentage of that course to the relevant professor. In case of part-time attendance, we allocate half of the percentage, and in case of absence, we allocate zero percent. Then, we add up the obtained percentages in each exam and extract the total percentage of the professor's attendance in the exams.	Review by the exam expert and the data of the checklist of exam proctors with the confirmation of the relevant professor	During the exams, the attendance of professors is checked by the exam expert. Also, for this purpose, a checklist has been designed and provided to the exam proctors so that the attendance status of the professors in the exam sessions can be accurately obtained with the signature of the relevant professor
Percentage of grades registered on time	Data is extracted from the Ham Ava system and prepared by professors and academic groups. The calculation method is as follows: Number of courses with the status of not registering the final grade of professors divided by the total number of courses multiplied by 100 (internship and apprenticeship courses are also considered)	Ham Ava system (Instructor Grade Registration Report) section	At the beginning of the semester, the educational regulations letter is sent to all professors, and the deadline for registering grades is explained. Then, after the end of the exam period, the deadline for registering professors' grades is repeatedly announced, and it is also sent by letter to the academic groups to inform the heads of the groups and professors. After the deadline, the list of unregistered grades is extracted from the Ham Ava system and sent to the EDO unit and academic groups.
Exam analysis	The ratio of the professor's analyzed exams to the total number of exams held by the professor in the semester	Quantitative Exam Analysis System (Unique) and Automation	The purpose of analyzing exam questions is to check each question and determine its accuracy and deficiencies. In the analysis of exam questions, the strengths and weaknesses of the exam and the quality of all its questions are determined. Therefore, after conducting the exam, its questions should be analyzed and the results should be used to revise the exam and improve the quality of the questions. Therefore, after the exams are held, the exams are analyzed both quantitatively and qualitatively. In the quantitative analysis, exams with 10 or more students meet the exam analysis conditions, and in the qualitative analysis, all exams are analyzed qualitatively in terms of content and structure using the course budgeting and Millman's checklist.
Sending student counseling reports	Reporting has been qualitative and there is no specific calculation method.	Student survey and evaluation forms by professors	Consultations conducted during each academic semester are reviewed and evaluated by the head of the faculty advisors.
Presentation of course plans/ lesson plans	The ratio of courses with professors' lesson plans to the total number of courses taught by the professor in the semester	Faculty website/ Course plan section/Lesson plans	It is a type of program or framework written by the professor to carry out educational activities in the classroom. The lesson plan or educational scenario emphasizes the need for organization in teaching and learning. Therefore, professors upload their course plans to the faculty website before the start of the academic semester to inform students.

Hamava: Tabriz University of Medical Sciences Educational Management System

Table 2. Demographic characteristics of the participants in the Delphi study (n = 16)

Variable		Frequency
Gender	Male	9
	Female	7
Age (y)	<40	7
	40-49	4
	>50	5
Work experience (y)	1 to 10	8
	10 to 20	3
	20 to 30	2
	Over 30	3
Academic rank	Professor	5
	Associate Professor	8
	Assistant Professor	3

the Faculty of Management and Medical Informatics at Tabriz University of Medical Sciences were identified from the perspectives of experts and specialists. The resulting management dashboard was designed to help assess these indicators. According to the study's findings, dashboard users believed that it effectively identified the strengths and weaknesses of educational programs and contributed to the continuous improvement of educational quality.

Given the increasing adoption of dashboards across various industries, educational managers and deputies should view management dashboards as essential tools for accurately measuring and evaluating educational performance. Dashboards provide data-driven insights that allow educational leaders to make informed decisions based on evidence, ultimately leading to improved academic outcomes and enhanced educational productivity. As supported by existing research, including a study by Ayala et al, management dashboards are effective for improving management within educational institutions. These tools can enhance educational and administrative processes while potentially reducing costs by offering comprehensive analytical perspectives.¹²

Participants in this study noted that the dashboard's transparency in presenting data on the performance of Educational departments and faculty members positively impacted faculty evaluations. This transparency can assure teaching quality, boost student satisfaction, support faculty professional development, and enhance the overall performance of educational institutions. Furthermore, findings from Sugiyanti et al also underscore the positive impact of dashboards on teacher performance, aligning with our results.⁷

The dashboard assessed and reported the faculty's educational indicators across four consecutive semesters, facilitating informed decision-making during educational meetings. Key interventions based on the indicator statuses were implemented, such as adjustments for graduate students seeking grace semesters and targeted

investigations into academic probation causes. Specific courses linked to increased academic probation were identified, leading to necessary interventions. For students nearing probation, faculty advisors implemented strategies to improve their academic standing.

Additional interventions included managing requests for external instructors, providing faculty with end-of-semester educational report cards detailing lesson plan efficacy and course budgeting, test analysis, collaboration with the educational development office, and encouraging student participation in faculty evaluations. Notably, improvements were observed in indicators like grace semester requests, academic probation rates, and graduation percentages. However, other metrics, including average faculty evaluation scores and average student study durations, remained stable, and the percentage of students on probation declined due to factors such as a high number of employed students, economic challenges, and the admission of students with higher academic rankings due to increased capacity.

These findings highlight that while dashboards are powerful tools for presenting and visualizing data, they are not standalone solutions for improving educational processes and outcomes. Other factors also play significant roles in influencing these indicators. A review study by Masiello et al, which examined learning analytics dashboards (LADs), reinforces this notion by indicating that the effectiveness of LADs is largely determined by how the insights gained are utilized to design targeted interventions.²⁰

The dashboard designed in this study is among the first dashboards in this field. To maximize the dashboard's effectiveness, attention should be paid to the characteristics of the educational environment, user skills, and key principles of dashboard design during the design phase. It is crucial to allocate sufficient knowledge and time to the dashboard design phase.²¹ Descriptive analysis was primarily used to display data, and graphical representations were presented to users in the form of bar charts, pie charts, line graphs, numbers, and percentages, with three different performance levels indicated by green (suitable range), yellow (warning range), and red (critical range) colors. Users could obtain accurate and easy-to-understand information by looking at the dashboard's main page. The findings of the study by Boscardin et al also showed that summarizing data in a dashboard can increase the speed of information transfer to the audience, but it may come at the cost of losing data details and compromising the accuracy and precision of the dashboard's learning analytics capabilities.¹¹

Conclusion

Despite the need for improvement in some aspects of the designed dashboard, its use has led to improvements in management and educational processes, as well as some

Table 3. Analysis of the results of the Delphi study

Management indicators of the Educational Deputy	Mean (round one)	Status (round one)	Mean (round two)	Status (round two)
Q1 Percentage of conditional students	8	Confirm	-	-
Q2 Student dropout rate	7	Confirm	-	-
Q3 Student academic progress	7.5	Confirm	-	-
Q4 Number of requests for instructors from outside the faculty	6.5	Round Two	7	Confirm
Q5 Student participation in faculty evaluation	6	Round Two	7	Confirm
Q6 Average faculty evaluation scores from the perspective of learners	7	Confirm	-	-
Q7 Average faculty evaluation scores from the perspective of learners	8	Confirm	-	-
Q8 Average academic years of postgraduate students	6.5	Round Two	7.5	Confirm
Q9 Percentage of graduates	7.5	Confirm	-	-
Q10 Ratio of expelled students to total students	6	Round Two	6.5	Remove
Q11 Sending course budget	9	Confirm	-	-
Q12 Use of new teaching methods based on lesson plans	8	Confirm	-	-
Q13 Regular holding of classes	8	Confirm	-	-
Q14 Percentage of professors' attendance at the exam session	6	Round Two	7	Confirm
Q15 Percentage of grades registered on time	7.5	Confirm	-	-
Q16 Exam analysis	7	Confirm	-	-
Q17 Student-to-faculty ratio	6	Round Two	6	Remove
Q18 Sending student counseling reports	7	Confirm	-	-
Q19 Presentation of course plans	8	Confirm	-	-
Q20 Student satisfaction with the academic group	9	Confirm	-	-

indicators. Based on the findings of this study, proper design of dashboards, considering the specific needs of each educational deputy, attracting key stakeholders, and appropriate use of dashboard information by users lead to greater effectiveness of the dashboard, which ultimately enhances the quality of education. Medical universities play a unique role in providing human resources for health and treatment systems by offering specialized education. Modernizing educational and research methods in these institutions is essential for maintaining their position and impact in the face of rapid changes in today's world. With these considerations, investing in dashboards in educational environments, like other industries, seems necessary. Finally, it is suggested that Tabriz University of Medical Sciences expand the capabilities of management dashboards by utilizing user feedback and employing modern technologies in this regard to improve educational processes and increase stakeholder satisfaction. This action not only contributes to enhancing the university's position but can also serve as a model for other educational institutions.

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Authors' Contribution

Conceptualization: Raana Gholamzadeh Nikjoo.

Data curation: Fatemeh Abbasi, Parisa Yoshari.

Investigation: Milad Khodavandi, Fatemeh Abbasi, Parisa Yoshari.

Methodology: Raana Gholamzadeh Nikjoo, Milad Khodavandi, Fatemeh Abbasi.

Project administration: Raana Gholamzadeh Nikjoo.

Resources: Milad Khodavandi, Fatemeh Abbasi.

Software: Milad Khodavandi, Fatemeh Abbasi.

Supervision: Raana Gholamzadeh Nikjoo.

Writing—original draft: Milad Khodavandi, Parisa Yoshari.

Writing—review & editing: Raana Gholamzadeh Nikjoo, Fatemeh Abbasi, Milad Khodavandi.

Competing Interests

The authors declare no conflict of interest.

Ethical Approval

This study is classified as action research and does not require ethical approval.

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