

Challenges Facing Balancing Research and Teaching in Technical and Vocational Education Institutions in the Libyan Environment

Ali Nouri Shita^{1*}, Mohamed Ali Ehmead², Rabia Ayad Alaswed³
^{1, 2, 3} Administrative and Financial Sciences, Higher Institute of Science and
Technology, Al-Asabaa, Libya

التحديات التي تواجه تحقيق التوازن بين البحث والتدريس في مؤسسات التعليم التقني والمهني في البيئة الليبية

علي نوري شيته^{1*}، محمد علي احمد²، ربيع عياد الأسود³
^{1, 2, 3} العلوم الإدارية والمالية، المعهد العالي للعلوم والتقنية الأصابعة، الأصابعة، ليبيا

*Corresponding author:

shitaali91@gmail.com

Received: July 30, 2024

Accepted: November 15, 2024

Published: December 17, 2024

Abstract

Study objective: The study aims to analyse the challenges facing faculty members in technical education in achieving a balance between research and teaching tasks, and to understand the impact of academic burdens on research production.

Methodology: The study relied on the questionnaire as a tool for collecting data from a random sample of faculty members. The questionnaire was designed to explore the participants' opinions about the balance between teaching and research. The study sample amounted to 38 individuals.

Results: The study found that faculty members face significant challenges in time management, which affects their balance between research and teaching. The study indicated that the impact of academic burdens casts a shadow on the research productivity of faculty members. The evaluation of technical education institutions also focuses on the quantity of research production rather than the quality of teaching, which increases the pressure on academics. The study showed that factors related to societal pressures and evaluation of research aspects show less impact on academic performance in general.

Study limitations: The scope of the study was limited to 38 items, which affects the generalizability of the results. The study sample may not adequately represent all academic disciplines, which opens the way for conducting more studies in the future.

Keywords: Technical Education, Scientific Research, Time Management, Balance between Teaching and Research, Academic Loads.

الملخص

هدف الدراسة: تهدف الدراسة إلى تحليل التحديات التي تواجه أعضاء هيئة التدريس في التعليم الفني في تحقيق التوازن بين مهام البحث والتدريس، وفهم تأثير الأعباء الأكاديمية على إنتاج البحث.

منهجية الدراسة: اعتمدت الدراسة على الاستبانة كأداة لجمع البيانات من عينة عشوائية من أعضاء هيئة التدريس، وقد تم تصميم الاستبانة لاستكشاف آراء المشاركين حول التوازن بين التدريس والبحث، وبلغت عينة الدراسة 38 فردًا.

النتائج: توصلت الدراسة إلى أن أعضاء هيئة التدريس يواجهون تحديات كبيرة في إدارة الوقت، مما يؤثر على توازنهم بين البحث والتدريس، وأشارت الدراسة إلى أن تأثير الأعباء الأكاديمية يلقي بظلاله على إنتاجية البحث لدى أعضاء هيئة التدريس، كما يركز تقييم مؤسسات التعليم التقني والفني على كمية إنتاج البحث بدلاً من جودة التدريس، مما يزيد من الضغوط على الأكاديميين، وأظهرت الدراسة أن العوامل المتعلقة بالضغوط المجتمعية وتقييم جوانب البحث تظهر تأثيراً أقل على الأداء الأكاديمي بشكل عام. حدود الدراسة: اقتصر نطاق الدراسة على 38 فقرة، مما يؤثر على قابلية تعميم النتائج، قد لا تمثل عينة الدراسة كافة التخصصات الأكاديمية بشكل كاف، مما يفتح المجال لإجراء المزيد من الدراسات في المستقبل.

الكلمات المفتاحية: التعليم التقني، البحث العلمي، إدارة الوقت، التوازن بين التدريس والبحث، الأعباء الأكاديمية.

Introduction

Higher institutes and technical colleges are vital centers of knowledge and creativity, where faculty members play a major role in transferring knowledge to future generations, in addition to the functions of research and community service. However, these tasks and their overlap require faculty members to work at a continuous pace, and with high skill in managing time to ensure an effective balance between teaching and scientific research, as well as community service. Achieving this task does not seem to be an easy matter, as it faces a set of challenges that may affect the quality of education and research directly or indirectly, which is reflected in the relationship of faculty members with the community.

Given the status of faculty members, the pressure of balancing educational requirements, including preparing lectures, correcting academic work, and interacting with students, with the demands of scientific research, which require the time and effort required to conduct innovative studies, write research papers, and participate in conferences, can lead to a reduction in the time allocated to teaching or research, which may affect the quality of either. Rapid developments in the fields of knowledge and technology also pose ongoing challenges for institutions and faculty members to keep pace with developments in areas such as artificial intelligence and technological developments, which makes it important to constantly update curricula and study materials. Under these circumstances, we often notice low levels of resources and adequate support to meet these new requirements, which often leads to a gap between what is taught and what happens in the professional reality. There are also challenges related to funding and resources. In many institutions, funding may be limited, which affects the ability to conduct advanced research or provide the necessary tools and technologies. With this lack of funding, academics may be forced to seek external funding, which adds an additional burden to their list of tasks.

In addition to these challenges, there are issues related to the evaluation of academic performance. In most institutions, more weight is given to scientific research than to teaching, as academics are evaluated based on the number of research papers published in high-level scientific journals rather than focusing on the quality of teaching and interaction with students. This system may lead to neglecting the teaching aspect and directing efforts towards producing research only to obtain academic recognition and promotions. In light of these challenges, it becomes necessary to search for strategies to solve these problems. Among the possible solutions is improving the structure of academic evaluation to reflect the true balance between research and teaching, and providing greater financial and institutional support for faculty members to conduct research and teach effectively. Higher education institutions can also encourage cooperation between academics and institutions to ensure that the research they conduct is consistent with the needs of society.

The study problem:

Academic institutions around the world are facing increasing challenges to ensure the quality of education and scientific research, which imposes continuous pressure on faculty members who seek to balance their various academic tasks. Balancing teaching and research requirements with administrative responsibilities has become a complex challenge in itself, and has direct effects on the quality of academic education, especially with the increasing responsibilities placed on faculty members, as they are expected to provide distinguished levels of education in a way that achieves the aspirations of students in particular and the academic community in general, and at the same time they are required to conduct scientific research at a high level of quality that contributes to the development of knowledge and enhances the status of their institutions. This disparity between teaching and research obligations puts them in a difficult position, as they must achieve excellence in both aspects without one affecting the other. With the increase in administrative responsibilities or other academic activities, the burden on them increases, which deepens the problem. The biggest challenge facing faculty members is the ability to manage time effectively, and in a way that achieves a balance between research and teaching tasks. However, focusing on one aspect and neglecting the other aspects will often lead, under

the pressure of increasing pressure, to negative effects on The teaching process, where faculty members are unable to develop educational programs appropriately or interact effectively with students, which leads to faculty members providing educational content below the expected level. On the other hand, if more focus is placed on teaching, research efforts will be affected, as opportunities for solid research that contributes to enhancing the institution's academic standing and providing distinguished scientific contributions decrease. This disparity between research and teaching requirements is not limited to its academic effects, but also extends to include the psychological and health aspects of faculty members. In addition, the continuous pressure to meet the needs of multiple parties (students, institution, society, family) may lead to psychological pressures that affect health, as well as a decline in job satisfaction and loss of motivation for academic work. This problem increases with the expansion of administrative responsibilities or other academic activities that drain their time and energy, which deepens the state of imbalance.

Based on the above, the study problem can be identified as the ongoing challenges facing faculty members in achieving a balance between teaching and research requirements, as failure to achieve balance negatively affects the academic process.

Importance of the study:

The importance of the study lies in enhancing the efforts made to raise the quality of academic education. Studying the challenges and difficulties that prevent achieving a balance between research and teaching constitutes an essential step towards improving academic performance, through studying the difficulties faced by faculty members in achieving a balance between teaching and research, which contributes to achieving the required balance, in addition to providing recommendations based on scientific research to develop effective strategies that would enhance the academic work environment and improve the ability of faculty members to manage their responsibilities in a balanced manner.

Study methodology:

The study relied on a methodology that combines the questionnaire as the main tool for collecting data, in addition to reviewing previous studies to analyze the theoretical aspects of studies in the same context. The questionnaire was carefully designed to explore the participants' opinions on the research topic, as it included a set of statements to ensure diversity of answers and depth of analysis. The questionnaire was distributed to a random sample of faculty members, taking into account academic specialization to ensure diverse representation of different disciplines. Previous studies were also relied upon to provide a theoretical framework that supports the analysis and places the results in a broader context, which enhances the credibility of the study and enables comparison.

Study hypothesis:

Higher education institutions face increasing challenges in achieving a balance between the teaching and scientific research tasks carried out by faculty members. Both teaching and research play a pivotal role in developing academic performance, but combining them in practice imposes pressures that often lead to a negative impact on the balance process. In this regard, the study attempts to test the difficulties that prevent faculty members from achieving a balance between research and teaching performance.

Previous literature:

Balancing research and teaching is a central issue facing faculty members in technical education institutions, as academics seek to achieve outstanding levels of performance in both aspects, without compromising the balance between them. Many previous literatures have addressed this topic from multiple angles, focusing on the factors that influence achieving this balance, such as time allocation, institutional support, and integration between teaching and research. This literature seeks to provide a better understanding of ways to improve research productivity without affecting the quality of teaching, In this regard, a study (Tingsong Li & Xi Yang, 2024) indicated that research-oriented teaching enhances research productivity, while traditional curriculum-based teaching reduces it, On the other hand, the study (Hasan Arslan & Miray Doğan, 2024) focused on the factors affecting the sustainability of academic productivity, such as institutional support and workload, and recommended the need to create a more supportive and equal academic environment. As for the study (Shannon N. Davis, et al, 2020), it highlighted the importance of directing university research as a means of enhancing integration between teaching and research, stressing the need to provide research mentoring opportunities for faculty members, On the other hand, the study (Hasan Arslan & Miray Doğan, 2024) focused on the factors affecting the sustainability of academic productivity, such as institutional support and workload, and recommended the need to create a more supportive and equal academic environment. As for the study (Shannon N. Davis, et al, 2020), it highlighted the importance of directing university research as a means of enhancing integration between teaching and research, stressing the need to provide

research mentoring opportunities for faculty members, The study (Mohammad Ayub Khan, 2017) also showed that achieving a balance between the functions of teaching and research would improve the quality of education, pointing out the importance of strengthening academic management in a way that contributes to supporting this integration. Finally, the study (Isaac Bonaparte, et al, 2015) addressed the challenges facing new faculty members in achieving a balance between research and teaching, stressing the need for formal development programs to support research production and the accompanying development at the professional level.

Firstly: The importance of balance between research and teaching and its impact on academic performance:

The main tasks of universities are three main functions: research, teaching, and community engagement. One of the main challenges in the daily work of faculty members is often the pressure to enhance educational content, while at the same time undertaking largely uneven efforts at teaching. Teaching is often seen as a barrier to research, and the value of teaching tends to be undervalued compared to the value of producing research publications, In the model presented by (Brew, A, 2003), research is seen as taking place in a “disciplinary research culture” and teaching in a “managerial learning environment.” As a result, teaching and research tend to engage in conflicting directions, rather than complementing each other. Research and teaching may be seen as incompatible, or as having no relation to each other (Hattie & Marsh, 1996; Robertson & Bond, 2001), To move from a state of imbalance towards an ideal balance in which research and teaching are integrated, a number of higher education researchers have called for a closer integration of research and teaching (Barnett, 1997; Brew, 2003; Hattie, & Marsh, 1999).

Balancing the tasks assigned to a faculty member is one of the most important keys to academic success. When faculty members achieve a balance between research and teaching, they can integrate modern knowledge and innovations into their curricula, which effectively contributes to providing educational content that is renewed and relevant to environmental developments, which enhances the learning experience for students and gives them experience in the future. In this regard, a study (Prema Gaikwad, 2021) based on the theories of cognitive and social motivation discovered how faculty members balance research and teaching, The mechanisms used by faculty members at a private higher education institution in the Philippines to approach research preparation were presented. The findings indicated institutional support through time allocated for research, financial support, resources, and incentives. The personal aspects of this process included the advancement of knowledge, research skills, and networking opportunities. This is confirmed by the study of (Joy Myers, et al., 2018), It provides insight into how a group of teachers included students in a research project. Faculty members had the opportunity to learn alongside students and listen to their perceptions. Through this experience, students not only gained research experience, but also Rather they expanded their thinking about the role of research in their future careers as teachers. Simply exposing students to research and actually engaging them in the learning process may make them more likely to engage in educational action research once they have their own classrooms. Reflecting on practices and engaging in inquiry about those practices will not only benefit their teaching, but will also help them better meet the needs of their students by bridging the gap between research and practice in education. The study confirms that this model has the potential to develop pre-service teachers who approach classrooms with a researcher's mindset and make instructional decisions based on empirical data.

The balance between academic tasks (research and teaching) allows faculty members to manage the time and resources available to conduct their research that can lead to new discoveries, which enhances the reputation of the academic institution. However, the balance between research and teaching can lead to increased job satisfaction for faculty members, especially when they feel that they are able to achieve their academic goals in both fields. This enhances their sense of accomplishment and success (Agha & Irfan, 2017). The balance between research and teaching has a positive impact on students. For example, when faculty members are active in research, they become role models for their students, which encourages them to engage in scientific research. This can lead to the development of students' research skills and enhance their future opportunities (Komal Saeed & Yasir Aftab Farooqi, 2014).

There is no doubt that providing resources, as well as research training, helps faculty members increase research rates. A study (Aithal, 2016) indicated many of these institutional efforts to improve faculty productivity. Other areas of institutional barriers to research productivity have been identified that make research productivity a challenge for faculty members, taking into account that institutional aspects are more flexible to changes (Jung, 2012). Personal characteristics emerge as important to research productivity issues. Faculty members have identified many mechanisms to balance research and teaching, such as integrating research with teaching and the field of expertise, collaborating with

students and colleagues, and making multiple personal choices that support research as well as teaching.

secondly: Difficulties faced by faculty members in achieving a balance between research and teaching:

Faculty members at universities face increasing pressure to balance the demands of teaching and scientific research. Scientific research is an essential part of a faculty member's duties, as it contributes to the development of knowledge in his field of specialization and enhances the institution's reputation and academic standing. However, teaching requires a great deal of effort to ensure the provision of distinguished educational content that students can understand and benefit from. However, balancing the two sides remains the desired goal, and this requires administrative skills, time, and the ability to work under pressure. The most prominent difficulties and challenges are as follows:

1- Time management challenges:

Most faculty members face increasing pressures during the educational process, which puts them between the hammer of excellence in research activity and the anvil of renewing the teaching content to keep pace with current developments. However, the time available for conducting scientific research is often limited due to teaching commitments. Scientific research takes a lot of time, ranging from collecting data, analyzing it, and writing scientific papers. This lack of time can lead to a decline in the quality of research or a slowdown in its completion, and at the same time affects the improvement of the quality of the teaching process.

2- Focus on research at the expense of teaching:

Teaching and research are essential functions of higher education institutions, but many faculty members may face significant difficulties in balancing the two tasks at the same time. However, several studies have found that teaching often takes longer than research, which may have a negative impact on research performance. In this regard, a study (Tingsong Li & Xi Yang, 2024) analyzed the effect of two teaching methods on faculty performance. The results showed that faculty members at research universities devote more time to research-oriented teaching than to curriculum-based teaching. The time faculty members spend on curriculum-based teaching has a significant negative relationship with research output, while faculty time spent on research-oriented teaching enhances their research productivity and research excellence, in recent years the bulk of the international research literature on integrating research and teaching has shifted from a focus on teacher-centred approaches, which emphasize the integration of research-derived knowledge into the curriculum, to a focus on creating strategies for students to learn through different modes of inquiry and inquiry. Institutions attempting to integrate research and teaching have increasingly emphasized creating opportunities for students to engage in or experience research (Brew & Cahir 2014), in an effort to develop student engagement, and undergraduate research has been shown to enhance this.

3- Challenges of evaluation criteria:

A balanced assessment of faculty efforts often leads to a balance between the tasks they are assigned during their academic career, by giving balanced relative weights to the evaluation of research and teaching processes. Studies have shown that time constraints and inconsistent assessment are variables that greatly affect the level of academic performance and scientific productivity. Also, mentoring university researchers benefits both faculty members and students, but it imposes significant challenges on them (Shannon Davis, et al., 2020).

Analyzing the scientific theories of integrating teaching and research, and diagnosing the pros and cons of both approaches, shows that a balanced combination of teaching and research activities positively affects the quality and standards of education in general, in order to create optimal conditions for the evaluation process. Academic institutions must demonstrate balanced academic and research leadership, allocate all required resources, demonstrate operational flexibility, and build a supportive institutional culture.

4- Challenges of weak resources allocated to research:

The lack of financial resources allocated to scientific research is one of the most prominent challenges facing faculty members in achieving a balance between research and teaching, in a way that ensures the quality and efficiency of the academic process. Many studies have shown that the resources allocated to research are insufficient to complete research and participate in conferences, especially international ones. Academics believe that academic publications are placed primarily to obtain promotions, which draws attention to the problem of economic difficulties facing academics. In addition, academics have pointed to high academic burdens as a major concern (Miray Dogan, 2024 & Hasan Arslan). The study (Alya Elgamri et al, 2024) confirms that Arab researchers struggle to conduct high-quality research despite limited resources, insufficient funding, and the lack of infrastructure to support research. Moreover, the lack of teamwork and guidance reduces research productivity.

5- Publishing and promotion challenges:

Faculty promotions are the most prominent challenges they face during their academic careers. Many studies have focused on the productivity and effectiveness of faculty performance in obtaining permanent appointments and promotions. Faculty members who hold temporary positions in research institutions are expected to bear heavy teaching loads and work on many committees in order to continue to remain in their positions. As a result, isolation, anxiety, and stress often govern the lives of faculty members who seek promotion and permanent excellence in their institutions (Isaac Bonaparte, et al., 2015). Many academic institutions demand more time for faculty members to teach and research, and faculty members are often not rewarded for work that specifically improves student outcomes. If these institutions are to build a "mentoring culture," there must be significant support from management and targeted efforts to address barriers to achieving this goal. Many local academic institutions focus on the number of papers without considering the quality of journals and conferences in which they are published, and this trend therefore represents an additional challenge to achieving a balance between research and teaching.

6- The shortcomings of awareness programs regarding evaluation criteria:

Reaching a level of awareness of the requirements for achieving quality assurance standards by faculty members is one of the basics that those responsible for technical education in the Libyan environment must pay full attention to, due to the great importance of faculty members within the components of the educational process on the one hand, and due to their awareness of evaluation standards and its reflection on the level of their performance of their tasks on the other hand, because they represent the basis on which development and improvement depend, in achieving the goals of technical education, especially in raising the level and quality of the educational process in its various aspects and advancing it, in addition to their continued development of their skills in all aspects related to improving their profession, in light of their institutions' efforts to achieve quality and academic accreditation. Accordingly, the low level of awareness of evaluation standards will contribute to a decline in performance levels in general.

7- Challenges of professional fatigue and overlapping administrative and academic responsibilities:

Professional burnout is one of the most important challenges facing faculty members in technical and vocational education institutions, as the pressure resulting from multiple academic tasks such as teaching, supervising students, and research commitments, leads to clear negative effects. Faculty members often feel exhausted as a result of the continuous efforts in trying to reconcile teaching and scientific research, which leads to an imbalance in achieving the balance between research and teaching in light of the complexity of tasks. When one aspect takes over the attention at the expense of the other, such as research, for example, the performance rate will inevitably decline on the other side. This negatively affects their academic development and limits their ability to contribute to their scientific fields. Stress can lead to professional burnout, poor performance during the semester, and decreased job satisfaction. In addition to the negative personal and physical effects on the faculty member, burnout is also believed to have negative effects on students and their achievement (Sara Laybourn, et al, 2019). Increasing teaching loads and low salaries also push many faculty members to seek external sources of income, which does not allow them enough time for research (Alya Elgamri et al, 2024).

8 - Challenges of updating educational content:

Updating educational content is one of the biggest challenges facing faculty members, as it includes preparing lectures, supervising student research, correcting exams, and continuous interaction with students. All of these tasks consume a lot of time and effort, which reduces the time available for practicing scientific research. The culture of the institution is a major factor in achieving a balance between research and teaching, as the culture of the university itself is one of the decisive factors in determining such strategies. Some universities have been able to develop a culture by either focusing on teaching or research as the primary activity of the institution (2017 Mohammad Ayub Khan). Teaching requires constant adaptation to developments in curricula and technological innovations in education. This continuous updating makes it difficult for faculty members to settle down and focus on scientific research, as updating educational materials and improving teaching methods requires a continuous investment of time and effort.

Research community and sample:

The research community consists of faculty members working in colleges and higher technical institutes affiliated with the Ministry of Technical Education. The study sample size was 38 individuals. 38 questionnaires were distributed to the study sample members, and 38 questionnaires were retrieved and subjected to analysis.

Data collection tool:

The questionnaire form was prepared in a way that ensures the clarity of the paragraphs and ease of answering them. The questionnaire form was designed in two sections. The first section included personal information, while the second section included paragraphs related to the challenges and difficulties that affect the balance between the research and teaching performance of faculty members.

Statistical methods used to describe and analyze data:

In the context of statistical analysis, a variety of statistical tools were used to provide a deeper understanding of the extracted data and to accurately interpret its results. The arithmetic mean was calculated as a tool to determine the central value that represents the general trend of the data, which gives a comprehensive overview of the prevailing trends. To measure the dispersion of the data and the extent of its departure from the mean, the standard deviation was used, which provides an idea about the degree of variation of values from the central value. In order to test the questionnaire statements and ensure the existence of statistically significant differences between the variables, we used the T-test to determine whether the apparent differences between the samples were due to chance or represented significant differences. In addition, the percentage was calculated, which contributed to providing an accurate quantitative view of the incidence rate of phenomena or the frequency of different variables. The rank was also relied upon to classify and arrange the data according to their values, which facilitated determining the relative importance of the results.

Data encoding:

After collecting copies of the questionnaire, the digital method was used in coding the data, where the answers were coded as in Table No. (1).

Table No. (1) Distribution of scores for answers related to the five-point scale

Answer Degree	Strongly disagree	Disagree	neutral	Agree	Strongly Agree
	1	2	3	4	5

Statistical description of the study sample:

Table No. (2) Frequency and percentage distribution of the study sample items according to their characteristics and personal data

Academic Qualification	Master's	Doctorate	Total				
	Number	31	7	38			
Ratio%	%81.6	%18.4	%100				
Academic Degree	Assistant Lecturer	Lecturer	Assistant Professor	Associate Professor	Professor	Total	
	Number	11	15	12		38	
Ratio%	%28.2	%38.5	%30.8			%100	
Specialization	Administrative and Financial	Medical	Computer	Law	Engineering	Other	Total
	Number	14	14	2		8	38
Ratio%	%37	%37	%5			%21	100%
Years of experience	Less than 5 years	6 to 10 years	11 to 15 years	More than 15 years	Total		
	Number	7	15	9	8	38	
Ratio%	%18	%39.5	%23.7	%18.4	%100		
Training courses	Less than 3 courses	From 3 to 5 courses	From 5 to 10 courses	More than 10 courses	Total		
	Number	22	8	5	3	38	

Ratio%	%57.9	%21.1	%13.2	%7.8	%100
Published researches	Less than 3 researches	From 3 to 6 researches	From 7 to 10 researches	More than 10 researches	Total
Number	21	7	8	2	38
Ratio%	%55.3	%18.4	%21	%5.3	%100

The results of the analysis shown in Table (2) indicate that (81.6%) of the sample members are master's degree holders, which represents the vast majority of the sample members, while the percentage of doctorate holders was (18.4%), which means that most of the study sample members are still in academic stages without a doctorate, which may indicate some challenges in devoting themselves to scientific research for this category, as master's degree holders often have greater teaching burdens compared to doctorate holders.

The data also indicate that the highest representation is for the lecturer category at (38.5%), followed by the assistant professor category at (30.8%), then the assistant lecturer category, which represented (28.2%). We note that the results seem consistent with the previous classification, as we note the clear absence of the categories (associate professor and professor), which may indicate weakness or lack of opportunities to obtain promotion to senior academic positions, or it may indicate the young academic age of faculty members in technical institutes and colleges, and this may lead to weak research productivity due to faculty members' focus on teaching at the expense of research activity. We also note that the percentage of administrative, financial and medical specializations amounted to (37%) for each of them, representing (75%) of the sample size, while the percentage of computer specialization amounted to (5%), which is the least represented, while the percentage of other specializations amounted to (21%). This disparity in specializations reflects the nature of the needs of technical education, as the need for administrative and medical specializations increases. However, it may affect the quality and diversity of research produced, especially if some specializations suffer from greater pressure in teaching. In view of the experience of faculty members, we note that the largest group of participants have years of experience ranging from 6 to 10, which constitutes (39.5%) of the sample size, while the group with less experience was concentrated in members with less than 5 years of experience, while the percentage of individuals with long experience (more than 15 years) reached (18.4%). This may seem logical in view of the academic level of the sample members. This result indicates that most faculty members are in the middle stage of their professional lives, and this stage may be a challenge for them in achieving a balance between teaching and research, as they are in the stage of building their professional and research path. As for faculty members obtaining training courses, we note that more than half of the sample (57.9%) have obtained less than 3 training courses, which indicates a lack of professional development opportunities that support teaching and research skills. This indicator indicates a lack of opportunities to obtain appropriate levels. From training, this may mean that there may be challenges in adapting to technological changes or new educational methods, which may negatively affect the quality of research and teaching. It was also found that more than half of the sample (55.3%) published less than 3 research papers, while we note that (5.3%) of the sample published more than 10 research papers, which clearly reflects the decline in research production, which reinforces the hypothesis that they face difficulty in reconciling teaching and research. This indicates the possible reasons for inappropriate teaching loads, low institutional support, or scarcity of opportunities available to support research activity.

Challenges facing the balance between research and teaching performance of faculty members:

Table No. (3) Frequencies, arithmetic mean, standard deviation and T-Test results on the mean of the statements

Rank	Paragraph	Repetition					Arithmetic mean	Standard deviation	Ratio %	Test T	sample direction
		Strongly Agree	Agree	Neutral	Disagree	Strongly					
4	I don't have enough time to focus on	2	22	3	8	3	4.473	0.4182	89.4736	21.7221	Strongly agree

	research and teaching in a balanced way										
8	Institutional assessment focuses more on research than teaching	3	13	9	12	1	4.157	0.51 49	83.15 78	13.86 13	Agree
3	Current performance evaluation criteria do not help improve research and teaching skills	7	23	7	1	0	3.947	0.48 36	78.94 73	12.07 49	Agree
13	Resources allocated for research and teaching are insufficient to meet the needs of faculty members	20	17	0	1	0	3.921	0.77 73	78.42 10	7.303 6	Agree
5	The focus is on the number of published research papers in the evaluation of research performance without taking into account the quality of these papers	10	16	3	7	2	3.6578 95	1.47 43	73.15 78	2.750 6	Agree
6	The pressures of publication and promotion present difficulties in achieving a balance between research	6	20	6	5	1	3.657	0.98 79	73.15 78	4.105 1	Agree

	and teaching										
11	Occupational burnout presents difficulties in achieving a balance between research and teaching	2	24	5	6	1	3.657	0.9879	73.1578	4.1051	Agree
7	There are deficiencies in the awareness programmes held by the institution regarding the performance evaluation of faculty members	11	24	1	2	0	3.526	0.8506	70.5263	3.8140	Agree
14	The institution uses subjective performance evaluation criteria in assessing academic performance (research and teaching)	4	14	11	9	0	3.447	1.0106	68.9473	2.7286	Agree
10	The pressures of updating educational content present difficulties in achieving a balance between research and teaching	4	17	8	7	2	3.368	1.1578	67.3684	1.9614	Agree
9	The overlap between administrative and academic responsibilities prevents achieving a	5	23	3	6	1	3.342	0.9338	66.8421	2.2582	Neutral

	balance between research and teaching performance										
1	Focus on publishing in high-quality international journals impacts on achieving a balance between research and teaching	7	10	5	13	3	3.315789	1.2489	66.3157	1.5586	Neutral
2	Unbalanced evaluation of research aspects (publication) at the expense of other aspects prompts faculty members to focus on research to achieve promotion or reward at the expense of their teaching performance	9	21	4	4	0	3.131	1.0903	62.6315	0.7439	Neutral
12	Societal pressures (community contribution) on academics prevent the balance between research and teaching	3	21	5	8	1	3.131	1.6849	62.6315	0.4813	Neutral

The results of Table No. (3) indicate that the most prominent challenges facing faculty members in achieving balanced performance are represented in the process of time management in facing the academic tasks assigned to them, as it was shown that the paragraph dedicated to the availability of sufficient time to focus on research and teaching obtained the highest arithmetic mean (4.473) and an agreement rate of (89.47%), which reflects a strong agreement among the sample members, and the

calculated T value (21.7221) exceeded the tabular value (2.024), which conclusively confirms its statistical significance. The results also showed that most members of the study sample believe that the evaluation of technical education institutions focuses its attention on research production at the expense of interest in teaching, as paragraph (8) showed that the agreement rate of the study sample members reached (83.16%) and the calculated T value (13.8613), This reflects the importance of this paragraph. On the other hand, the paragraphs with low averages, such as societal pressures and unbalanced evaluation of research aspects, were less important as they obtained a lower approval rate and the calculated T value was less than the tabular value, which makes them less influential, as well as their relative importance is lower compared to others.

In general, we note through statistical analysis that faculty members face major challenges in balancing research and teaching, which makes the study hypothesis widely accepted, especially with regard to the lack of time and the focus of institutional evaluation on research rather than teaching.

Conclusion:

The results of the study indicate that faculty members in technical education face significant challenges in managing time to achieve the ideal balance between research and teaching. The study also found that academic burdens significantly affect faculty members' ability to double their research output. It also showed that the evaluation of technical education institutions focuses more on the amount of research output than on teaching, which increases the pressure on faculty members to present research at the expense of developing their teaching skills. On the other hand, the study showed that factors related to societal pressures and unbalanced evaluation of research aspects have less impact on academic performance in general. These results confirm that there is a pressing need now more than ever to reconsider institutional evaluation policies and provide adequate support to faculty members to achieve a better balance between research and teaching.

References:

- [1] [1] Aithal, P.S. (2016). How to increase research productivity in higher educational institutions: SIMS model. Retrieved from <https://mpr.aub.uni-muenche>.
- [2] [2] Alya Elgamri et al, 2024, Challenges facing Arab researchers in conducting and publishing scientific research: a qualitative interview study, *Research Ethics*, Vol. 20(2), PP 331–362.
- [3] [3] Barnett, R. (1997). *Higher Education: A critical business*. Buckingham, UK: Open University Press.
- [4] [4] Brew, A. (2003). Teaching and Research: New relationships and their implications for inquiry-based teaching and learning in higher education. *Higher Education Research & Development*, 22, 1-18. <http://dx.doi.org/10.1080/072943603200005657>.
- [5] [5] Grant Bage, Lessons and Lacunae? Practitioners' suggestions for developing research-rich teaching and learning: Angles on innovation and change, Published online in *Innovations in Education and Teaching International*, 16 April, 2018, pp 1-20.
- [6] [6] Hattie, J., & Marsh, H. W. (1996). The relationship between research and teaching-a meta analysis. *Review of Educational Research* 66, 507-542. <http://dx.doi.org/10.3102/00346543066004507>.
- [7] [7] Isaac Bonaparte, Augustus Abbey, Ephraim Okoro, Challenges facing beginning Faculty in the 21st Century Higher Education: Evaluating Research Productivity, Teaching Effectiveness, And Service, *International Journal of Academic Research in Progressive Education and Development* January 2015, Vol. 4, No. 1, pp 143-162.
- [8] [8] Joy Myers, Amanda G. Sawyer, Katie Dredger, Susan K. Barnes, & Reece Wilson Examining Perspectives of Faculty and Students Engaging in Undergraduate Research, *Journal of the Scholarship of Teaching and Learning*, Vol. 18, No. 1, January 2018, pp. 136-149.
- [9] [9] Jung, J. (2012). Faculty research productivity in Hong Kong across academic discipline. *Higher Education Studies*.
- [10] [10] Komal Saeed & Yasir Aftab Farooqi, 2014, Examining the Relationship between Work Life Balance, Job Stress and Job Satisfaction Among University Teachers A Case of University of Gujrat, *INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY SCIENCES AND ENGINEERING*, VOL. 5, NO. 6, JUNE .
- [11] [11] K. Agha, F. T. Azmi, and A. Irfa, 2017, Work-Life Balance and Job Satisfaction: An Empirical study Focusing on Higher Education Teachers in Oman, *International Journal of Social Science and Humanity*, Vol 7, No3, March.
- [12] [12] Miray Doğan & Hasan Arslan, Is the Productivity of Faculty Members Sustainable? The Perspective of Faculty Members, *Trends IN High. Education*. 2024, 3, pp 356–372.
- [13]

- [14][13] Mohammad Ayub Khan, Achieving an Appropriate Balance between Teaching and Research in Institutions of Higher Education: An Exploratory Study, *International Journal of Information and Education Technology*, Vol. 7, No. 5, May 2017, pp 341- 349.
- [15][14] Prema Gaikwad, 2021, Balancing Research Productivity and Teaching by Faculty in Higher Education: A Case Study in the Philippines, *Journal of Higher Education Theory and Practice* Vol. 21(7), pp181- 192.
- [16][15] Sara Laybourn, et al,2019, Teacher Procrastination, Emotions ,and Stress: A Qualitative Study, *Frontiers in Psychology*, 1 October , Volume 10, Article 2325,pp1-13, www.frontiersin.org
- [17][16] Shannon N. Davis, Rebecca M. Jones, Duhita Mahatmya, Pamela W. Garner, Encouraging or Obstructing? Assessing Factors That Impact Faculty Engagement in Undergraduate Research Mentoring, *Front. Educ., Sec. Educational Psychology*, Volume 5 - 17 July 2020, pp 1-8.
- [18][17] Susan Mathieson, Integrating research, teaching and practice in the context of new institutional policies: a social practice approach, *Higher Education*, 2019, 78: pp799–815.
- [19][18] Tingsong Li & Xi Yang, Conflict or facilitation? Faculty members' teaching time and their research performance, *The International Journal of Higher E*