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Impact of Adoption of Leadership Methodology on the Development of Academic Competencies at Taif University

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Abstract

The study aimed to examine the level of adopting leadership methodology, level of leadership talent management, level of building leadership merits, and the level of coaching and self-empowerment (mentoring) and at Taif University, from the perspectives of academic leaders, as well as examine the effect of adopting the leadership methodology at Taif University in developing the leadership competencies of academic leaders. The main study included (152) male and female of academic leaders at Taif University. The instrument of the study consisted of questionnaire in its final form consisted of (49) statements, which were divided into four main axes: leadership methodology adoption (13) statements, leadership talent management (10) statements, building leadership competencies (14) statements, and guidance and self-empowerment (12) statements. The study results revealed that (Institutional and programmatic adoption) came in first place according to the responses of academic leaders in the university, showed that (Organizing human resources in a manner that develops talent) came in first place according to the responses of academic leaders in the university, showed that (Organizational training and learning) came in first place according to the responses of academic leaders in the university, and showed that (Training and qualification via actual situations and switching roles) came in first place according to the responses of academic leaders in the university, as well as the Simple linear regression analysis model showed determine the contribution of the variable (level of adoption of the leadership methodology) in predicting leadership talent management.

Keywords: adoption of leadership methodology, academic competencies, academic leaders at Taif University

Introduction

The achievement of organizational success in any sector, including higher education, cannot be attained by the mere reliance employees' skills, especially if their work is poorly directed. Therefore, it is important to manage, guide, and direct employees toward the achievement of desired organizational goals. This can only be accomplished with availability of effective leadership that is based on an appropriate and suitable methodology. In essence, leadership is a process of exerting influence on others through various means, include inducement and persuasion. The success of a leader is reliant on a number of essential requirements, such as the adoption of a well-defined vision, core values that correspond to the vision, and plans for accomplishing work. An effective leader is one that takes advantage of social influence for winning more and stronger support and acceptance, building coalitions, building coalitions, negotiating deals, influencing more emotions, and remedying issues (Umpstead et negotiating deals, influencing emotions, and remedying issues (Umpstead et al., 2015, 144).

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Due to their influence in directing and guiding faculty members, academic leaders play a significant role in providing them with opportunities for the development of their competencies. The development of professional competencies of academics is significantly important for success in the contemporary higher education sector. Modern academic environments are characterized by turbulence and fast changes due to a variety of influencing factors. In fact, it has been found that dissatisfaction and increased stress among faculty members is largely attributable to the lack of opportunities for developing professional competencies, with manifestations that include inadequate preparation, lack of feedback measures, limited collegial relationships, lack of needed resources, unrealistically high expectations, and poor work-life balance (Leslie, 2014, 97).

Thus, it can be stated that leadership may play a significant role in developing academic competencies at higher education institutions. However, it is important to investigate the nature of this relationship and how certain leadership methodologies may allow for attaining desired outcomes. Leadership is a key function in any contemporary organization, including higher education institutions. It guides organizational activities and towards the achievement of goals and improvement of performance. In this regard, a topic worthy of investigation concerns the impact of adoption of leadership methodology on academic competencies among faculty members in higher education institutions.

Some recent studies discussed topics that are related, but indirectly, to that of the present study. For example, the study of Jamali et al. (2022) investigated the effect of leadership styles on the performance of faculty members, with findings highlighting indicating that certain leadership methodologies, such as transformational leadership and laissez-faire leadership, play a role in improving faculty members' performance. Some studies investigated how certain aspects of leadership and management can help in developing faculty members' competencies. For example, the study of Purwaningsih and Rasyid (2022) show that effective leadership is associated with improved performance in talent management. These findings are in line with those obtained by the study of Bair (2017), which indicates that coaching can have a positive effect on critical reflection on instructional practices, thereby leading to improvements in pedagogical involvement, personal self-renewal, and professional collegiality. From the preceding discussion, it can be stated that there still an evident paucity of studies that directly investigated the role of leadership methodologies in developing faculty members' academic competencies. This gap is the research problem that the present study aims to address. The study aims to contribute to close the research gap in this regard.

Literature Review

Significance of leadership in higher education institutions

Effective leadership is significantly important in bringing together all stakeholders (both external and internal) within a comprehensive and all-encompassing structure. Universities often interact with a wide range of both internal and external stakeholders. Effective leadership helps universities manage interactions with stakeholders in different contexts that vary by degree of the university's involvement, location of interaction, cooperation potential, and influenced needed to be exerted over the operation of other parties (Sharma & Jain, 2022, 250).

Another reason why leadership has become of significant importance in higher education contexts is that this sector has become increasingly globalized and market-driven. This has placed considerable pressures on higher education institutions to perform effectively in various areas including the academic aspects as

well as services. Professional services undertake operations in a wide range of areas, including student-focused services (e.g., sports, services, accommodations, student finance, etc.) as well as those related to the institution's operations (e.g., finance, human resource management, management of research funding, marketing, interaction with the industry, etc.). Leaders of higher education institutions play a significant role in achieving efficiency in the functioning of the aforementioned services (Black, 2015, 56).

The preceding discussion highlights the significant role of effective leadership in driving strong organizational performance at higher education institutions. Leadership guides and directs all key operations within a university. Without the ability to properly coordinate among these operations, a university may fail to achieve organizational goals or desired outcomes. A strong and effective leadership is key to ensuring that administrative and educational activities and operations are undertaken in a manner that meets the demands and expectation of various internal and external stakeholders.

Significance of developing academic competencies at higher education institutions

In any higher education institution, human resources represent the main essence for successful organizational performance. Having dedicated and qualified faculty staff is critically important for enabling higher education institutions to achieve desired outcomes with regards to the three main goal areas of their operation, which are education, research, and community service. In order to ensure that faculty members are adequately competent and equipped with skills and knowledge needed for adapting to the many challenges surrounding the higher education sector today, it is of utmost importance to provide them with opportunities for developing their professional competencies. The fulfillment of this requirement is essential for ensuring raising the level of quality of higher education (Knight, 2014, 2).

Another major reason why the development of faculty members' academic competencies has become a pressing need is the growing need for adopting a "competency-based" philosophy at higher education institutions, which is departure from traditional methodologies, with the purpose of turning higher education into a main contributor to social and economic development in society. This need has emerged mainly due to the growing competition in the higher education sector globally in recent years. As a result, it has become necessary support the development of faculty members' academic competencies as a way to address the complex challenges characterizing the 21st century. Global universities are increasingly introducing programs for training faculty members and developing their academic competencies. The significance of development of faculty members' academic competencies has grown to the extent that it has become as important as publishing high-quality research (Elmahdi et al., 2015, 80).

Based on the above discussion, it can be stated that the development of faculty members' academic competencies is a critical requirement for ensuring the competitiveness of universities in the highly competitive higher education sector of today. It is also important for adapting to the rising trends in higher education which emphasize learner-centeredness. The development of academic competencies would enable faculty members to meet students' educational and social needs more effectively and comprehensively.

Leadership Methodologies Adopted at Contemporary Higher Education Institutions

The discussions below focus on two main topics. The first discussion concerns the main categories of leadership models that have found applications in the higher education sector. The second discussion focuses on a number of leadership methodologies that are prevalent in practice in contemporary higher education contexts.

Overview of Leadership Models

Contemporary higher education institutions adopt a wide variety of leadership methodologies, which are categorized under the categories outlined in Table 1.

Table 1. Leadership models in higher education (Black, 2015, 56-58).

Category	Description
Hierarchical Leadership Models	These models emphasize the use of power and authority inherent in the organizational hierarchy. Communication takes a top-down pattern. These models have been criticized for poor effectiveness in affecting social change, developing the educational process, and instilling a sense of global citizenship among students.
Individualistic Leadership Models	These models mainly focus on professional recognition and personal status. They also direct attention to the dilemma of maintaining balance between the functions of education and research. A downside of these models is that they undermine cooperation due to valuing competition as a factor for achieving success and better outcomes.
Collegial Leadership Models	Under these models, academics cooperate without affecting their individual interests. This means that an academic's individual interests are not an issue of concern, as the collegial responsibilities that main subject of observation. The models for the academic community, but may lead to challenges for the institution itself due to its ineffectiveness in meeting the expectations of external stakeholders.
Collaborative Leadership Models	The spread of these models at higher education institutions has largely fueled by support from research funders rather than initiative from higher education institutions themselves. The effectiveness of an academic has become tied to the extent they maintain collaboration with others, while maintaining adherence to the principles of accountability as well as evidence-based work practices. The rising need for implementing collaborative models has led to the decline of hierarchical model at contemporary higher education institutions.
Transformative Leadership Models	Transformative models have witnessed significant growth to the limit that they have become dominant in modern higher education institutions. These models match the contemporary needs for leadership and education at educational institutions. For instance, these models emphasize the importance of emotional intelligence, which is a highly endorsed notion in educational leadership. Moreover, these models' learner-centered focus is resonant with the needs for highly adaptable educational systems. The adoption of these models is also seen as a potential solution for creating new and innovative solutions for responding to the many challenges surrounding the contemporary higher education sector.

Examples of the most practiced leadership methodologies at high education institutions

A variety of leadership methodologies are adopted and implemented at higher education institutions. Below is a discussion of a number of the most widely practices leadership methodologies in these institutions. The leadership methodologies under discussion are transformational leadership, transactional leadership, and laissez-faire leadership.

o ***Transformational Leadership***

Transformational leadership has been a highly commended leadership methodology in higher education. This is attributable to the fact that this leadership methodology places heavy emphasis on building a strong community that stimulates higher levels of performance among instructors and students alike. Transformational leadership allows for inspiring, encouraging, and mentoring key stakeholders (staff members, students, and other institutions). It is beneficial for building an environment that stimulates expansion and growth of the educational community, as stakeholders' concerted efforts are capitalized on.

A transformational leader may deprioritize their self-promotion and self-interest, but for directing attention to the advancement and development of staff members of the educational institution, in the light of the adopted mission and vision. Transformational leadership involves motivating all stakeholders to work toward the achievement of the broad goal of capacity building and promoting a strong sense of community in the educational process; this can be achieved by cultivating a desire for change and pursuing a shift from the status quo in order to adapt to changes occurring in educational fields globally (Sharma & Jain, 2022, 253).

○ *Transactional Leadership*

Transactional leadership can be best understood through lens of the exchange theory; the goals as well as ways of achieving them are defined within a context of exchange arrangements that involve rules for rewards and punishments. The practice of transactional leadership is bound by three main dimensions, which are as follows (Amin et al., 2013, 99-100):

1. Contingent reward: this is an exchange arrangement by which the leader defines a set of objectives as well as the rewards granted to employees in the case of fulfillment of these objectives.
2. Management-by-exception (active practice): the leader observes employees' behaviors actively in order to detect violations then implement corrective procedures accordingly.
3. Management-by-exception (passive practice): the leader passively anticipates the emergence of violations before taking any corrective measures.

○ *Laissez-Faire Leadership*

Laissez-faire leadership is a highly passive leadership methodology. It is distinctive for the lack, or even absence, of practice of leadership. A leader who adopts this leadership relinquishes leadership responsibilities, often makes delays in decision making, does not provide feedback, and gives minimal attention to catering to employees' needs (Amin et al., 2013, 100). The previous discussion highlights the several types of leadership models that have been implemented at higher education institutions. However, these models do not enjoy proportional adoption at higher education institutions today due to changes in educational philosophy and priorities. It is also evident that transformative leadership models, especially the transformational leadership methodology, are gaining considerable attention due the congruence between the inherent nature of this methodology and the nature of needs in the higher education sectors, in which creative management and learner-centeredness are among the main priorities.

Dimensions of leadership at higher education institutions

Leadership at higher education institutions is a complex phenomenon. It is a multi-dimensional phenomenon. Below is a discussion of the main dimensions of this phenomenon. These dimensions are adoption of a leadership methodology, leadership talent management, building leadership merits, and coaching and self-empowerment.

Adoption of a leadership methodology

The process of adopting a methodology is decisive that it makes a difference in determining whether the educational institution's leadership is effective or ineffective. In fact, an institution's success in achieving organizational goals and promoting staff members' satisfaction is closely reliant on the proper adoption of a leadership methodology that meets the needs of the institution and the staff (Mayotte, 2019, 20-21). The selection and adoption of a certain leadership methodology is often influenced by several factors, such as the culture and the context within which the educational institutional is operating. The adoption of an appropriate leadership methodology makes the difference between the success and failure in achieving

satisfaction for employees (Amin et al., 2013, 98).

Leadership talent management

The management of leadership talents is important for success in the placement of competent leaders. The preparation of suitable candidates for assuming leadership positions requires having a pool of leadership talents. This pool must encompass people with appropriate levels of readiness for leadership and potential for directing the institution's operational activities. Therefore, the process of managing leadership talents must be properly organized across all levels, from junior (recruitment of staff members) to senior (appointment for leadership positions). This means that effective management of leadership talents involves recruitment, training, and sustainable and gradual training of staff members with accordance to their capabilities, competencies, and expertise (Sari et al., 2022, 4518).

Building leadership merits

Building leadership merits is reliant upon the role of senior leaders in universities. Senior leaders can achieve this goal by providing support to faculty members. One of the most important measures that senior leaders can implement to support the development of leadership merits is the creation of an environment within which faculty members can experience the development of leadership capabilities through practices such as posing questions, developing intellectual competencies, and formation of values. Within such an environment, faculty members can use the knowledge and skills they acquire in making decisions, establishing commitments, and learning to have confidence in their own opinions (Umpstead et al., 2015, 145).

Moreover, in order to succeed in developing faculty members' leadership merits, senior leaders should communicate and adhere to the institution's mission and vision. This represents a way for role modeling in the practice of effective leadership. The development of leadership merits also requires the promotion of a culture that encourages risk taking and provides highly structured learning contexts. The inclusion of faculty members in work committees would provide them with opportunities for using leadership skills in tackling significant issues with far-reaching effects on the institution. Work in committees can provide participating members with a general overview of the nature of policy, financial, and legal issues surrounding the institution's activities. Additionally, work in committees can provide faculty members with opportunity to be exposed to large-scale collective activities that rely on extensive networking and cooperation with large numbers of people (Umpstead et al., 2015, 145).

Coaching and self-empowerment (mentoring):

Relationships for the development of leadership competencies in higher education institutions are classified into two main categories, which are as follows (Seale, 2015, 155): Coaching: coaching is a one-on-one relationship that is goal-focused and practical in nature, with focus on affecting behavioral change. Mentoring (self-empowerment): this type of relationships is characterized by a high level of commitment. It often involves a person in a senior position who aids the professional and personal development of another person in junior position. The mentoring relationship can be for either the short term (for the development of particular leadership skills) or the long term (extensive and involves holding several meetings over an extended period of time).

It is worth noting that faculty mentoring arrangements can be either formal or informal, with the latter being more common in arrangements in which leadership development is of interest. In a mentoring arrangement, a more experienced academic provides support to a less experienced one through psychosocial, and career support. Psychosocial support focuses on the development of aspects such as the sense of identity and

personal efficacy. On the other hand, career support mainly focuses on professional practice and deepening the understanding of organizational culture. Mentorship relies on several techniques for fostering leaning and skill acquisition, such as feedback and provision of opportunities for having more active engagement in the academic community (Umpstead et al., 2015, 144).

Although coaching and mentoring (self-empowerment) are two different concepts, they share many similarities. For example, both methodologies strongly emphasize personalized learning and training within learner-centered contexts, thus catering to faculty members' professional needs on an individualized basis. Both coaching and mentoring are reliant on high levels of trust, collegiality, and commitment to both the persons involved and the process to an extent that is wider compared to that of conventional professional development contexts. Moreover, implementing these two methodologies requires honest reflections, thereby leading to promoting self-awareness and lasting impact. Both these methodologies endorse fallibility and uncertainty and require the availability a safe environment for learning and growth. They also strongly encourage authentic and experiential learning. The implementation of these methodologies is informed by a number of learning theories and concepts, such as transformative learning, adult learning, experiential learning, and situated learning (Boillat & Elizov, 2014, 160).

Despite the many similarities between coaching and mentoring, there are also many differences between them. For example, coaching mainly focuses on skill development and tasks. It is generally practical in nature and takes advantage of learning opportunities that are available in daily work. Coaching is a type of on-the-job learning and often involves observation of faculty members' instruction activities and provision of feedback. It is also concerned with other aspects of academic work, such as preparation of assignments and tests as well as development of course objectives. It is worth noting that coaching is not confined to the focus on teaching competencies, but it is also concerned with the development of leadership skills and supporting other roles that faculty members perform. It is mainly based on reciprocal learning experiences between individuals with similar expertise and levels of experience. On the other hand, learning experiences in mentorship are more abstract, as learning is not contextualized within daily work experiences. Compared to the case of coaching, mentoring relationships are characterized by stronger emotional bonding, higher level of caring and more depth, as they tackle several issues impacting faculty members on the individual level, such as career development and work-life balance. Mentorship involves guiding for effective performance within the institution. Additionally, mentors work on acquiring resources for supporting the mentees in accomplishing goals and fulfilling aspirations (Boillat & Elizov, 2014, 160).

From the preceding discussion, it can be stated that dimensions of leadership at higher education institutions are complementary. Effective leadership of a university requires directing balanced attention among adoption of a leadership methodology, leadership talent management, building leadership merits, and coaching and self-empowerment. Thus, senior leaders of universities and higher education policy makers must devise appropriate strategies in order to attain proper integration among the aforementioned dimensions.

Key competencies of academics in universities

Work in higher education contexts is highly demanding, and thus it requires a wide range of competencies in a variety of areas. The nature of competencies may differ depending on the academic's ranking and discipline, among other factors. Below is a discussion of some of key competencies required to be possessed and developed in several group of academics at higher education institutions.

faculty members

According to Knight (2014), the key competencies of faculty members that must be targeted by professional development opportunities are those outlined in Table 2.

Table 2. Areas of professional development for developing faculty members' competencies, according to Knight (2014).

Area	Description of Competencies
Discipline Specific	Concerned with the specific academic discipline of the academic.
Leadership	Basic leadership skills, such as time management, interpersonal communication, problem solving, teamwork, and cross-cultural communication.
Instruction	Competencies belonging to this category include curriculum design, effectiveness of instruction, motivation of students, assessment of students, problem-based instruction, and technology-supported instruction.
Research	Concerned with various aspects of research, such as writing research articles, research design, analysis of data, and preparation of funding proposals.
Career Development	Skills of devising strategic plans for career development through administrative and academic rankings.
Language Skills	Improving skills in the native language as well as developing proficiency in foreign languages.

Mid-Level academic leaders

According to the study of Pham et al. (2016), the key competencies for a mid-level academic leader include those outlined in Table 3.

Table 3. Key competencies for a mid-level academic leader, according to Pham et al. (2019).

Area	List of Competencies
Governance of Departments	Management of multiple roles. A clear strategic vision and sense of direction. Communication of the department's general direction.
Management of Programs	Promotion of high-quality instruction. Promotion of research among faculty members.
Management of Human Resources	Understanding the procedures and policies of recruitments of faculty members. Developing faculty members' capacities. Performance assessment and provision of feedback. Treatment of faculty members in a manner characterized by integrity and fairness. Supporting faculty members' participation in decision making. Academic appointment preparation.
Management of Resources and Budgets	Adequate understanding of external and internal sources of funding. Securing resources in order to support research.
External Communication	Interpersonal communication skills. Ability to carry out communication effectively. Improvement of the image of the academic department.

Office Management	Decision-making skills. Resolution of conflicts. Maintaining high morale among faculty members. Establishment of a work climate characterized by collegiality and positivity.
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Based on the above discussion, it can be stated that success in academia requires the possession a wide range of competencies in various areas. The list of required competencies may differ based on the difference in organizational level and academic ranking. This complex variety necessitates designing professional development programs with a highly personalized perspective in order to cater to the needs of individual academics.

The impact of adopting leadership methodology on developing professional competencies of academic leaders:

There is a significant relationship between the adoption of leadership methodology and academics' professional competencies, as the two often develop concurrently. For instance, the development of leadership capabilities is naturally associated with improvement in competencies in other areas. It also plays a role in the promotion of sharing of common experiences and mutual learning among academic leaders (Seale, 2015, 155). Regardless of the adopted leadership methodology, an academic leader must ensure the availability of a variety of requirements in order to ensure the availability of requirements for effective development of professional competencies among faculty members. These requirements mainly include the provision of formal opportunities, such as seminars, training workshops, group and individual learning and consultation arrangements (such as those of mentoring and coaching), and provision of sources and information that faculty members can individually use for advancing their professional growth (Leslie, 2014, 98).

A supportive leadership methodology is critical for helping academic leaders and faculty members acquire personal and professional competencies. Such a leadership methodology would help faculty members manage and cope with work stress. It is also valuable for helping them adapt their skills and competencies to the circumstances of organizational change. Moreover, supportive leadership methodology is associated with effective monitoring, which is important for the development of professional competencies (Heyliger, 2014, 39).

An appropriate leadership methodology is also important as a complementary component to training opportunities. Indeed, motivation and formal training are not enough for attaining effective development of professional competencies of academic leaders and faculty members. Rather, strong and supportive leadership is key to yielding tangible outcomes of efforts for developing academic leaders' professional competencies (Anwar & Humayun, 2015, 116). The preceding discussion shows that effective leadership methodologies are instrumental for developing academic competencies among faculty members. An academic leader is directly responsible for providing the resources and requirements for ensuring the development of professional competencies of all categories, including academic competencies. Therefore, academic leaders must adopt appropriate strategies and measures for ensuring sustainable and long-term development of academic competencies for all faculty members.

Relevant Studies

The study of Jamali et al. (2022) investigated the effect of leadership styles on the performance of faculty members, with focus on the moderating role of organizational culture in this relationship. The population of the study consisted of all faculty members, academic leaders, and postgraduate studies at the Mehran University of Engineering and Technology, located in Jamshoro, Pakistan; the final sample included (384) participants. The study adopted a descriptive research methodology, and data was collected via questionnaire. Findings of the study include the following: transformational leadership and laissez-faire leadership styles are positively correlated with improved performance among faculty members; transformational leadership was found to be the most appropriate for improving faculty performance due to characteristics such as the assignment of challenging work as well as promotion of autonomy and confidence; and a negative relationship was found between transactional leadership and faculty performance.

Suhardi and Merdiani (2022) investigated the impact of leadership style on talent and competency management in higher education as a response the "Independent Campus" policy in Indonesia. The sample of the study included (100) university lecturers working at Indonesia universities. The study adopted a quantitative research methodology, and was collected using questionnaires. Findings of the study include the following: changes occurring in the Indonesian higher education system concern three main categories, which are student affairs and learning activities' model, development of technology and science, and higher education institutions and the resources they possess; leadership styles positively influence lecturers' willingness to comply with the "Independent Campus" policy. Another study that investigated the relationship between Leadership and talent management is the study of Purwaningsih and Rasyid (2022). This study aimed to investigate the impact of leadership on talent management in Indonesian universities. The sample of the study included (108) faculty members working at (12) universities located in West Java, Indonesia. This study adopted a quantitative research methodology, and data was collected via questionnaires. Findings of the study show that effective leadership is associated with improved performance in talent management.

The study of Jais et al. (2021) discussed a process for managing talents at higher education institutions, with focus on leadership competences. The population of the study consisted of all members of the Leadership Competency and Instrument Committee at the Higher Education Leadership Academy (AKEPT) in Malaysia; the final sample included (12) members. The study adopted a qualitative research methodology, and data was collected in interviews and focus group discussions. Findings of the study resulted in the development of an academic leadership development framework that encompasses five clusters of competencies, which are leading, cognition, personnel effectiveness, influence, and impact.

The study of Bair (2017) provides a description for the outcomes of a project for developing faculty members, with the reliance on the Cognitive Coaching model for developing the skills of critical reflection on instructional practices. The sample of the study included (12) faculty members working at a faculty of education at large and comprehensive university for liberal arts that is located in the Midwestern region of the United States. The study adopted a qualitative research methodology, and data was collected through interviews and document analysis. Findings of the study show that the training project had a positive effect on pedagogical involvement, personal self-renewal, and professional collegiality; thus, this training methodology can be of value for the development of faculty members' professional competencies.

Methodology

A questionnaire forms

The questionnaire in its final form consisted of (49) statements, which were divided into four main axes:

leadership methodology adoption, leadership talent management, building leadership competencies, and guidance and self-empowerment.

Table (...): distribution of statements to questionnaire axes in its final form

Axis	No. of statements
Leadership methodology adoption	13 statements
Leadership talent management	10 statements
Building leadership competencies	14 statements
Guidance and self-empowerment	12 statements
Total	49 statements

Questionnaire reliability

After applying the questionnaire to the study sample, the Cronbach Alpha reliability coefficient was obtained for each axis separately, then the total reliability was calculated; table (..) displays the reliability coefficients for the questionnaire axes and its total reliability.

Table (..): Cronbach's Alpha reliability coefficient for the questionnaire axes and the total reliability

s	Axis	Cronbach's Alpha coefficient
1	Leadership methodology adoption	0.92
2	Leadership talent management	0.94
3	Building leadership competencies	0.96
4	Guidance and self-empowerment	0.96
Total reliability of the questionnaire		0,97

Looking at Cronbach's Alpha reliability coefficients in table (..), it is clear that the questionnaire has excellent reliability coefficients ranging between (0.92-0.97) as categorized by (Taber, 2016), which makes it valid to achieve the study objectives. In general, the table shows that the overall reliability of the questionnaire is (0.97), and this means that it is possible to obtain identical results by (97%) between this application and re-application of the questionnaire, and this implicitly means that the statements are clear and explicit and bear accurate ideas in which the respondent's opinion does not change with time.

Structural Validity of The Questionnaire

Pearson correlation coefficients were calculated to examine the correlation between the questionnaire statements and the axes to which they belong, to verify the structural validity of the questionnaire; Table (..) displays the scores for the coefficients of the correlation between the questionnaire statements and the axes.

Table (..): coefficients of the correlation between the questionnaire statements and the axes

First axis		Second axis		Third axis		Fourth axis	
Statement	Correlation coefficient	Statement	Correlation coefficient	Statement	Correlation coefficient	Statement	Correlation coefficient
1	0.696**	1	0.810**	1	0.818**	1	0.703**

2	0.712**	2	0.827**	2	0.739**	2	0.856**
3	0.832**	3	0.791**	3	0.859**	3	0.833**
4	0.771**	4	0.832**	4	0.883**	4	0.868**
5	0.817**	5	0.900**	5	0.846**	5	0.871**
6	0.847**	6	0.855**	6	0.836**	6	0.881**
7	0.758**	7	0.888**	7	0.876**	7	0.897**
8	0.678**	8	0.889**	8	0.803**	8	0.860**
9	0.782**	9	0.757**	9	0.861**	9	0.813**
10	0.664**	10	0.755**	10	0.885**	10	0.874**
11	0.732**	--	--	11	0.867**	11	0.815**
12	0.702**	--	--	12	0.843**	12	0.786**
13	0.442**	--	--	13	0.792**	--	--
--	--	--	--	14	0.854**	--	--

** significant at (0.01) significance level

Table (..) shows that coefficients of the correlation between the questionnaire statements and the axes to which they belong, are all significant at (0.01) significance level, which indicates high internal validity of the questionnaire axes, as the statements correlated to the total average of the axis responses are true statements that measure what they were developed for. Table (..) displays the coefficients of the correlation between the axes and the questionnaire as a whole.

Table (..): coefficients of the correlation between the questionnaire axes and its total average

s	Axis	Correlation coefficient of the questionnaire
1	Leadership methodology adoption	0.703**
2	Leadership talent management	0.910**
3	Building leadership competencies	0.918**
4	Guidance and self-empowerment	0.904**

** significant at (0.01) significance level

Table (..) shows that coefficients of the correlation between the axes and the total average of the questionnaire, are statistically significant at (0.01) significance level or less, and the high correlation coefficients are evidence of the high internal validity of the questionnaire content, and this indicates that the questionnaire axes measure what the questionnaire as a whole measure.

Characteristics of the Study Sample

Frequencies and percentages were obtained to distribute the sample according to the study variables (educational qualification, years of experience in education, number of adult education courses acquired, grade level); Table (..) displays the distribution of the respondents according to the study variables.

Table (..): distribution of the respondents according to the study variables

Variables	Variable levels	Frequenc y	Percentag e
Educational qualification	Male	71	46.7%
	Female	81	53.3%

Years of experience	Human	103	67.8%
	Scientific	41	27.0%
	Medical and health	8	5.3%
Adult education training courses acquired	Professor	23	15.1%
	Assistant professor	77	50.7%
	Associate professor	52	34.2%
Grade level	Dean	25	16.4%
	Deputy head of department	37	24.3%
	Head of department	52	34.2%
	Vice dean	38	25.0%
Total		152	100%

The length of intervals in five-point Likert scale were defined by calculating the range ($3-1=2$), then divided by the largest value in the scale to get the length of the interval, that is ($2\div 3=0.67$), and then this value is added to the smallest value in the scale (the start of the scale which is one) to define the peak of this interval, and this is how the length of intervals in all questionnaire axes as indicated in table (..).

Verbal scale	Low	Medium	High
Quantitative scale	1	2	3
Range of averages	Less than 1.67	From 1.67 to less than 2.34	From 2.34 and above

Table (..) shows that the intervals of the levels of leadership methodology adoption, leadership talent management, building leadership competencies, and guidance and self-empowerment; from these intervals, the level category can be defined from the average values, for example: when the average value ranges between (1.67) and (2.34), the level of leadership methodology adoption is medium.

Results and Discussion

Answer of the first question

The first study question: "what is the level of leadership methodology adoption in the Taif University from the point of view of academic leaders?"; and to answer the first question, arithmetic means and standard deviations were used to arrange the statements of the first axis (leadership methodology adoption in Taif University) due to the accuracy of the means and standard deviations in defining the response intervals of the sample, to define the general level of adoption in each statement and the general adoption average in the axis. Table (..) displays the means and standard deviations for the statements of the first axis.

Table (..) means and standard deviations for the sample responses are arranged in a descending order for each statement of the first axis

Statement no.	Statement	Mean	Standard deviation	Adoption level	Order
1	Strategic planning methodology	2.39	0.75	High	13
2	Response to international contexts	2.42	0.76	High	10
3	Participation and community	2.51	0.74	High	7

	engagement				
4	Field studies and surveys	2.41	0.80	High	11
5	Comprehensive and ongoing assessment	2.53	0.68	High	5
6	Ethical standards and values	2.71	0.62	High	2
7	Institutional and programmatic adoption	2.78	0.52	High	1
8	Self-resource and autonomy	2.43	0.77	High	9
9	Governance and accountability principles	2.53	0.75	High	6
10	Programming and digital technologies	2.64	0.53	High	4
11	Sustainable professional development	2.69	0.57	High	3
12	Flexible and effective incentives	2.43	0.66	High	8
13	Guidance and self-empowerment (Coaching).	2.39	0.71	High	12
General average of adoption level in the axis		2.53	0.49	High	

Table (..) shows that (Institutional and programmatic adoption) came in first place according to the responses of academic leaders in the university, where the response mean for this statement was (2.78), falls within the (high) adoption level. Meanwhile, (strategic planning methodology) received the 13th place according to the responses of the sample, where the mean was (2.39), falling within the (high) level. The table also shows that the level of leadership methodology adoption in Taif University from the point of view of academic leaders in general, was (high) as the mean was (2.53).

Answer of the second question

The second question: "what is the level leadership talent management for academic leaders in Taif University from their point of view?"; to answer the second question, arithmetic means and standard deviations were used to arrange the statements of the second axis (leadership talent management) due to the accuracy of the means and standard deviations in defining the response intervals of the sample, to define the general level of adoption in each statement and the general adoption average in the axis. Table (..) displays the means and standard deviations for the statements of the second axis.

Table (..) means and standard deviations for the sample responses are arranged in a descending order for each statement of the second axis

Statement no.	Statement	Mean	Standard deviation	Management level	Order
General mean of management level in the axis		2.00	0.64	Medium	
1	Attracting distinguished talents from outside the university	1.83	0.87	Medium	10
2	Early detection of talents in the university	1.97	0.83	Medium	7

3	Availability of postgraduate studies according to talent and merit.	2.00	0.78	Medium	4
4	Organizing human resources in a manner that develops talent	2.23	0.65	Medium	1
5	Supporting the practice of creativity and innovation processes	2.13	0.75	Medium	2
6	Participation of talents in global events.	2.02	0.71	Medium	3
7	Preparation of second-line leaders	1.99	0.79	Medium	6
8	Employing organizational competitiveness	1.93	0.77	Medium	8
9	Using benchmarking	1.91	0.79	Medium	9
10	Holding periodic seminars and conferences.	1.99	0.74	Medium	5

Table (..) shows that (Organizing human resources in a manner that develops talent) came in first place according to the responses of academic leaders in the university, where the response mean for this statement was (2.23), falls within the (medium) management level.

Meanwhile, (Attracting distinguished talents from outside the university) received the last place according to the responses of the sample, where the mean was (1.83), falling within the (medium) level. The table also shows that the level of leadership talent management in Taif University from the point of view of academic leaders in general, was (medium) as the mean was (2.00).

Answer of the third question

The third question: "what is the level of building leadership competencies for academic leaders in Taif University from their point of view?", to answer the third question, arithmetic means and standard deviations were used to arrange the statements of the third axis (building leadership competencies) due to the accuracy of the means and standard deviations in defining the response intervals of the sample, to define the general level of adoption in each statement and the general adoption average in the axis. Table (..) displays the means and standard deviations for the statements of the third axis.

Table (..) means and standard deviations for the sample responses are arranged in a descending order for each statement of the third axis

Statement no.	Statement	Mean	Standard deviation	Building level	Order
	General mean of building level in the axis	2.22	0.59	Medium	
1	Moral obligation towards work	2.34	0.70	High	3
2	Mental and emotional excellence	2.26	0.67	Medium	6
3	Effective communication	2.30	0.68	Medium	4
4	Inspiring and influencing employees	2.19	0.75	Medium	1
					0
5	Leading work teams effectively	2.38	0.70	High	2
6	Empowering and motivating employees	2.20	0.70	Medium	9

7	Enhancing institutional capabilities	1.99	0.88	Medium	1 4
8	Organizational training and learning	2.40	0.56	High	1
9	Constantly updating knowledge	2.09	0.84	Medium	1 2
10	Investing in new opportunities	2.05	0.85	Medium	1 3
11	Strategic planning	2.28	0.65	Medium	5
12	Change and development leadership	2.25	0.63	Medium	8
13	Competitiveness in virtual environments	2.09	0.61	Medium	1 1
14	Creating alternatives and innovative solutions	2.26	0.68	Medium	7

Table (..) shows that (Organizational training and learning) came in first place according to the responses of academic leaders in the university, where the response mean for this statement was (2.40), falls within the (medium) building level. Meanwhile, (Enhancing institutional capabilities) received the last place according to the responses of the sample, where the mean was (1.99), falling within the (medium) level. The table also shows that the level of building leadership competencies in Taif University from the point of view of academic leaders in general, was (medium) as the mean was (2.22).

Answer of the fourth question

The fourth question: "what is the level of guidance or self-empowerment for academic leaders in Taif University from their point of view?", to answer the third question, arithmetic means and standard deviations were used to arrange the statements of the fourth axis (guidance and self-empowerment) due to the accuracy of the means and standard deviations in defining the response intervals of the sample, to define the general level of adoption in each statement and the general adoption average in the axis. Table (..) displays the means and standard deviations for the statements of the fourth axis.

Table (..) means and standard deviations for the sample responses are arranged in a descending order for each statement of the fourth axis

Statement no.	Statement	Mean	Standard deviation	Guidance level	Order
	General mean for the guidance level in the axis	2.01	0.64	Medium	
1	Training and qualification via actual situations and switching roles	2.21	0.56	Medium	1
2	Adopting job coexistence programs to gain various experiences	2.00	0.75	Medium	6
3	Participation in open discussion groups to invest intellectual potential	1.99	0.73	Medium	7
4	Focusing on the passions and interests of members	1.88	0.75	Medium	11
5	Investing and supporting members' strengths	2.11	0.82	Medium	3

6	Addressing weaknesses of members and avoiding them in the future	2.03	0.83	Medium	5
7	Providing opportunities for each member to maximize his abilities	2.05	0.77	Medium	4
8	Leaders' involvement in (coaching) programs as a practice with employees	1.97	0.79	Medium	8
9	Exercising some leadership work with higher skills	2.20	0.73	Medium	2
10	Providing (coaching) training sessions for inspiration and creativity	1.93	0.80	Medium	10
11	Finding a coach to provide (coaching) services in each college or department	1.85	0.78	Medium	12
12	Providing all mentoring services at the appropriate time and place	1.93	0.76	Medium	9

Table (..) shows that (Training and qualification via actual situations and switching roles) came in first place according to the responses of academic leaders in the university, where the response mean for this statement was (2.21), falls within the (medium) guidance level.

Meanwhile, (Finding a coach to provide (coaching) services in each college or department) received the last place according to the responses of the sample, where the mean was (1.85), falling within the (medium) level. The table also shows that the level of guidance and self-empowerment in Taif University from the point of view of academic leaders in general, was (medium) as the mean was (2.01).

Answer of the fifth question

The fifth question: "*What is the effect of adopting the leadership methodology at Taif University in developing the leadership competencies of academic leaders?*" In order to answer the fifth question of the study, the linear regression analysis method was used to define the impact of the level of adoption of the leadership methodology by Taif University in the following aspects:

First aspect: leadership talent management

To examine the impact of adopting the leadership methodology at Taif University on the level of leadership talent management among academic leaders, linear regression analysis was used to study and predict the impact.

Table (..) shows a simple linear regression analysis model to determine the contribution of the variable of the level of adoption of the leadership methodology in predicting leadership talent management.

Table (..): Simple linear regression analysis model to determine the contribution of the variable (level of adoption of the leadership methodology) in predicting leadership talent management

R	R Square	Adjusted R Square	Error of the Estimate
0.52	0.27	0.26	0.54

Table (..) shows that that the correlation coefficient between the two variables was (0.52), while the coefficient of determination was (0.27); This means that the level of adopting the leadership methodology contributes (27%) to the interpretation of the dependent variable represented in the management of leadership talents, which is a low or weak contribution coefficient.

To test the linearity of the model, table (..) shows the result of the ANOVA test accompanying the analysis of variance, which assumes that all values of all variable coefficients are not equal to zero.

Table (..): ANOVA test for linearity of the first model

Source of variation	Sum of squares	Degrees of freedom	Mean squares	F-value	P-value
Regression analysis	16.756	1	16.756	56.452	0.000
Residuals	44.523	150	0.297		
Total	61.280	151	-		

Table (..) shows that the P-value of the model is less than the significance level (0.05), which indicates the linearity of the model, and thus the analysis process can be completed, and the values of the variable coefficients in the linear regression equation can be found. Table (..) shows the coefficients of the simple linear regression equation to determine the contribution of the variable level of leadership methodology adoption in predicting leadership talent management.

Table (..): coefficients of the linear regression equation to determine the contribution of the variable (level of leadership methodology adoption) in predicting leadership talent management

Regression model	Unstandardized coefficients		Standardized coefficient	T-value	P-value
	(B) value	Standard error	(Beta) value		
Constant coefficient	0.293	0.231	-	1.266	0.207
Coefficient of leadership methodology adoption	0.675	0.090	0.523	7.513	0.000

Table (..) shows that that the constant coefficient is equal to zero, because the P-value of the coefficient is higher than the level of significance (0.05), while the coefficient of the level of leadership methodology adoption is not equal to zero because the P-value of the coefficient is less than the level of significance (0.05). Thus, the simple linear regression equation can be written in the following form:

y: is the level of leadership talent management

x: is the level of leadership methodology adoption

The second aspect: building leadership competencies

To study the effect of leadership methodology adoption at Taif University on the level of building leadership competencies among academic leaders, linear regression analysis was used to study and predict the impact.

Table (..): Simple linear regression analysis model to determine the contribution of the variable level of leadership methodology adoption in predicting building leadership competencies

R	R Square	Adjusted R Square	Error of the Estimate
0.49	0.24	0.23	0.52

Table (..) shows that the correlation coefficient between the two variables was (0.49), while the

coefficient of determination was (0.24), which means that the level of leadership methodology adoption contributes by (24%) to the interpretation of the dependent variable represented in building leadership competencies, which is a low or weak contribution coefficient.

To test the linearity of the model, table (..) shows the result of the ANOVA test accompanying the analysis of variance, which assumes that all values of the coefficients of the variables are not equal to zero.

Table (..): ANOVA test to test the linearity of the second model

Source of variation	Sum of squares	Degrees of freedom	Mean squares	F-value	P-value
Regression analysis	12.834	1	12.834	47.333	0.000
Residuals	40.673	150	0.297		
Total	53.507	151	-		

Table (..) shows that the P-value of the model is less than the significance level (0.05), which indicates the linearity of the model, and thus the analysis process can be completed, and the values of the coefficients of the variables in the linear regression equation can be found. Table (..) shows the coefficients of the simple linear regression equation to determine the contribution of the variable (level of leadership methodology adoption) in predicting the building of leadership competencies.

Table (..): coefficients of the linear regression equation to determine the contribution of the variable level of adoption of the leadership methodology in predicting building leadership competencies

Regression model	Unstandardized coefficients		Standardized coefficient (Beta) value	T-value	P-value
	(B) value	Standard error			
Constant coefficient	0.726	0.221	-	3.284	0.001
Coefficient of leadership methodology adoption	0.591	0.086	0.490	6.880	0.000

From the table (..) it is clear that the constant coefficient and the coefficient of the level of leadership methodology adoption are not equal to zero, because the P-value of the two coefficients is less than the level of significance (0.05). Thus, the simple linear regression equation can be written in the following form:

- y: is the level of building leadership competencies
- x: is the level of leadership methodology adoption

The third aspect: guidance and self-empowerment

To study the impact of leadership methodology adoption in Taif University on the level of guidance and self-empowerment of academic leaders, linear regression analysis was used to study and predict the impact.

Table (10): Simple linear regression analysis model to determine the contribution of the variable of leadership methodology adoption in predicting the level of guidance and self-empowerment

R	R Square	Adjusted R Square	Error of the Estimate
0.48	0.23	0.22	0.56

It can be seen from the table (..) that the correlation coefficient between the two variables was (0.48), while the coefficient of determination was (0.23); This means that adopting the leadership methodology contributes (23%) to the interpretation of the dependent variable represented by guidance and self-empowerment, which is a low or weak contribution coefficient.

To test the linearity of the model, table (..) shows the result of the ANOVA test accompanying the analysis of variance, which assumes that all values of the coefficients of the variables are not equal to zero.

Table (..): ANOVA test for linearity of the third model

Source of variation	Sum of squares	Degrees of freedom	Mean squares	F-value	P-value
Regression analysis	13.852	1	13.852	43.968	0.000
Residuals	47.256	150	0.297		
Total	61.108	151	-		

Table (..) shows that the P-value of the model is less than the significance level (0.05), which indicates the linearity of the model, and thus the analysis process can be completed, and the coefficient values of the variables in the linear regression equation can be found. The table (..) shows the coefficients of the simple linear regression equation to determine the contribution of (leadership methodology adoption) variable in predicting the level of guidance and self-empowerment.

Table (..): The coefficients of the linear regression equation to determine the contribution of the variable of leadership methodology adoption in predicting the level of guidance and self-empowerment

Regression model	Unstandardized coefficients		Standardized coefficient (Beta) value	T-value	P-value
	(B) value	Standard error			
Constant coefficient	0.462	0.238	-	1.937	0.050
Coefficient of leadership methodology adoption	0.614	0.093	0.476	6.631	0.000

From the table (..) it is clear that the constant coefficient and the coefficient of the level of leadership methodology adoption are not equal to zero, because the P-value of the two coefficients is less than or equal to the level of significance (0.05). Thus, the simple linear regression equation can be written in the following form:

y: is the level of guidance and self-empowerment

x: is the level of leadership methodology adoption

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