The Role and Responsibilities of Academic Leaders in Effectuating Quality, Impact, and Excellence by Innovation in Higher Education

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Abstract

Innovation is critical for higher education in the 21st century. It can improve teaching and learning, increase research quality and impact, solve social problems, and bring more funding and collaboration. It can also boost the happiness and creativity of staff and students, who can follow their interests, try new things, and work with different people. But innovation is not simple. It requires a positive and supportive culture, a clear and shared vision, a strong and effective leadership, and a regular and systematic evaluation. This seeks to review the existing research on innovation in higher education, analyze and discuss how academic leaders can encourage and enable innovation in higher education, and to further provide some helpful and evidence-based suggestions for academic leaders and practitioners who want to innovate in higher education.

Introduction

Dimensions of Innovation in Higher Education

Innovation in higher education is a complex and multifaceted phenomenon that can be defined and measured in different ways. Innovation in higher education is the intentional introduction and application within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to benefit the individual significantly, the group, the organization or wider society. Innovation in higher education can be classified into four main dimensions: pedagogical, organizational, technological, and social innovation (Sharma & Sharma, 2021). Pedagogical innovation refers to the changes in the content, methods, and modes of teaching and learning, such as curriculum design, assessment, and delivery. Organizational innovation refers to the changes in the structures, processes, and cultures of higher education institutions, such as governance, management, and quality assurance. Technological innovation refers to the changes in the use and integration of digital tools and resources, such as online platforms, learning analytics, and artificial

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intelligence (Wolff, 2021). Social innovation refers to the changes in the engagement and collaboration of higher education institutions with external stakeholders, such as industry, community, and policymakers. Social innovation includes the social processes of innovation, such as open-source methods and techniques and also the innovations which have a social purpose — like microcredit or distance learning (do Adro & Fernandes, 2019).

Diversity, intrinsic motivation, and autonomy positively impact individuals' ability to be innovative within higher education institutions. Consideration of time, efficiency, and trust is crucial for a comprehensive understanding of innovation within an institutional setting (Tierney & Lanford, 2016). Effective pedagogies should be grounded in theory and supported by evidence. Twenty-first-century skills play a crucial role in pedagogical innovation (Herodotou et al., 2019). A shared understanding of pedagogical innovation is essential for advancing teaching practices. Innovative approaches impact student learning experiences (Major et al., 2020). According to Serdyukov (2017), the primary focus of educational innovations should be on enhancing teaching and learning experiences. Innovations should consider learners, parents, community, society, and cultural contexts. Innovations in education are interconnected with the broader societal context. Raising the quality and scale of innovations benefits not only education, but also the entire society.

The Drivers and Barriers of Innovation in Higher Education

Different factors inside and outside the institution affect innovation in higher education. Innovation is driven by the internal factors of staff and student motivation and creativity, resource availability and allocation, innovation incentives and rewards, and innovation culture and climate. Innovation is hindered by the internal factors of staff and student resistance and inertia, resource lack and mismanagement, innovation disincentives and risks, and conservatism culture and climate. Innovation is also driven by the external factors of student, employer, and society demand and expectations, institution competition and collaboration, policymaker and regulator support and guidance, and technology availability and accessibility. Innovation is also hindered by the external factors of demand and expectation lack and mismatch, institution pressure and constraints, support and guidance lack and inconsistency, and technology cost and complexity.

Özkul (2012) discusses the challenges and opportunities for innovation in university education in the context of globalization, knowledge economy, and information society. The paper suggests that universities need to adopt a more entrepreneurial and collaborative approach to innovation, and to foster a culture of creativity, risk-taking, and experimentation among students and faculty. The paper also highlights the role of technology, interdisciplinary studies, and lifelong learning in enhancing innovation in university education.

The Outcomes and Impacts of Innovation in Higher Education

Innovation can affect higher education in many ways, both good and bad, both planned and unplanned, and both short-term and long-term. For example, innovation can improve the quality, relevance, efficiency, and sustainability of higher education, as well as the student experience, the research output and impact, the social challenges, the external funding and partnerships, and the reputation and competitiveness of the institution. But innovation can also cause some problems, such as more workload, stress, and uncertainty for academic staff and students, less equity, diversity, and inclusion in higher education, more ethical, legal, and social issues, and more disruption and displacement of existing practices and structures (OECD, 2012). Blass and Hayward (2014) say that higher education institutions have to manage innovation to stay sustainable after 2025. The study looks at the examples from industry and private providers to show the importance of innovation. Academic innovation is a complex effort in higher education institutions. It covers various areas, such as teaching and learning research, faculty development programming, and entrepreneurial elements. Universities often create academic innovation units to try new approaches such as adaptive learning, pedagogical partnerships, technology enhancements, and multimodal learning (Barger et al., 2021).

The Best Practices and Examples of Innovation in Higher Education

Higher education can innovate by following various examples and best practices within and across institutions, nationally and internationally. These include:

- Creating and using new curricula, teaching methods, and learning environments, such as competency-based learning, video streaming, open curriculum, gamification, micro-credentials, and blockchain.
- Starting and carrying out new research projects and partnerships, such as interdisciplinary, transdisciplinary, and cross-sectoral research, and working with industry, community, and policymakers.
- Adopting and integrating new technologies and resources, such as adaptive learning, artificial intelligence, virtual reality, augmented reality, and cloud computing.
- Transforming and adapting new leadership and governance models, frameworks, and approaches for innovation in higher education.

Analysis and Discussion

The Skills and Competencies of Academic Leaders for Innovation

Academic leaders have the power and duty to guide the vision, values, and outcomes of Higher Educational Institutions (HEIs). They are the top officials and managers of different levels and areas in HEIs. They help HEIs innovate, which means creating and applying new or better ways of doing things that benefit the HEIs and their partners (OECD, 2012). Some of the skills and competencies of academic leaders for innovation are:

- **Vision**: To lead their HEIs well, academic leaders must envision and share a bright future that others want to follow. Vision helps them find and seize chances for innovation, and to match their HEIs' aims and plans with the demands of the world (Sultan, 2023).
- **Creativity**: Academic leaders should be creative and encourage it in others. Creativity lets them question the existing ways, try new things, and solve hard problems. Creativity also helps them adjust to changes and deal with unclear situations (Amabile et al., 1996).
- **Collaboration**: To work well with others inside and outside their HEIs, academic leaders need the right skills and attitudes. They also need to use the diverse views, skills, and resources of

others for innovation. By collaborating, academic leaders can build trust, share knowledge, learn together, and create value. Collaboration also helps academic leaders to connect with different stakeholders, such as students, faculty, staff, alumni, employers, industry, government, and society, and to meet their needs and expectations (Bryson et al., 2015).

- **Communication**: Communication is a key skill for academic leaders. They should communicate in clear, persuasive, and respectful ways, using different methods and formats, and adapting to different situations and people. Communication helps them to express their vision, share their ideas, ask for feedback, spread their innovations, and persuade others. Communication also helps them to listen well, understand different perspectives, solve problems, and build rapport (Ruben & Gigliotti, 2016).
- **Change management**: To lead change in HEIs, academic leaders must know how to plan, do, check, and act. They must also deal with challenges and opposition. Change management helps them to adapt to the outside world, to do better and be more efficient, and to reach their innovation targets. Change management also asks them to be adaptable, strong, and caring for their staff and students (Kotter, 1996).

These skills and competencies are not exhaustive, nor are they mutually exclusive. They are interrelated and complementary, and they can be developed and improved through education, training, mentoring, and practice. Academic leaders who possess and demonstrate these skills and competencies are more likely to foster and facilitate innovation in higher education, and to contribute to the advancement of their HEIs and the society at large.

The Strategies and Actions of Academic Leaders for Innovation

Innovation can happen at different levels and aspects of higher education (HE). It can improve HE quality, relevance, efficiency, and impact, and help HE institutions (HEIs) meet the changing demands of stakeholders. Sultan (2023) studied how innovation, leadership, and governance helped HE recover from Covid-19. They found that academic leaders used various tactics to deal with the pandemic, such as online learning, digital skills, collaboration, and quality assurance. Top Hat (2023) gave a guide to academic leadership in HE, and stressed the role of academic leaders in innovating, excelling, and transforming their institutions, in response to the changes in HE, such as new technologies, pedagogies, and markets. Sauphayana (2021) examined how innovation affected management and leadership in HEIs, and found a strong link between more innovation and better education management and leadership. They also advised academic leaders to use a participatory, collaborative, and flexible leadership style to promote innovation.

Based on the statement given, some of the strategies and actions of academic leaders for innovation are:

• Setting goals: Academic leaders set SMART goals for innovation that match the institution's vision, mission, and values. They share these goals with the stakeholders, and check and report their progress and results. Setting goals helps academic leaders to plan, prioritize, and lead innovation, and to inspire and direct the staff and students.

- Allocating resources: Academic leaders allocate enough and suitable resources, such as people, money, space, and technology, to back and maintain innovation. They also make sure that the resources are given and used fairly, openly, and wisely. Allocating resources helps academic leaders to supply the inputs and facilities for innovation, and to let the staff and students use the resources for their innovation.
- Creating incentives: Academic leaders create incentives, such as praise, rewards, promotion, funding, or chances, to support and recognize innovation. They also create disincentives, such as punishment, fines, or limits, to stop and avoid bad or harmful innovation. Creating incentives helps academic leaders to shape the behaviour and attitude of the staff and students towards innovation, and to boost and reward their motivation for innovation.
- Building culture: Academic leaders build a culture of innovation, which is a shared way of thinking and doing that fosters and celebrates innovation. They also create a climate of innovation, which is how the staff and students feel about the level and quality of innovation in the institution. Building culture helps academic leaders to define the identity and character of the institution, and to make the staff and students feel part of and committed to innovation.
- Evaluating performance: Academic leaders evaluate the performance of innovation, which is how they measure and judge the inputs, processes, outputs, outcomes, and impacts of innovation. They also give feedback and advice for improvement, and share and learn from the successes and failures of innovation. Evaluating performance helps academic leaders to know how well and how much innovation is happening, and to find the strengths, weaknesses, opportunities, and challenges for innovation.

The Challenges and Opportunities of Academic Leaders for Innovation

Innovation also involves challenges and opportunities for academic leaders, as they have to balance stability and change, manage resistance and risk, and adapt to diversity and complexity. These challenges & opportunities can be explained in the manner as described herein below:

- Balancing stability and change: Academic leaders keep their institutions' values, traditions, and standards, but also foster innovation and change. They match their innovation plans and actions with their institutions' goals, resources, and culture. They check the results and effects of innovation, and change them if needed.
- Managing resistance and risk: Academic leaders deal with the obstacles and problems that block or stop innovation, such as fear, doubt, or opposition from different groups, like faculty, staff, students, or others. They explain and share the vision, reasons, and benefits of innovation, and involve and support the groups in the innovation process. They also foresee and reduce the possible risks and uncertainties from innovation, such as ethical, legal, financial, or operational issues. Furthermore, they create a culture of trust, openness, and teamwork, and reward and encourage innovation (Whittaker & Montgomery, 2022).
- Adapting to diversity and complexity: Academic leaders meet the varied and complex needs and demands of the inside and outside environments, such as the changing students, society, technology, and knowledge, and the growing global competition and cooperation in higher education (Debowski & Blake, 2007). They use the diversity and complexity as sources of

innovation, and build the ability and flexibility to adjust to the changing situations. They also help to enable the exchange and combination of ideas, views, and practices across fields, sectors, and cultures.

The academic leaders have a vital role in fostering and facilitating innovation in higher education, which can enhance the quality, relevance, and impact of education. However, they also face challenges and opportunities, such as balancing stability and change, managing resistance and risk, and adapting to diversity and complexity. They need to develop the skills, strategies, and culture to overcome these challenges and seize these opportunities.

The Trends and Developments of Academic Leadership for Innovation

Academic leaders for innovation lead and help innovation and entrepreneurship in higher education. They create an innovative culture, collaborate, support, and align stakeholders' goals and incentives (Geschwind et al., 2019). Some trends and developments of academic leadership for innovation are:

Emerging models: Different models exist, like vice dean for innovation, innovation center, innovation ecosystem, and innovation network. They have different scope, structure, functions, and outcomes, based on the institution's context and needs.

Frameworks: Various frameworks can guide and evaluate academic leadership for innovation, like the Innovation Leadership Framework, the Innovation Capability Maturity Model, the Innovation Excellence Framework, and the Innovation Ecosystem Model (Hoffecker, 2019). They offer a complete and systematic way to assess and improve the innovation performance and impact of higher education institutions.

Approaches: Different approaches can boost and support academic leadership for innovation, like the design thinking approach, the lean startup approach, the agile approach, and the open innovation approach. They stress the importance of user-centricity, experimentation, iteration, feedback, and collaboration in the innovation process (Sugrue et al., 2017). To sum up, academic leadership for innovation is a dynamic and complex thing that needs constant change and improvement. It can use emerging models, frameworks, and approaches that can help make a culture of innovation, collaborate, support, and align stakeholders' goals and incentives in higher education institutions.

Recommendations and Conclusion

Table 1. Model for Skills, Capacity Building for Academic Leaders				
Skills and Competencies	Strategies and Actions	Challenges and Opportunities	Trends and Developments	
<i>Vision</i> : articulate and communicate a compelling and inspiring direction and purpose for innovation.	<i>Setting goals</i> : define and align the objectives, expectations, and indicators of innovation, both at the individual and institutional levels.	<i>Stability and change</i> : balance between maintaining the existing practices and structures that ensure quality and continuity, and introducing new practices and structures that enable innovation and development.	<i>Distributed leadership</i> : share and delegate leadership roles and responsibilities among multiple actors and levels within the institution.	
<i>Creativity</i> : generate and implement novel and useful ideas and solutions for innovation.	Allocating resources: provide and distribute the necessary financial, human, and material resources for innovation, and ensure their optimal and efficient use.	<i>Resistance and risk</i> : manage the sources and consequences of opposition and uncertainty that may arise from the stakeholders and the environment during the innovation process.	<i>Collaborative leadership</i> : establish and maintain effective and productive relationships and networks among diverse and interdependent stakeholders and partners, both within and outside the institution.	
<i>Collaboration</i> : work and learn with others, both within and outside the institution, to achieve common goals and outcomes for innovation.	<i>Creating incentives</i> : design and implement the rewards and recognition systems for innovation, both intrinsic and extrinsic, and ensure their fairness and transparency.	<i>Diversity and complexity:</i> adapt to the variety and interdependence of the factors and actors that influence and are influenced by the innovation process, such as disciplines, cultures, and sectors.	<i>Adaptive leadership</i> : adjust and modify the leadership styles and strategies according to the changing situations and challenges of innovation, and learn from the experiences and feedback of innovation.	
<i>Communication</i> : convey and receive information, feedback, and opinions effectively and respectfully for innovation.	<i>Building culture</i> : develop and nurture the values, norms, and practices that support and encourage innovation, such as trust, openness, diversity, and risk-taking.	<i>Demand and expectations</i> : meet the demand and expectations of students, employers, and society for innovation.	<i>Transformative leadership</i> : create and sustain a fundamental and positive change in the vision, culture, and practice of higher education through innovation.	

Table 1. Model for Skills, Capacity Building for Academic Leaders

<i>Change management</i> : plan, execute, monitor, and evaluate the processes and outcomes of innovation, and cope with and overcome the challenges and uncertainties of innovation.	<i>Evaluating performance</i> : measure and assess the processes and outcomes of innovation, both qualitatively and quantitatively, and provide feedback and learning opportunities for improvement.	<i>Competition and</i> <i>collaboration:</i> compete and collaborate with other institutions for innovation.	<i>Emerging models,</i> <i>frameworks, and approaches:</i> learn from the best practices and examples of innovation in higher education, both nationally and internationally.
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Based on the table depicted above, the following recommendations can be made for academic leaders and practitioners who want to promote and implement innovation in higher education:

- Learn and expand the skills for innovation, like vision, creativity, collaboration, communication, and change management.
- Use effective and proven strategies and actions for innovation, like setting realistic goals, allocating flexible resources, creating fair incentives, building a supportive culture, and evaluating the innovation results, with suitable methods and tools.
- Solve the internal and external problems for innovation, like balancing stability and change, managing resistance and risk, and adapting to diversity and complexity, with a proactive and problem-solving approach.
- Benefit from the internal and external opportunities for innovation, like meeting the needs and expectations of students, employers, and society, competing and collaborating with other institutions, following the support and guidance from policymakers
- and regulators, and using the technology available and accessible.
- Follow and adopt the new and changing trends and developments of academic leadership for innovation, like distributed, collaborative, adaptive, and transformative leadership, and learn from the best practices and examples of innovation in higher education, nationally and internationally.

This paper has studied the idea, aspects, factors, obstacles, outcomes, impacts, and best practices of innovation in higher education, and the role and duties of academic leaders in supporting and enabling innovation in higher education. The paper has shown the importance and benefits of innovation in higher education, and the challenges and opportunities of academic leadership for innovation. The paper has also given some practical and proven suggestions for academic leaders and practitioners who want to encourage and apply innovation in higher education. The paper hopes to help the progress and competitiveness of higher education in the 21st century, and the motivation, satisfaction, and well-being of academic staff and students.

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