An interactive process for developing strategic research and research training plans for higher education institutions

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Abstract

Universities need to stay relevant and viable through engaging effectively with society, government and the private sector at all levels. These objectives are achieved via modernising university research and research training. However, the stated objectives are often not accomplished due to a number of internal and external challenges which include leadership, management, fluctuations in student enrolments, market influences and competition. It has been recognised that these challenges can often be managed successfully when an organisation is able to determine its vision for the future and the path to realise its aspiration. This paper presents an interactive process for developing research and research training strategic plans, hence, providing a road map to facilitate institutions vision, mission, values, goals, and strategies. The paper also proposes a procedure for managing the implementation procedure.

Keywords: Higher Education; Research; Research Training Strategic Plans; Management; Implementation

Cite this article as: Baban, S.M.J. (2018), "An interactive process for developing strategic research and research training plans for higher education institutions", *International Journal of Development and Sustainability*, Vol. 7 No. 1, pp. 240-249.

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1. Introduction

Research is the systematic generation of new knowledge, development of new ideas and experimentation with new techniques. Hence, the quality and impact of research and research training in a university are key factors for gaining national and international recognition as well as remaining relevant and to effectively engage with society, government and the private sector at all levels (Baban, 2017). Furthermore, research activities inform student learning and contributes to enhancing the quality and relevance of teaching programmes, and it will provide the University with an intellectual platform to set and lead the standards of scholarly activities regionally, nationally and internationally. Therefore, if the University is to become a serious contributor to economic, social and cultural development, then, this critical function must be expanded and strengthened in order to become a more research driven institution. Realising these aspirations will require focusing on several key issues. These include selecting and prioritising focal areas of research, formation of productive partnerships and coalitions, recruiting research active academic staff, creating an enabling environment for research, making time for research, developing supportive and rewarding policies.

Strategic planning assumes that specific aspects of the future can be influenced by the organization. Crisp (1991) defines strategic planning in higher education as "the set of activities designed to identify the appropriate future direction of a college and includes specifying the steps to move in that direction". Consequently, there is wide consensus that strategic planning, if developed and implemented properly, will offer universities a solid road map to determine where a University is headed in terms of research and research training over a specified time frame and the process by which it will realise its goals and objectives (Baban, 2015; Baban, 2017).

2. Strategic planning in higher education

Strategic planning in higher education emerged in the 1970's and 1980's and has been steadily evolving since as a response to various external and internal challenges facing higher education intuitions (Chaffee, 1984; Gumport and Sporn, 1999). The challenges often include fluctuations in student enrolments, the change in student demographics and associated funding irregularities; market influences and the threat of competition has led to the emergence of higher education as business (Newman and Couturier 2002). In addition to the pressures to meet public expectations and become more accountable in the new competitive environment (Moja, 2007; Taylor et al., 2008) as well as meeting the demands made by accrediting bodies which begun to assert that Universities should have a strategic plan and an assessment plan in order to meet accrediting requirements (Baban, 2018).

These circumstances have led universities to seek means to manage these pressures and to, at the same time succeed in a competitive environment. As a consequence, strategic planning has emerged as an effective tool for developing and implementing a proactive and flexible stance whilst operating in a fluctuating environment. Therefore, strategic planning is viewed as a pathway for formulating institutional mission and

vision, prioritising resources, and promoting organisational focus. It follows that universities need to conduct their core activities and to manage their resources to deliver their declared research and research training priorities and goals within a competitive and changing environment (Kettunen, 2008). Some researchers suggested that universities should be more proactive and undertake transformations to become initiators of changes rather than reacting to external pressures (Moja 2007).

Strategic plans have several components and each component serves a specific purpose. These components are planning tools used either separately or in groups; the planning process is tasked with ensuring that these individual components are aligned with each other and mutually supportive.

Strategic planning can be developed with two emphases. First a focus on internal pressures, bases strategic planning on institutional values, and is purely practical, seeking to assist the university to run efficiently and effectively (West-Burnham, 1994; Larsen and Langfeldt, 2005). The other emphasis is related to placing the organisation in the most favourable position to benefit from potential changes in the external environment including changes in government regulations, emerging technologies and most importantly changes in the student market (Gumport and Sporn, 1999; Bayenet et.al., 2000).

In terms of process, strategic planning will require developing a research and research training vision for the organization's future and determining research and research training priorities, procedures, and operations to achieve that vision. Included should be measurable goals which are realistic and attainable with emphasis on long-term goals rather than short-term objectives. Consequently, the planning process provides an interactive platform for all relevant staff at the University to develop and document a collective research and research training vision, values and mission statements. In addition to developing a comprehensive strategy and a detailed action plan for the research and research training within the university, these supporting documents will provide specific points of reference and guidance in the planning process and during the implementation period.

2.1. 2.1 Agreeing on the fundamental concepts and terms

Developing and implementing a strategic plan requires agreements on the following essential terms and concepts from the research and research training perspective (Baban, 2015).

i. Vision Statement: The vision statement is the expression of institutional aspiration based on analysis of the institution's environment and describes the university's research and research training as they would appear in a future successful state. It is intended to serve as a guide for deciding current and future courses of action, therefore, it needs to be a motivating and an ambitious statement about what the university would like to achieve or accomplish in research and research training in the mid-term or long-term future. It should challenge and inspire staff, students and all other stakeholders. Hence, it should essentially answer the question: If the organisation were to achieve all of its strategic research and research training goals, what would the University look like in the future.

ii. Mission Statement: The mission statement is a written declaration of the University's purpose regarding research and research training and focus that normally remains unchanged over time. It needs to be brief and

clearly explain why the institution exists as a university, and what it does at the levels of University, College and Department (Baban, 2018). Fundamentally, the mission statement outlines the university's strategic plan, hence it should identify the priorities, potential markets and stakeholders as well as articulating the institution's overall research and research training intension.

iii. Values: The values statement should explain what the university stands for and the way in which it intends to conduct its research and research training activities. Therefore, the values statement should declare, "These are the research and research training characteristics the institution believes are important and how the institution will work to achieve its goals"

iv. Goal: The goal is the final outcome from the plan. It is the general statement of a long-range purpose that should directly address research and research training needs. Furthermore, the university aspirations for research and research training should to be defined in terms of achievable and measurable outcome(s) that can be reasonably expected at the end of the planning period.

vi. Objective: The objective is a statement of the research and research training outcomes to be achieved based on specific time frames, identifying a method for measuring the results, and criteria for successful achievement. Hence, objectives should be stated in ways that clearly describe what will be accomplished and how it will be achieved.

2.2. SWOT analysis

SWOT analysis is a planning tool used to identify the strengths and weaknesses of an organisation and the opportunities and threats facing a university's research and research training (Dyson R., 2004). Hence, it is focused on defining the objectives of the organisation as well as the potential favourable and unfavorable conditions to achieve the objectives (Cheng-lin and Chen Jian, 2016). In the context of developing and implementing strategies for a university's research and research training functions and strategies, it can be briefly conceptualised as:

  i.   Strengths: the research and research training characteristics that give the University an advantage over others universities at present time.
 ii.   Weaknesses: the research and research training characteristics that places the University at a disadvantage relative to other Universities at present time.
iii.   Opportunities: the research and research training elements that the University could exploit to its advantage at present and in the future.
 iv.   Threats: the research and research training elements that could cause difficulties and challenges for the University at present and in the future.

3. An interactive bottom-up approach for developing a research and research training plan

The success of the process will require developing collective intuitional understandings and agreements on key fundamentals such as the vision, core values and operating principles as well as research and research training priority and accountability issues (Dyson R., 2004). More specifically;

3.1. Institutional agreements

An essential first step for strategic planning is obtaining institutional agreements on the following concepts and principles (Baban, 2015):

i.   *Organizational core values and operating principles.* These are the beliefs and principles that guide the organization; these should be shared and strongly held values by senior management and staff.

ii. *Vision for the Target Community.* This is the University's image of what the community it serves would be like if the values and operating principles were shared and practiced by all involved.

iii. *Mission.* This is the University's public statement of the contribution it promises to make to help accomplish the community vision.

3.2. Developing a research and research training plan

Developing a research and research training is a reciprocal process involving input from all relevant staff, hence, once, a collective institutional view is developed and agreed upon, the planning process can proceed through determining the following steps:

1. Establishing the Current Status of Research and Research Training at the University. This will provide the university with a clear understanding of the current capabilities, teams, performance level (International, National, Regional, Local) and demand for University's Research and Research Training as well as the actual and potential competitors and the University's real competencies.

2. Identifying Research and Research Training Priorities. This sets the direction of the University over the long term and clearly defines the mission (priority research areas, developing research teams, markets, customers and products) and vision (conceptualisation of what the organization's future should or could be). This process should be driven by a focus on where to take the University's Research and Research Training over the planning period.

3. Define Expected Objectives. Identify Define the expected objectives that clearly state what the university must achieve to address the priority areas and issues.

4. Determine Accountability. This is a roadmap showing the way to realise the vision. All the plans should articulate the personal responsible for, and the time lines associated with allocating the necessary resources (time, human capital, and funds) to address the priority issues and to achieve the defined objectives

5. Review. To ensure the plan performs as designed, scheduled formal reviews of the process should be held and the model must be refined as necessary.

3.3. An interactive process for developing a research and research training strategic plan

The following represents a participatory and an interactive Process for developing the research and research training strategic plan. The process consists of four tasks aimed at collecting written responses from all relevant staff at various University, College and Department levels (Cheng-lin and Chen Jian, 2016). These

tasks can only be successfully executed after establishing institutional agreements on the fundamentals such as goal, core values and operating principles.

Task 1: Define or review the Research & Enterprise vision, mission and values. The task, through the questions below, aims to develop consensus on the Research and Research Training Plan vision and mission based on and guided by the University's vision, mission and core principles.

1- *Forming the Vision:* Based on institutionally agreed values, concepts, definitions and your own experience, list five points best defining the Research and Research Training vision for the University. Provide this information at the following levels of the University as appropriate: Campus, College or Department (specify).

2- *Developing the Mission:* Based on institutionally agreed values, concepts, definitions and your own experience, list five points best defining the Research & Research Training Mission for the University. Provide this information at the following levels as appropriate: Campus, College or Department (specify).

3- *Developing the Research & Research Training Core Principles:* Based on institutionally agreed values, concepts, definitions and your own experience, list five points best defining the research and research training strategic plan's core principles (applied and relevant research, research quality and impact, staff development, and links to the market, links with international institutions and professional organisations,) for the University. Provide this information at one of the following levels as appropriate: Campus, College or Department (specify).

Task 2: SWOT (Strengths, Weaknesses, Opportunities, Threats) Analysis. The task, through the question below, aims to rationally examine the current status of the University's Research and Research Training approachesbased on the reality of the University and its aspirations to become international and competitive at regional, national and international levels.

1- *Defining Strengths, Weaknesses, Opportunities, Threats:* Based on institutionally agreed values, concepts, definitions and your own experience, perform SWOT analysis for the University's Research and Research Training approaches. Focus on the issues of relevance, priority areas, quality impact, critical mass, facilities, national and international links, etc...).Then comparing these characteristics with the main competitors locally, regionally and internationally.Provide this information at the following levels as appropriate: Campus, College or Department (specify).

Task 3: Research & Research Training as Core Functions. The task, through the question below, aims to develop consensus, at the Campus, College or Department levels, on defining the main aspects of the University's Research and Research Training.

1- *Defining Research & Research Training Core Functions:* Based on institutionally agreed values, concepts, definitions and your own experience, list five points best defining Research and Research Training aspects at the University. Provide this information at the following levels as appropriate: Campus, College or Department (specify).

Task 4: The University in 2030. The task, through the question below, aims to establish, at the Campus, College or Department levels, the main preferred characteristics of Research and Research Training in 2030 to make the University the preferred destination for students, lectures and researchers as well as being the first choice for employers.

1- *Defining the University on 2030:* Based on institutionally agreed values, concepts, definitions and your own experience, list five points best defining the University's Research and Research Training in 2030. Provide this information at the following levels as appropriate: Campus, College or Department (specify).

4. The implementation plan

The implementation plan is the means of turning goals and objectives into a working plan.
There are a number of prerequisites that reinforce implementation and ensure a successful outcome, these include (Baban, 2018):

1- Assignment of responsibility, deadlines and identification of measures of completion and documentation. Therefore, it is necessary to identify one person to be accountable for the implementation of a specific action into competition, a person to monitor the implementation of the specific action, a date by which the action is expected to be completed, and what measures will be used to define success in the implementation of the action. Diagram (1), represents a basic implementation plan for an university research and research training priority, containing clearly defined actions, implementation and monitoring responsibilities as well as the deadlines for delivering the actions (Baban, 2015).

2- The person's assigned responsibilities for the actions must have the authority and the necessary resources (people, time, space, technology, and funding) to deliver the required objectives on time.

3- Facilitating faculty participation through targeting faculty members as individuals and research teams with the aim of obtaining commitment, willingness and a positive collective sense of the need for change. In addition to encouraging the organisational units to take responsibility for their strategic planning, while promoting alignment between relevant departments and faculties.

4- Strengthen the participation and capacity of planners and implementers. This is necessary to enable the departments and research teams organizational units to successfully fulfil their role in strategic planning process and it can be achieved through creating a diverse leadership team with deep organisational knowledge, a variety of perspectives, and an understanding of decision-making powers and boundaries.

5- Conducting a semi-annual review. This review is necessary to transparently manage the goals of the strategic plan.

6- The implementation plan should be flexible in its formation; hence it can be easily adjusted to respond to concerns about the planning process as well as the internal and external changes that will occur within the duration of the strategic plan.

7- Institutions intending to undertake the strategic planning process for the first time should carefully consider the feasibility of the proposed goals in terms of the necessary human and financial resources.

Diagram 1. The implantation plan for an identified priority with a University consultancy and Business Engagement plan (Baban, 2015)

Research and Research Training Priorities			Time lines			
			Sept	**Oct**	**Nov**	**Dec**
Priority 1: Developing University Research and Research Training Capability						
	Actions	**Implementation**	**Monitoring**			
1	Training in developing and managing Research projects	D. Univ. Pres. Academic	Univ. Pres.		■		
2	Establish advisory networks of regional leaders to inform Research activities	D. Univ. Pres. Academic	Univ. Pres.		■		
3	Establishing research capability and priority areas	URC	D. Univ. Pres. Academic		■		
4	Provide the necessary management and operational facilities	D. Univ. Pres. Academic	Univ. Pres.			■	■
5	Develop policies to promote research activities	Univ. Council	The Senate+ Univ. Pres.			■	■
a	Foster and support innovative practice in research and scholarship.	Univ. Council	D Univ. Pres. Academic		■		
b	Align performance management to support excellence and innovation in research..	HoD + Univ. Council	D Univ. Pres. Academic		■		
c	Encourage and strengthen opportunities for research development that inform learning, teaching and the curriculum through research outcomes.	HoD + Univ. Council	D. Univ. Pres. Academic	■	■	■	■
d	Ensure probation and promotion criteria reward success in research activities and achievements.	Univ. Council	Univ. Pres.			■	■
e	Encourage research active staff contribution to teaching and learning and enhancing the student experience.	HoD	D. Univ. Pres. Academic		■	■	■
6	Building partnerships with all relevant stakeholders.	HoD + D. Univ. Pres. (Academic)	Univ. Pres.		■	■	■
7	Utilising Graduation Projects to enhance research activities and outcomes	Dept. Scientific Committee	HoD		■		
a	Develop graduation projects based on the needs of the private sector.	Dept. Scientific Committee	HoD		■		
b	Multidisciplinary graduation projects from different departments.	HoD	D. Univ. Pres. (Academic)		■		

5. Conclusions

Universities are facing ongoing challenges to stay relevant in their research and research training in order to engage effectively with society, government and the private sector. Evidently, the quality and impact of research and research training in a university are key factors for gaining national and international recognition as well as determining the standards of scholarly activities regionally, nationally and internationally. Hence, for a university to become a serious contributor to economic, social and cultural development, it has to become a research driven institution. Strategic planning holds great promise for delivering this essential requirement and if developed and implemented properly, will offer universities a solid road map to determine where a University is heading toward in terms of selecting and prioritising focal areas of research, formation of productive partnerships and coalitions, recruiting research active academic staff, creating an enabling environment and developing supportive and rewarding policies. Furthermore, it can assist with managing the delivery of the priorities and goals by attaching specific time frames to each function and assigning the responsibility to one person. However, it should be mentioned that strategic plans often include commendable goals, however, these goals are not realised due to lack of leadership, lack of the political will to implement and not aligning resource allocations with the key research and research training priorities. Furthermore, plans tend to become hindered by long lists of actions and indicators that draw the organisation's focus away from its major priorities and goals.

This paper presented a participatory process for developing strategic plans to fulfill an institution's forethought for its research and research training in the future. The plan, as a prerequisite, promotes establishing collective institutional agreements on the intuition's operating principles and research and research training fundamentals such as vision, mission, values and goals. Then information is collected based on staff feedback at university, college and department levels through the specific tasks. The paper also proposes an implementation procedure to manage the delivery of declared research and research training priorities and objectives

Experience shows that the process of planning must engage middle management and staff throughout the planning process so they develop the capacity and understanding required to implement the plan. At the same time, the wide input from multiple constituencies regarding the institution's major priorities and goals must be carefully considered and accommodated within the plan. Furthermore, the strategic planning process and associated procedures can help guide senior management to develop evidence based decision-making in terms of resource allocation for Research and Research Training activities in a timely manner and in accordance with clearly defined goals.

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