

Enhancing Innovation among Business Colleges at Omani Universities: A Theoretical Framework

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ABSTRACT

Higher education graduates especially business graduates suffer from unemployment issues, finding job opportunities in the Sultanate of Oman. This problem seems due to the potential market needs of talents and skilled potential human resources. The article focuses on suggesting a framework of development. Based on secondary resources and the researcher personal experience; the suggested framework uses the country natural and human resources with rooted technology and promote a marriage or merge among educational programs from various disciplines with business specializations. this merge operates on possibility of major and minor innovation that the country can develop and keep the rooted nationalization and culture.

The articles answer the main question which is how colleges of business can kick forward the innovation over academic institutions and their programs? Through collecting data from interviewing several faculty members and published and unpublished reports from universities and government agencies, the paper concludes that.

This article draws a framework for innovation among business colleges and establish kind of a road map for further research, this is a call to investigate the status of innovation, using empirical data on wide range, analysing the environment of business colleges and sees if it encourages faculty members and educators to work for innovation.

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INTRODUCTION

Businesses are changing rapidly especially with booming of technology (Gupta & George, 2022). Technology has helped in developing and creating hundreds of new businesses- work and jobs- roles at different sectors and industries. Organizations in the three main sectors, government, nongovernment, and private sector need employees, human resources (HR) to work with them, functioning and operating. HR are coming from different colleges, but the focus of this study is on business colleges that's teaching many specializations: business, management, public administration, banking, finance, accounting, HR, marketing, communication, logistic, MIS, and research.

Business colleges need to develop their programs, curriculum and further supporting activities to serve different business sectors. This means that business colleges need to develop innovative programs for sector products and services. The innovation process and transactions should cover business colleges' products and functions that are targeted teaching, consulting, research, and community services. However, Innovation among business colleges and sectors cannot be done solely by academic institution; it needs to work with several stakeholders and formulate a partnership. Thus, partnership can be called as open innovation, an initiative between leading companies and academic institutions (Matriano, 2019).

According to Oman National Centre for Statistics and information (NCSI), in 2020, about 72% of unemployed youth who aged from 18-29 years are enjoyed high education (NCSI, 2023), but for the market needs and their competency they cannot find work in several business sectors. The surprised figure of youth educated employment comes from business specialization. Although, business colleges' graduates are considered the needed human resources among business sectors, about % 40 from educated people, an unemployed are coming from the business colleges (NCSI, 2023). This is a shocking percentage as business graduates supposed to fit with different business sectors. Sounds that innovation needed for the purpose of development.

While some researchers believe that innovation among universities should be on digitization, which means transfer all curriculum, programs, culture and infrastructure of colleges to digitalization. This call because technology is moving fast among business sectors and booming will continue in future too (Times Higher Education, 2023). However, this article disagrees with such approach and adopts of technology merged with of marriages of Business College's specializations with other educations programs at universities in which all alignments with the country vision and their industries, business sector's needs.

Research Problem

Business colleges are major suppliers for human resources to various businesses and industries (ASU report, 2022). They supposed to supply the market with talent and innovative people; people who are high skilled, knowledgeable, and can spread development and innovation across business sector and industries.

Graduates from business specializations are worried about their future as part of them did not find a job and still looking. A major reason of unemployment is related to change needs over demanded skills; with the current shift of competencies from traditional economy to knowledge economy in which includes technological development; current jobs seem to be disappeared or scarce as part of graduates cannot find jobs with their current competencies and skills. Although technology is important to develop all the business sectors, it sounds that

a huge part of graduates will not find real jobs especially with the underemployment in the government sectors and the decrease of demands over regular employees. In 2020, statistics show that government sector employed 52 % from total workforces in Oman.

Research objective

The objective of this article is to suggest or develop a framework for business colleges to assist academic institutions developing their students as potential human resources for business sectors and industries. This objective is playing a modern role in developing various businesses sectors and industries align with Omani government vision 2040 and it's prioritized of national development.

Research question

The main research question is how colleges of business can kick forward the innovation over academic institutions and their programs?

Definition of concepts and terms

- **Innovation:** it refers to a new idea, product, services, systems, things that is new or a fundamental changed happened on it (Merriam-webster dictionary, 2023). Innovation can be defined as the process of introducing new ideas, products, services, or processes that bring about positive change and create value for customers and society as a whole (Chesbrough, 2022). It involves a combination of creativity, experimentation, and risk-taking to develop and implement new solutions to existing problems or to address emerging needs and opportunities.

Management information system (MIS)

Management Information System (MIS) refers to the use of computer-based or digital technologies to collect, organize, analyse, and report data and information relevant to the management and operations of an organization. MIS is a crucial component of modern business, enabling organizations to make informed decisions, streamline operations, and stay competitive in an increasingly data-driven world. (Laudon & Laudon, 2016; Rainer & Turban , 2008).

Innovation values or principles

The principles that help you push forward innovation over human resources. Innovation values or principles refer to a set of beliefs and practices that guide individuals, organizations, and societies in creating and implementing innovative ideas and solutions. Some of the key principles and values of innovation include continuous experimentation and learning, user-cantered design, agility and flexibility, sustainability and social responsibility (Gawer & Cusumano, 2014).

Methodology

The research follows the descript approach by depending in both primary and secondary methods. Primary data is qualitative data came from interviewing faculty members who are working at universities in Oman. Their information has kept anonymous to allow them to speak freely without harming their job security or allows other to attracts- citizens them. Secondary data that includes both qualitative and quantitative; some of these data are governmental reports not published yet. The research uses these data to answer the main questions.

The article presents variable literature then construct a framework followed by discussion and recommendation and suggesting further studies.

Literature review

Youth & Unemployment

As per 2020 statistics, the total population of Omanis are 2,731,456, the youth aged between 18-29 years old are 549,969. This means that youth in the age of entering workforce has a significant amount of 20% from total population. Statistics will increase every year according to natural growth rate. For number of Omanis looking for a job, about 65,438 Omani are looking for work in 2020; 72% from them youth aged from 18-29 years are not employed and looking for work (NCSI, 2023).

To analyse the unemployment among youth, 47,007 from Omani youth is looking for a job; about 26,583 higher education graduates are employed looking for jobs; this equal to % 40.6 from a total unemployed youth (NCSI, 2023). The public or government sector cannot; since it still the public or government sector considered the main and primary sector for employment as % 50.4, most of them are males about % 85.8 (NCSI, 2023).

Government 2040 vision

The Omani government has formulated a 2040 vision for developing the country including developing economic sectors and people. Reviewing the vision pillars can see where the government is going. The vision has prioritized both economic and education. For education, learning and research aims to enhance the national capabilities with focusing on technology, technical and vocational education as well as the emphasis on Public-Private Partnership to build schools. For economic, the focus is on economic diversification and financial sustainability. In addition, leadership and management also exist to ensure the implementing of all initiative and achievement of the vision. All government initiatives aim at the end of citizen well-being and social protection (Vision follow-up office, 2023)

Looking for the pillars, it's clear that the government has realized how important is developing potential and current human resources. Such a mission of developing potential human resources needs new programs and initiatives. Business colleges is in the heart of playing a development are in potential human resources.

Business colleges

There are (23) business colleges in academic institutions at Oman distributed over (00) districts. These colleges teach business related programs such as business, management, accounting, finance, marketing, MIS, business intelligence and so on.

1753 students have graduated from Business College at A' Sharqiyah University, Oman (ASU), about 28% from them are working and the rest are looking for jobs. The unique data is that the share of business college at ASU from the total the university graduates is 44% (ASU, 22).

Researchers agree that higher education's institution is a condition for human development and rising innovation. Examples from the world, Asia, Pacific's, Europe, and USA, GCC are supporting such statements (Tierney & Lanford, 2016).

Education system has been criticized to become more innovative; this means the focus shifts to entrepreneurship development. As for the shift, it should have a modern new curriculum include finance, marketing, strategy, design & technology skills, leadership skills, and experiential learning. Enhance technology related subjects: technological innovation, artificial intelligence, huge data analytics, digital marketing is a core to meet the demand in market. In addition, business schools should, highly interact and build partnership with the public and private sectors to formulate and be part of the innovation ecosystem of a country. Furthermore, business schools need to produce high quality of research related to entrepreneurship, family business, and innovation. When market shows such a benefit from business schools, they tend to support them (Bris, 2023). Thus, colleges development should reflect on students' skills and later graduates as potential HR for business sectors and organizations (Bris, 2023).

Main resources in Oman

Traditionally, Oman depends on oil and gas as main sources of its revenue; times has reported a percentage of such dependency from 68% to 85% (Moody's Analytics, 2023). The country depends on natural resources exclusively fuel (petroleum and natural gas) at the first place. Less than 1% of Oman is planted or under cultivation; agriculture is mainly for survivor. However, minerals resources (copper, marble, asbestos, chromium, gypsum, and limestone), livestock and fish. In additional to fuel, petroleum, natural gas, many natural resources can be identified such as mineral resources, copper, chromite, and gypsum. In addition, there is also other natural resources that used as infrastructure for tourism; heritage and religious places, buildings, urbanization, and natural places that make up the area so attractiveness for tourism. Tourism is the fastest growing industry in the country (World Database, 2019).

About 7000 years of history that reflected and shaped by forts, castles and various historical cites as well as special culture and costumes. This rich content makes tourism a potential dynamic sector to create jobs and reduce unemployment. Also, tourism helps in creating revenue for many sectors and subsectors, this includes retail, transportation, hotels, restaurant...etc. (Alsaiani et al, 2021). Tourism is a real opportunity. The researchers suggest that develop tourism should be rooted in Omani culture which means that any use of technology must be within the interests of Oman as country and nation.

Looking for agriculture opportunity, Oman has a huge land and mostly are not used for planting. Research shows that it possible to plant lands with using available technology and tools (Alsalami et. al, 2020). Oman government support starting up and current projects in agriculture and food security (Ministry of Agriculture, 2023). To show the important of agriculture products, Oman export 99% bread wheat (Farooq et al, 2022), which make it a serious issue related to survival and strategic national security. Here maybe there is a need for business college to merge with other specialization such as agriculture and food security to ensure meeting the skills needed in project development, entrepreneurship, and marketing as well as other specialization from different colleges.

Innovation can refer to something new or to a change made to an existing product, idea, or field (Merriam-webster dictionary, 2022). To develop innovation at the organizational levels, three factors or elements should take into consideration. These are: technology, decision-making, and alignment with organization mission. To spread innovation at the individual levels, seven principles or value influences people innovation (Awashreh, 2021).

In innovation, people and organization should look forward (Swoboda, 2021), but they must innovate for the present not for the future (Ducker cited in Swaim, 2022). This means that innovation is not a dream, but it can be achieved, and the first step is to see what kind of ideas and plans can be taken.

According to Swaim (2022), Ducker defined innovation as the task of endowing human and material resources with new and greater wealth-producing capacity. "The large organization has to learn to innovate, or it will not survive.". Thus, Business colleges must learn to innovate otherwise they cannot produce human capital that needed in the market.

Upon of this line of needs, statistically, graduate from business colleges in Oman seems suffering from finding jobs, this due not only to macro-environment, economic- social and political environment but also to their obtained skills. The needs here are for modern skills that are in demanded at the market.

Drucker believes that innovation starts with opportunities, and these opportunities comes with analysis. The analysis comes from scanning external and internal environment including the used process. In addition, innovation needs to operate in the system (Ramadani & Gerguri, 2010), that within the social – economic culture. Innovation is associated with research, an essential factor that for innovation is focus about enhancing research among both academic institutions and practitioners (Matriano, 2019).

For American universities, schools of business, they teach creativity and innovation at various academic programs; this represent about 71% of the colleges offer creativity and innovation courses at academic levels (Zhao & Zhao, 2021). Innovation programs required that change the way of thinking of students from the focus of marks and grades to output and outcomes, to productivity that fit the innovation productions. This means the shift of programs should focuses “on questions, ideas, and integration of stakeholder requirements-a central component of design thinking-can foster creativity and innovation that strengthens how assessment processes are developed so the resulting decisions support substantive change.” (Benson & Dresdow, 2013).

FINDINGS

This section presents the finding from the interviews heled by the researcher and supported where is needed by the secondary.

Innovation depends on conducting research to translate them into different aspects of economic growth. The transfer or transform ideas; theories and frameworks to realization and reality on business sectors is shown or represented by economic growth. This view is from economical and business aspects (University of Birmingham, 2023). The innovation that business colleges to be aligned with its mission and the market needs. For example when a Omani university stated in the mission; preparing graduates to be able to complete in the regional and international market, that should reflect on their programs, curriculum, skills and students. Well, most of a business college at a university, students cannot write one correct sentence. A cording to a faculty member, student shut down when asking them to provide an examples or analysing a case, even change a word from the text, they do not acts (interview with management faculty, 2023). In contracts, asking business students to draw, design, using their hands and work, you will find a Omani students who move and try do a project (faculty interview, 2023).

Some researchers, example Arturo Bris goes behind developing innovation among colleges, he calls for specific innovation of departments, decartelization in works, in which promote innovation among academic institutions. Since innovations requires capital, external stakeholders are needed for doing the jobs with business colleges (Bris, 202 i3).

Business faculty cannot talk in abstract, they need to think and execute, so they have to understand that innovation is a concept aims to explain the contents of its socioeconomic culture including business culture. Socialists focus on introducing new elements in a culture through new discovery including digitization (Schaefer cited in Tierney & Lanford, 2016). While researchers from business disciplines, may define innovation as introducing and implementing of new practices in management, functions, process, technology, models, policies with the intention to achieve organization goals (Birkinshaw et al. cited in Tierney & Lanford, 2016), or innovation could be new combination of tasks or idea that allows a trailer made products. Innovation could be an ambiguous term too (Tierney & Lanford, 2016).

Globalization had entered the world after the collapse of soviet's union, and this concept reflects the possibility of communicating, moving business transactions, trade, workers and establishing business freely. Thus, the focuses were on capital, goods, and works. Later on, the focus took place on knowledge-intensive services that created a new era of knowledge-based economy. The shift of knowledge means that human resources to be creative not only specialized. Now, with the ongoing technological development, creativity skills and specialization skills also developed and change, this means that business colleges' needs to be ongoing developed too. For example, a lot of software's business specializations have introduced and used in the regional and international market, thus students at business colleges needs to know these. Similar, maybe software applications are used in research analysis for both quantities and qualitative research in which students needs to know and work on it (faculty interview, 2023).

Theoretical framework

The framework consists of an open system of innovation that focuses on analysing and understanding the changeable external environment and possible creation of opportunities. Developing potential human resources must be aligning with Oman 2040 vision. As shown in the vision, technology and skilled people are the aims of potential human resources. This can be happened on adopting the framework innovation in which take into consideration the country resources, possibility of innovation, roles of academic institutions including business colleges (faculty interview, 2023).

Innovation merge over specialization

The model in this paper suggests that there is a possibility of enhancing innovation among academic institutions including business colleges by doing a merge among many specializations, using programs from business colleges as a core for creating new programs with other colleges or disciplines. This idea came from the Oman vision as the focus on developing all industries and available resources (faculty interview, 2023).

The new merged academic specializations start from the available resources; natural, historical and resources with a use of available rooted technology in the country. Rooted

technology does not mean a high-tech intelligence instead it with use national rooted that does not harm current and future generation interests and protect the environment (interview with a faculty, 2023).

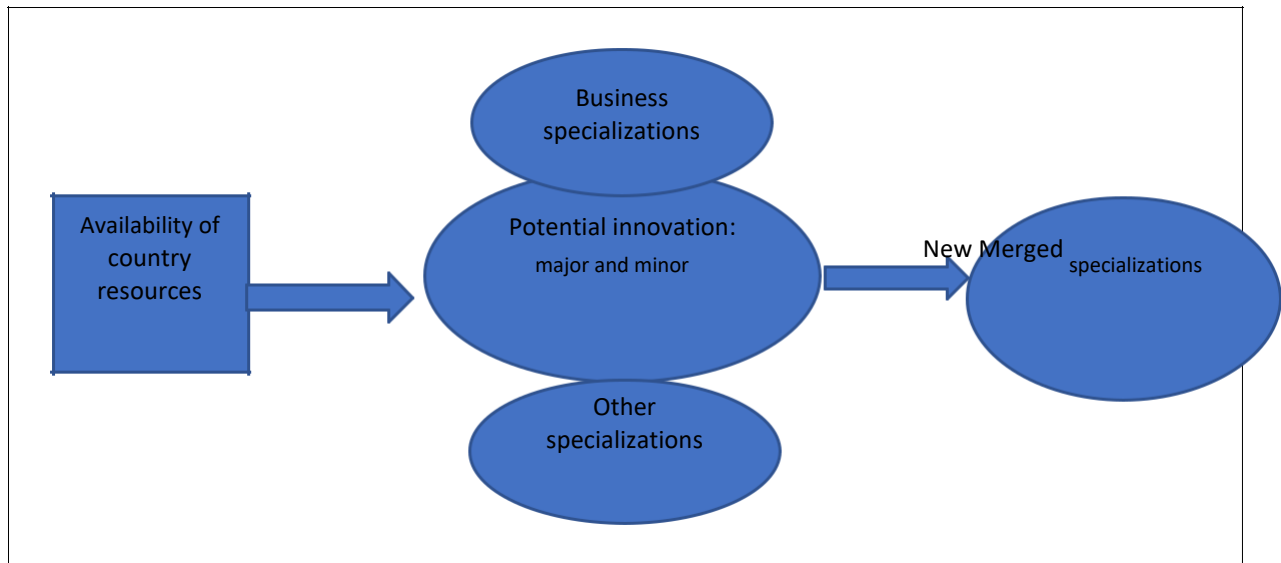
For example, there is a need to promote and increase the production of agriculture products; this needs a merge between business and agriculture engineering specialization based on rooted technology that increase workforce and do not harm people and environment (faculty interview, 2023).

Oman do have hundreds of potential natural- historical cites which make the country very attractiveness for tourism. Since tourism is the fastest growing industry in the country (World Database, 2019), the needed merge here for new specializations between business and related tourism subjects that kick forward the sector and protect the interest of both current and future generations (interview with a faculty, 2023).

Table (1) Innovative Merged Specialization

Country resources	Possible or potential innovation	Business Specialization	Possible merged specialization
list of available and potential country resources		List of business specializations	
	Main innovation (Major innovation)		
	Secondary innovation (Minor innovation)	other specializations related to current and potential resources	
Both current and future generations interests should be protected and grounded. developed by the author framework			

When country depends on rooted technology, this means that the suggested framework will create occupations that require knowledge of human interaction; for example a merge between business and health, business and social services, business and media, business and engineering, business and novels, business and artifacts ...etc thus, this merge develop four types of expertise which are : knowledge, pursue research and development, practical in a way to the ability to engage in interactive problem solving; and adapt to use of communication technologies (Bereiter, 2002; Hargreaves, 2003 cited in Tierney & Lanford, 2016).



Business colleges can play fundamental roles in developing economic industry and various business sectors through the main functions of the colleges and the role of their faculty members. Business colleges should interact with business sectors and industry and communities. This means that they need develop innovative rooted curriculum and programs, to widen the innovation values among Oman organization. The result of such a development work will have direct results, more employed people, more entrepreneurship, and developed of various business sectors (faculty interview, 2023).

Pre-request on the business colleges signal level?

MIS helps organizations manage their information effectively to make better decisions.

In the context of innovation, MIS can be seen as a soft incubator, providing a framework for creativity and experimentation by enabling collaboration, communication, and analysis of data. MIS can be thought of as an umbrella for the entire work model because it encompasses the various components that facilitate innovation, including technology, people, processes, and data. MIS helps organizations manage and integrate these components to create an environment that fosters innovation and allows them to stay ahead of the competition. Therefore, in summary, MIS serves as an incubator for innovation by providing a comprehensive framework that enables organizations to manage their resources effectively, collaborate efficiently, and make informed decisions that drive growth and success over the long term (faculty interview, 2023).

MIS is the soft-Incubator for innovation/ the umbrella for the whole model/ work. Why? Because MIS is the study of people, technology, organizations, and the relationships among them (faculty interview, 2023). Innovation cannot come from scratch; it needs infrastructure; MIS here is the soft infrastructure for innovation. All data required for the innovation comes from MIS.

At the organizational levels, three factors or elements should take into consideration; as Awashreh (2020), has mentioned these factors are: technology, decision-making, and alignment.

- Technology: equipment, tools, computers, software, networks, platform, website, internet, etc.
- decision-making refers to top management support and facilitating of the innovation matter.
- Alignment: aligned the coming innovate output to organization mission

To allow educators/ faculty members to innovate, Awashreh (2020), has mentioned seven principles as follows:

- Freedom in knowledge and data exchange
- Independence: in thinking
- Job security
- No restriction
- Informal relations – less formality and less structured
- Thinking out of the box
- Real motivate for faculty members and educators

Awashreh (2020), has pointed to three types of groups can work together and cooperate to kick innovation forward: technology specialists/ experts to ensure rooted suitable tech are used, organization development practitioner/ expert, and H.R. innovation practitioner-experts/ practitioner (at the university we need both educators and HR with training experiences who are specialized in innovation and training / learning)

Trends in higher education requires that both creativity and innovation become more important to workforce development. Is this because the needs for creative human resources or increase the national number in human development index. Goddard draws researcher's attention of incensement in number of students who is enrolled at colleges in the word. He stated that the enrolment has increased by 47.2 % from the year of 2010 to the year of 2025. It seems that the target also is to get out from poverty which means try to educate people to find their ways in generating income for their survivors (Tierney & Lanford, 2016).

Many reasons for promoting innovation among academic institutions, one of these reasons is the budget cut in higher education budgets and the encouragement of privatization (Tierney & Lanford, 2016). This cut also reached GCC in which became a fear risking academic institutions and various business sectors; the dependency on government is decreased and government push towards working in private sectors and their citizen to establishing their own business. Thus, all this push to adopt innovation. Now the change is to use innovation in a way to go with rooted technology (interview with a faculty, 2023).

Five factors can kick forward innovation; these are (1) diversity in HR experience, believes, thinking and backgrounds including nationality cultures, regions...etc. diversity creates both diversity and comprehensives. (2) Availability of entrepreneurship skills among colleges includes both faculty members and students. (3) Problem Solving Skills. (4) work and collaborate with private companies. (5) Focus on both digitizing, technology advancement and cyber security ([Ganesh, 2018](#)).

Discussion

The unemployment issue is concerned many parties especially young graduates who are seeking to live their normal life by securing incomes such as jobs and works. Unemployment issue will continue to be a serious problem on the government agenda; it's increasing rapidly regardless of government initiative and actions. The Omani ministry of labour reports states

that unemployment among youth has increased double in 2022 and will continue increasing every year (Ministry of Labour, 2023). The unemployment will not be solved unless it's struttred within the economic sectors, business colleges, and by know the opportunities and demand of current business sectors and works on fulfilling it with talent HR demands. Academic programs and workforce skills should interact with current and future dimension in Oman.

The call for using technology in different specialization might be rationale if it planted with the current Omani sources; natural, financial, and human resources. This means Oman do not to adopt a high technology that replace people with reports and intelligence machines, it needs to use suitable tech that employee or create jobs for more people, protect the interest of current people and future generations.

However, advanced technologies and development are sounds like an enemy for jobs seekers. This attitude might rise because university graduates lack of modern and technological skills so thy face difficulties in finding jobs (faculty interview, 2023).

This needs a deep thinking for each country in this case Oman to consider what kind of resources does the currently have. According to government resources, the county has many potential resources such as natural resources in the bottom of the lands, cultural and heritage sites that make tourism potential reliable sources of income, and huge lands in which it can provide incentives and facilities to producers and encourage local and foreign residents.

The increasing and growing of population size with the decreasing among needed human resources and employees and works push concerned parties to think what they to focuses on. Well, at the time people is suffering from finding works and jobs, it obvious that population i.e., people with all classifications and groups still needs to fulfil their needs. What is the most of needs that people demands, well; the needs are vary and developed, change in shapes, but still can categorized into the five main needs. The most important which is food, security, socialization, and belongings (faculty interview, 2023).

Where does business colleges specializations locate from the developed needs? It sounds that marriages, merged of two or more educational specialization should be rises here? It sounds that business specializations can merge with many or all business sectors including sectors that makes all types of products, military, agriculture, mining, tourism, natural resources, social services, languages, health, entertainments, and all of sectors. It's now human thinking to determine which merge specialization should intakes (faculty interview, 2023).

Nowadays, HR working in banks does not work traditionally by their hands, they use soft programs to operate in which means dealing with the technology and understand how it operates is the new shift for talent HR. This example shows the shift of skills from analysing credit application to using soft-ware programs (faculty interview, 2023).

CONCLUSION AND RECOMMENDATION

The results show that there is a need for merging specialization from business colleges with other colleges for the creation of programs that fit the needs, the demands in industrial and business markets. In addition, students need to be more innovators are in academic institution to encourage for creativity and innovation by having environment, curriculum, instructors, programs that kick forward innovation and later play the innovation. Considering the value or principles that helps developing innovation among academic institutions, mainly

their faculty members and students. Spearheading innovation among students means preparing to meet the needs of business sectors (faculty interview, 2023). This article draws a framework for innovation among business colleges and establish kind of a road map for **further research**. Further research that implements the framework on this article, identifies the merged specializations for the benefit on rooting innovation and technology. To solve the unemployment among graduates at all colleges, the second model shows the need of creating – developing new programs merged of business specializations with other academic programs to serve business sectors and employed graduates by having new merged demanded industries talent HR

This article concludes that to help developing business sectors and provides industries with talents human resources; it should use the suggested framework based on innovating idea that are developing new programs that can fit organization needs with talent human resources. Furthermore, the article calls for imperial research to identify programs needs to be merged from business colleges and other specialization.

COMPETING INTERESTS

The author has no competing interests to declare.

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