

Roadmap of Higher Education Institutions (HEIs) in Tawi-Tawi Province: Its Implementation

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This study was conducted to ascertain the implementation of road map of higher education institutions (HEIs) in the province of Tawi-Tawi. The study used the quantitative-qualitative method of research involving HEIs' administrators, faculty and graduate respondents. Questionnaires (checklists and unstructured questions) were used in gathering data. Weighted mean, standard deviation and multiple regression analysis were used in the statistical treatment of data. The findings indicated that the respondents rated high on the HEIs level of road map implementation of teaching pedagogy, quality assurance assessment, curricular offerings and general education programs. Likewise, in instruction, research, extension and production. The assessment of respondents on the HEIs' level of achievement in terms of efficiency, effectiveness, quality and accessibility categorically were in agreement. Likewise, their assessment of employment prospect of graduates. The study further revealed that the road map of the HEIs significantly affected their instruction, research, extension and production functions. Furthermore, the HEIs' road map significantly affected their efficiency, effectiveness, quality and accessibility. However, the teaching pedagogy and quality assurance assessment are good predictors to HEIs' instruction, research, extension and production functions. Congruently, curricular offering is a good predictor to instruction and production. In reviewing general education programs in terms of instruction and research, it is recommended that HEIs should strengthen their road map implementation programs. This will allow them to attain excellence on teaching pedagogy, quality assurance, curricular offerings and general education programs. HEIs should review the programs/projects/activities inputted in their road map efforts to achieve efficiency, effectiveness, quality and accessibility; and HEIs

have to conscientiously work to toughen their four functions: instruction, research, extension and production.

Key words: *Roadmap, HEI, instruction, research, extension, production, Tawi-Tawi.*

Introduction

School reform is continuously undertaken worldwide to meet the demands of the global market and industry. It is an attempt to make higher education institutions more relevant and responsive to the job markets. It is carried out in Uzbekistan, Thailand, Vietnam and other Asian countries including the Philippines.

In the Philippines, reforms in higher education are aimed at maximizing the system's contribution toward developing competent and high – level human resources as well as generating knowledge and technologies needed for advancing the country's national development and competencies. These urgently needed workable changes are systematically packaged and harmonized into the administration's Higher Education Reform Agenda (HERA) which seeks to extract for the entire higher educational system higher accountability of outcomes and impacts (Roadmap for Public Higher Education Reform, 2010).

This unified reform agenda of the Commission of Higher Education's is in response to the three fundamental and long-running weaknesses of Philippine Higher Education. 1) The lack of overall vision, framework and plan for higher education, 2) deteriorating quality of higher education, and 3) limited access to quality higher education by those who need it most and have the potential to maximize its benefits (Roadmap for Public Higher Education Reform, 2010).

HEIs must constantly monitor and analyze the global, national and local environment. It is important to take into account the educational policies and regional needs and reconcile them with the HEIs' resources and internal processes. The role of management is to communicate and implement the strategic plans of the internal processes of the HEIs. The management continuously develops the internal processes and aligns resources to achieve its goals.

In Tawi-Tawi province, HEIs have been playing integral roles in the upliftment of the province economy. They have been providing relevant programs to students and eventually become human resources capable of improving their families' socio-economic status and becoming useful and productive citizens of their respective communities.

With the dynamism of the HEIs in the province of Tawi-Tawi the management, together with their teachers, continues to explore and adopt best practices to make their institutions



responsive to the needs of the provinces and contribute to national development. They are continuously introducing reforms by evaluating their programs and curriculum so that their graduates can easily be employed.

The Philippine Educational System has made changes in the provision of basic education and the HEIs are directly affected by its full implementation. In this perspective, the researchers have decided to embark on the road mapping of HEIs in the province of Tawi-Tawi as they wait for challenges dictated by local and global markets.

Objective of the study

This study was conducted to ascertain the impact of the roadmapping of higher education institutions (HEIs) in the province of Tawi–Tawi on their graduates’ employment. Specifically, it sought to determine (a) the level of road map implementation among HEIs in terms of teaching pedagogy, quality assurance assessment, curricular programs, and review of general education programs; (b) the level of roadmap implementation in HEIs in terms of instruction, research, extension and production; (c) road map implementation among HEIs achieve efficiency, effectiveness, quality and accessibility; (d) the employment prospects of the HEIs’ graduates in Tawi-Tawi; (e) the road map efforts significantly affect HEIs’ functions in terms of instruction, extension, research and production; and (f) the roadmap significantly affect HEIs’ efficiency, effectiveness, quality and accessibility.

Related Literature

This study is anchored on the fit between university education and graduate jobs (Corominas, Saurina, and Villar, 2012) which revolves around relationships of dependency and autonomy relative to the university’s functions and the requirements of the economy and the production sector.

The dependency model assumes a correspondence between the educational profiles of graduates and the jobs they fill – with provision matching and responding to the demands of the workplace. The relative autonomy model, however, questions the existence of a presupposed correspondence and proposes a dynamic regulation through “successive and flexible adjustments” between the labour supply and a production sector that adapts to the labour force that is available at a given time and in a given context.

From this perspective, it is assumed that the workforce available at a given time is active and influences demand by stimulating it. Given the difficulty of foreseeing how technology and the markets will evolve, it is questionable whether it is possible to go into the details of job duties, content and responsibilities, as well as the changes that jobs will undergo in the future

and the number of people who will be necessary to fill them. It is likewise suggested that qualification and skill cannot be assimilated just from formal undergraduate studies and that other ways of learning, for example, through work experience, are required (Ala, et al., 2011). This approach also advocates that a certain level of over-education in the workforce (ie. the extent to which graduates are employed in non-graduate jobs) may be positive in economic terms insofar as a greater abundance of qualification may lead to better job possibilities by increasing the overall level of innovation and competitiveness (Lemistre, 2010; Sala, et al., 2010).

Linked to this theoretical and macroeconomics on the behaviour of and relationships between labour market representatives – individuals, higher education institutions and those in the production sector – is the question regarding the effects of mismatch between education and graduate employment, at both the individual and organizational scale.

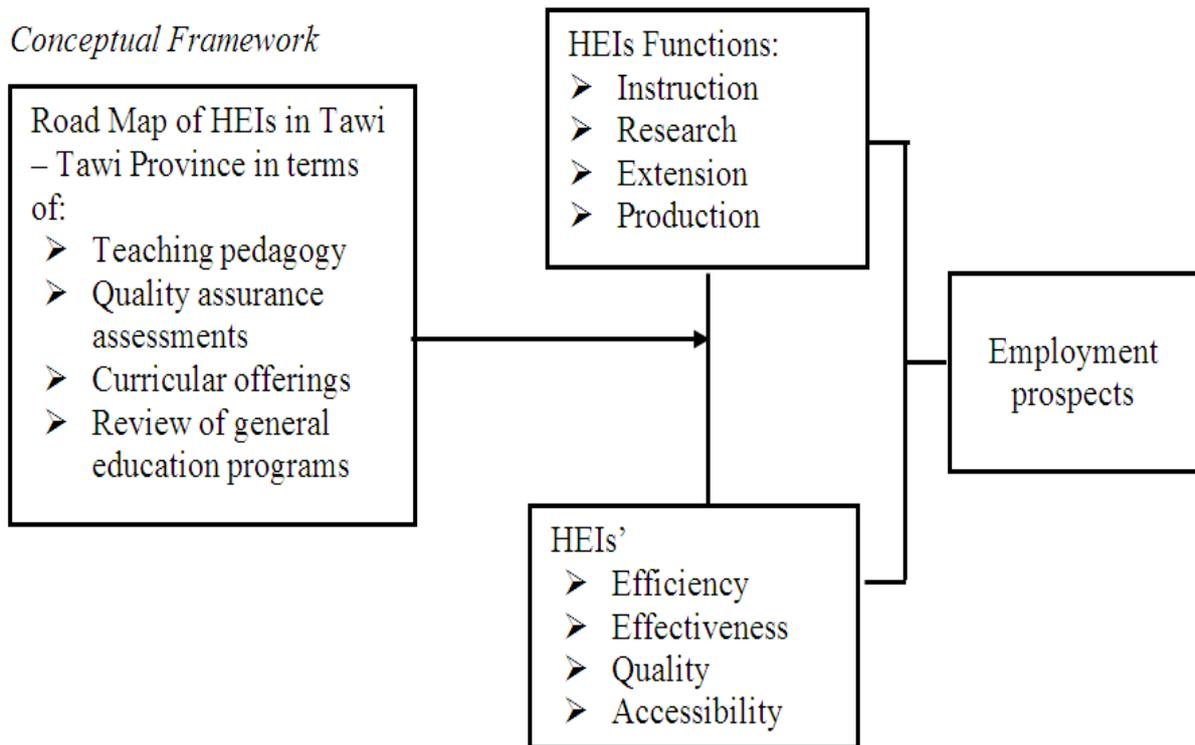
At the individual scale, the issue focuses on the consolidation of students' professional projects that lead them to go to university and their expectations regarding the type of employment they expect to get on finishing their studies (Brown, 2014). It is widely accepted that vocational interests in terms of individual's values and capabilities are developed during adolescence, and people are encouraged to get involved in what they are interested in, thereby increasing their corresponding skills and abilities (Ackerman, 2010). In this regard, the fact of not being able to get a job connected with one's degree or personal interests and capabilities may lead to the idea of failure due to the impossibility of being able to use and apply the skills developed at university and the loss of investment. Research on the university population has highlighted the fact that students have a more or less defined professional project and they would be willing to accept sacrifices, such as a change in the place of residence or longer journeys, in exchange for being able to work in a job connected with their degree and personal preferences and values (Troina, 2015; Sethi & Ghatak, 2018). Along the same lines, studies evaluating the "success" of graduates in terms of employment, as well as research on the effects of over-qualification on university graduates, have shown the negative effects of the education-job mismatch on salaries (Garcia, 2010).

In terms of the organizational dimension of the mismatch between the degree studied and the qualifications actually required of graduates for their job, different studies have corroborated a negative impact of over-education on motivation in the workplace. Contrary to the supposition that the over-educated become more involved, which would enable them to transfer their knowledge and skills through their work and therefore demonstrate their abilities and aspire to jobs more in accordance with their education. The empirical evidence shows a negative relationship between over-education and innovative and extra-role behavior in organizations, and also with regard to initiative in the personal development by graduates of their professional career (Gut, Peiro, Grau, 2009). The reason for this behavior has to do

with the students' prior expectations of obtaining a skilled job after many years of study and the desire to enjoy intrinsic rewards, such as the full use of one's skills and having certain responsibilities, together with external rewards, such as promotion and salary. The idea of lower-than-expected rewards, professional mismatch and the negative emotions associated with these ideas lead the worker to restrict his/her extra-role behavior (i.e., job-related behavior patterns over and above what is strictly specified and laid down), which have a positive effect on organizational efficacy and the worker's career.

Figure 1. Conceptual Paradigm of the Study showing the interplay of variables

Conceptual Framework



Conceptual Framework

The independent variable of the study is the road map of HEIs measured in terms of teaching pedagogy, quality assurance assessment, curricular offerings and review of general education program; and the dependent variables are the effects of roadmap implementation of HEIs in terms of instruction, research, extension and production. Likewise, the HEIs' efficiency, effectiveness, quality and accessibility.

The achievement of Road map implementation of the HEIs in Tawi–Tawi Province will be ascertained, and the extent of roadmap efforts will determine its effect on the employment prospects of HEIs' graduates.

Methodology

Research Design

This study adapted the descriptive quantitative – qualitative methods of research using the survey questionnaires and open-ended questions. It is descriptive because it is deemed appropriate to describe the effect of roadmap of the higher education institutions on the employment prospects of graduates.

It is quantitative research because it used numerical data obtained through survey questionnaires.

It is qualitative research because it used texts to analyze the data. These texts were obtained through interviews. It is open-ended questions so that participants can extensively discuss the issues and concerns about the road map of their institutions geared towards employment prospects.

Research Locale

This study was conducted in the four higher education institutions (HEIs) in Tawi-Tawi province. These are Tawi-Tawi Regional Agricultural College, Mindanao State University-Tawi-Tawi, Mahardika Institute of Technology Inc. and Abubakar Computer Learning Center Foundation Inc. These HEIs were coded as HEIs A, HEIs B, HEIs C and HEIs D respectively.

HEI A is situated in Nahil, Bongao, Tawi – Tawi. It is a chartered college and headed by a president. The president is assisted by three Vice Presidents; Vice President for Research, and Development, Extension Services and Production (RDESP), Vice President for Academic Affairs and Vice President for Special Concerns. The college has four Deans, such as Dean of Graduate Studies, Instructions, and Admission, Student Affairs.

The college offers graduate and undergraduate programs, namely: Master of Arts in Education (MAED), major in Educational Management and Supervision and Master of Science in Agriculture (MSA). The undergraduate programs include: Bachelor of Science in Agriculture (BSA), Bachelor of Science in Agricultural Education (BSAgEd), major in Crop Science and Animal Science, Bachelor of Science in Home Technology (BSH.T), major in Foods and Garments, Bachelor of Science in Agricultural Business (BSA.B.), Bachelor of Science in Forestry (BSF), and Bachelor of Science in Computer Science (BSCS).

HEI B is located in Sanga-Sanga, Bongao, Tawi – Tawi province. The college is head by a Chancellor and assisted three Vice Chancellors and seven Deans. These Chancellors are for

Academic Affairs, Administration and Finance and Research and Development. The Deans are for Graduate Studies, College of Fisheries, Institute of Oceanography, College of Islamic and Arabic Studies, College of Education, and College of Liberal Arts.

HEI C is in Barangay Lamion, Bongao, Tawi – Tawi. It is headed by a President with three Vice Presidents for Academic Affairs, Administration and Finance and for Technical-Vocational Education Technology. The Institute has three deans for College of Nursing, College of Criminology and College of Education.

HEI D is in Barangay Simandagit, Bongao, Tawi- Tawi. The institution is headed by its president and is assisted by the department chairpersons. The institution offers graduate programs, such as, doctorate and master’s degrees in educational management and peace and development; and undergraduate programs, such as, education, criminology, computer science, engineering, nursing and business and accountancy.

Population and Sampling Procedure

The target populations of this study were the administrators, faculty and graduates of the different colleges of the four HEIs in Tawi – Tawi Province.

Table 1: Respondents of the Study

Higher Education Institutions (HEIs)	N	%	Graduates (n)
HEIs A	80	26.67	5
HEI B	125	41.67	8
HEI C	70	23.33	5
HEI D	25	8.33	2
Total	300	100.0	20

As shown in Table 1, the HEI with biggest number of respondents is HEI B with frequency 125 or 41.67 percent in the distribution, followed by HEI A with frequency 80 or 26.67 percent of the respondents and the HEI with the least number (25) or 8.33 percent in the distribution is HEI D.

In the interview with graduates, there were 20 participants, the most number was eight in HEI B and the least number (2) was in HEIs D.

In the selection of the respondents, the total enumeration system was used. It means the entire population of administrators and faculty were considered.

Research Instrument

This study made use of the questionnaire-checklist and the open-ended questions. The former was designed to gather data from the administrators and faculty members and the latter was for the HEIs' graduates.

Part I. The first part of this questionnaire-checklist was designed to solicit personal data of the respondents, such as, name (optional), and name school presently teaching;

Part II, the level of road map implementation among HEIs in terms of teaching pedagogy, quality assurance assessments, curricular programs and review of general education program. Each indicator has ten statements with four options, numbered and described: 4 – very high, 3 – high, 2 – moderately high, and 1 –low. Likewise, for HEIs' functions in terms of instruction, research, extension and production;

Part III, was on the level of achievement of the road map. It used terms of efficiency (4 items), effectiveness (4 items), quality (6 items) and accessibility (10 items). Each item has four options: 4- strongly agree, 3- agree, 2- disagree, and 1 – strongly disagree.

Part IV, related to employment prospects of HEIs' graduates. It has 6 statements with four options described: 4- strongly agree, 3 – agree, 2- disagree, and 1 – strongly disagree.

Part V. Unstructured Question. The unstructured questions were designed to collect qualitative data from HEIs' graduates. These questions were focused on the road map's implementation in terms of teaching pedagogy, quality assurance, curricular offerings and review of General Education Program. It also included the achievement of road mapping in terms of efficiency, effectiveness, quality and accessibility.

Validity and Reliability of the Research Instrument

The research instrument was developed by the researchers. It was then referred it to the adviser for comments and suggestions. After which, the same instrument was submitted to the panel of experts who evaluated the questions in terms of relevance, suitability and appropriateness. Suggestions/remarks from the panel of experts were incorporated.

For the reliability of the research instrument, the questionnaire-checklists were administered once to the 25 faculty who were not respondents of the study. The data obtained from them were computed using Cronbach Alpha and the reliability estimate was 0.812 which means that the questionnaire-checklist was highly reliable.

For unstructured questions, these were referred to a panel of experts who evaluated the questions in terms of relevance to the research problems.



Ethical Consideration

Research participants were fully informed of the purpose of a study prior to their involvement, freely gave their consent to participate without undue pressure, and was able to withdraw from the study at any time without penalty. Informed consent was secured to ensure confidentiality in this study and access to the data were restricted to researchers.

Data Gathering Procedure

Permission was sought through a letter from the President of the Higher Education Institutions to conduct the gathering of data from among their officials. The researchers arranged the schedule with the Presidents/administrators. After which, the questionnaires were distributed and personally retrieved from the administrators and faculty.

Statistical Treatment of Data

To analyze the data, the following statistical measures using the Statistical Package for Social Sciences (SPSS) were used:

Weighted Mean and Standard Deviation. These measures were used to determine the level of the road map implementation among Higher Education Institutions in terms of teaching pedagogy, quality assurance assessments, curricular programs and review of general education program. These were also used to ascertain the level of achievement of road mapping in terms of efficiency, effectiveness, quality and accessibility; to determine the effect of road map implementation of HEIs to their Functions in terms of instruction, research extension, and production and to determine the employment prospects of the Higher Education Institutions' graduates.

Multiple Regression Analysis. This measure was used to determine the significant effect of HEIs' road map implementation on their four functions. This was also used to determine the significant effect of road map implementation on the achievement level of HEIs.

Qualitative data were analyzed by organizing the responses of the participants to the unstructured questions.

Results and Discussion

Based on the analysis of data, this study revealed the following findings:

1. The HEIs rated the level of implementation of road map in terms of teaching pedagogy at 2.817 (agree), quality assurance assessment at 2.714 (agree), curricular offerings at 3.162 (agree) and general education programs at 3.251 (agree).
2. The HEIs rated the effect of road map implementation on instruction at 3.044 (agree), research at 2.679 (agree) and extension at 2.665 (agree) and production at 2.349 (disagree).
3. The faculty members rated the HEIs' level of achievement of road mapping in terms of efficiency at 2.659 (agree), effectiveness at 2.950 (agree), quality at 2.989 (agree) and accessibility at 3.369 (agree).
4. The faculty members rated the employment prospect of graduates as a result of road map implementation at 3.002 (agree).

The road map efforts of the HEIs in terms of teaching pedagogy, quality assurance assessment, curricular offerings, and general education program taken collectively significantly affected their research function. However, when taken individually teaching pedagogy, quality assurance assessment and review of general education program significantly affected their research function but not the curricular offerings.

The road map efforts of the HEIs in terms of teaching pedagogy, quality assurance assessment, curricular offerings, and review of general education program taken collectively significantly affected their extension function. Furthermore, teaching pedagogy, and quality assurance assessment taken individually significantly affected their extension function but not their curricular offerings and review of general education program.

The road map efforts of the HEIs in terms of teaching pedagogy, quality assurance assessment, curricular offerings, and review of general education program taken collectively significantly affected their production function. Likewise, teaching pedagogy, quality assurance assessment, and curricular offerings taken individually significantly affected their production function but not the review of general education program.

The HEIs' road map efforts in terms of teaching pedagogy, quality assurance assessment, curricular offerings, and review of general education program taken collectively significantly affected their efficiency. In addition, road map efforts of HEIs in terms of quality assurance taken individually significantly affected their efficiency; however, teaching pedagogy, curricular offerings and review of general education program taken individually did not significantly affect their efficiency.

The HEIs' road map efforts in terms of teaching pedagogy, quality assurance assessment, curricular offerings, and review of general education program taken collectively significantly affected their effectiveness. In addition, road map efforts in terms of teaching pedagogy, quality assurance and review of general education program taken individually significantly affected their effectiveness; however, curricular offerings did not significantly affect their effectiveness.

The HEIs' road map efforts in terms of teaching pedagogy, quality assurance assessment, curricular offerings, and review of general education program taken collectively significantly affected their quality. Further, the road map efforts in terms of quality assurance significantly affected their quality; however, teaching pedagogy, curricular offerings and review of general education program individually did not significantly affect their quality.

The HEIs' road map efforts in terms of teaching pedagogy, quality assurance assessment, curricular offerings, and review of general education program taken collectively significantly affected their accessibility. Moreover, the road map efforts in terms of quality assurance assessment and curricular offerings taken individually significantly affected their accessibility; however, teaching pedagogy and review of general education program taken individually did not significantly affect their accessibility.

Conclusions

Based on the findings, this study concludes that the HEIs have high level of road map implementation in terms of teaching pedagogy, quality assurance assessment, curricular offerings and review of general education program. The HEIs' road map has high effect on their instruction, research, and extension functions; however, it has moderately high effect on their production function. The HEIs have attained the level of achievement in terms of road mapping efforts in terms of efficiency, effectiveness, quality and accessibility as a result of road map implementation.

Also, the HEIs have prepared programs that suit to the needs and demands of the industries of Tawi-Tawi province and other neighboring provinces. The HEIs road map in terms of teaching pedagogy, quality assurance, curricular offerings and review of general education programs are good predictors to their instruction function.

The HEIs road map in terms of teaching pedagogy, quality assurance, and review of general education program are good predictors to their research function. But not their curricular offerings.



The HEIs road map in terms of teaching pedagogy and quality assurance are good predictors to their extension and not the curricular offerings and review of general education program.

The HEIs road map in terms of teaching pedagogy, quality assurance and curricular offerings are good predictors to their production function but not their review of general education program.

The HEIs road map in terms of quality assurance assessment is a good predictor to their efficiency but not their teaching pedagogy, curricular offerings and review of general education program.

The HEIs road map in terms of teaching pedagogy, quality assurance assessment and review of general education program are good predictors to their effectiveness but not the curricular offerings.

The HEIs road map in terms of quality assurance is a good predictor to their quality but not their teaching pedagogy, curricular offerings and review of general education program.

The HEIs road map in terms of quality assurance and curricular offerings are good predictors to their accessibility and not their teaching pedagogy and review of general education program.



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