

PalArch's Journal of Archaeology of Egypt / Egyptology

ANALYSIS ON PRODUCTIVITY, PERFORMANCE AND UPWARD MOBILITY OF FACULTY MEMBERS

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Marvin P. Amoin. Analysis on Productivity, Performance and Upward Mobility of Faculty Members. – PalArch's Journal of Archaeology of Egypt/Egyptology 17(1), 343-353. ISSN 1567-214X

Keywords: Performance, Productivity, Upward mobility.

ABSTRACT

This research's main objective was to decide if the mobility of faculty indeed increases the efficiency and productivity of faculty in terms of teaching, research, and extension. A descriptive research design was implemented in the analysis. Faculty members with a professorial rank based on the National Budget Circular Period assessment were regarded as the study respondents. In terms of main outcome areas, the table of indicators per dimension was used in State Universities and Colleges' leveling instrument. There is a very strong inter-rater agreement with the collected data using Cohen's Kappa Index for face validity. Using Lawshe's method and an internal consistency measure of 0.84 using Cronbach Alpha Coefficient, a content validity ratio is calculated for each object. The Pearson product-moment correlation coefficient was used to calculate the strength of a linear relationship between two variables, following the assumptions underlying its use. The researcher uses a significance level denoted by alpha set at 0.05 statistically relevant to assess the level of significance. To determine the shift in faculty efficiency and productivity over time, the rate of change was used. As the rank of the faculty increases, the corresponding salary rise was also observed. Regarding upward mobility over time, faculty members' success level is increasingly growing in instructional study and extension services. In terms of instructional research and extension resources about upward mobility over time, faculty members' degree of productivity is lower than the faculty's performance.

INTRODUCTION

Productivity in the faculty is assessed in three (3) key areas of concern in the academy: instruction (I), research (R), and extension (E). A university-induced faculty should have a certain degree of excellence and efficiency that is supposed to rise steadily as it represents the university. The university adopts policies for promotion and incentive structures that promote faculty performance and productivity to ensure this monotonous growing faculty productivity trend.

The National Budget Circular 461 (NBC # 461) includes one such institutionalized framework for supporting faculty. A university faculty is assessed once every three years (called a cycle) under this circular and is modified in its faculty rank accordingly. At the faculty level, an upward adjustment implies a corresponding upward adjustment in pay. The object of NBC # 461 is precise to enable the faculty to perform well and increase its performance.

In teaching, effectiveness is the indicator of the efficiency and consistency of faculty members' delivery to foster students' ability to learn, while success deals with the way faculty members execute their tasks based on the institution's standards. Productivity must be related to effectiveness, which focuses on teaching the right subject in terms of educational qualifications, abilities, and upward mobility. In contrast, success is entirely based on quantitatively assessed independent tasks.

While a faculty may be graded as very satisfactory to outstanding in terms of results, it may be considered less effective in the academy. For example, in other areas such as instruction, an engineering professor who has outstanding scores in his business mathematics class might have less productivity score because he is more appropriate in teaching and handling engineering mathematics or subjects.

The typical thesis is nothing but a transfer of bones from one cemetery to another, according to (Dobie 1994), which implies that the latest Philippine theses, dissertations, and analysis are repetitive and stereotyped precisely because they all confirm or validate what is already agreed and validated. To obtain an outstanding outcome, research production must systematically examine existing or new knowledge as faculty members gain Professor Status in the University and must endorse theorems or establish new theories. The design and development of theory is already a prerequisite as stated under CHED Order No. 53, s.2007, for doctoral dissertations. New ideas and results help encourage a discipline parallel to the research process to produce further information and deepen comprehension of discoveries, not reacting to the rank's requirements.

Writing is vital for the success of the research, and publishing is essential for evaluating the quality of research. The main aspect of research productivity is to do the right research related to the researcher's degree. The purpose is to write and publish quality research in foreign or CHED cited journals with such standards. Still, some researchers merely comply with and act as a support system in research well outside their field of specialization.

The government assigned staff roles to administer the institution's administrative tasks. Still, most of the time, faculty members were charged with handling a non-teaching role or overseeing a particular unit or department, contributing to workload loading and often quitting the academic rank because of their preferences. Successful faculty members are also found in administrative positions with a negative effect on their study quality and classroom instruction delivery. They spend more hours working to satisfy the degree of expectation and satisfaction with the assigned mission, sacrificing quality time that could be used to schedule lessons and discuss the student's needs and concerns.

This situation raises the question: does the rise in faculty mobility improve the faculty's efficiency and productivity? If so, what is the marginal improvement per unit shift in faculty mobility in faculty efficiency and productivity? The emphasis of this paper will be on these and other related issues.

Objectives

To assess whether faculty mobility increases faculty efficiency and productivity in instruction, research, and extension.

1. In terms of instruction, research, and extension services, what is the level of productivity and performance of faculty members concerning upward mobility?
2. In terms of instruction, research, and extension services, is there a significant relationship between performance, productivity, and upward mobility?
3. What is the marginal increase in faculty and productivity per unit shift in faculty mobility?

Review /Survey of related literature

As research expenses have risen and as sources of research funding have shifted, U.S. research universities have established an increased focus on research results. While much of the historical debate focused on the faculty's characteristics, some recent studies have begun to concentrate on the program or organizational variables' influence as powerful attributes for improving such efficiency. This paper extends the findings of these recent studies by analyzing the relationship between competitiveness of academic research and institutional factors from the latest data from the National Research Council on national research universities and their programs in the four broad fields of biological sciences, engineering, physical sciences and mathematics, and social and behavioral science (DETERMINANTS OF HIGHER EDUCATION'S RESEARCH PRODUCTIVITY (Halil Dunder and Darrell R. Lewis, 1998).

A system of faculty ranks for faculty members to move through throughout their careers acts as a hierarchical structure. Every move represents a promotion that usually leads to a status and salary upgrade. Faculty success on institutional standards typically determines the rank of a faculty member. Some of the requirements are educational attainment, seniority, teaching, and service. Studies indicate, however, that the key criteria for promotion in universities awarding Ph.D. degrees are faculty study efficiency (Tien and Blackburn 2016).

The Philippines had the highest number of publications in the 1960s and 1970s (6 and 25, respectively compared to the other five ASEAN countries, although it, unfortunately, slipped down to third place behind Thailand and Singapore in the 1980s, then to fourth place in the 1990s when Malaysia overtook the country. Since then, in terms of research productivity at the individual, institutional and national levels, the Philippines has ranked lower than Singapore, Thailand, and Malaysia. On the other hand, Singapore accounted for more than 50 percent of the total number of publications from the six ASEAN countries and was at the top of the list from the 1980s onwards (Vinluan 2012).

The author pointed out that this low output may indicate that the Philippines' peripheral practices could be considered instead of core activities in both disciplines (education and psychology) and disseminating findings through publication in SSCI-indexed journals. The local orientation of many social science research studies, funding, individual characteristics of researchers, and the epistemic culture of information production in the region, among others, are some of the possible explanations cited (Vinluan 2012).

Finally, as the author said, this is an essential outcome because it affects national and local government and private sector initiatives to enhance the delivery of education (e.g., numerous steps to improve academic achievement) and psychology-related services (e.g., career advice, counseling), particularly to individuals who need them the most. This is because relevant research does not inform such initiatives or, whether they are at all, the research findings are contextualized to another country. They may not apply to the Philippine climate. Lorelei Vinluan, Philippine educational and psychological research productivity and comparison with ASEAN countries, *Scientometrics* 91 (2012) pp 277-294.

The effectiveness of research is easier to calculate than other forms of academic work-teaching has been described, and it is also challenging to identify and quantify community involvement and such vital functions as university-industry ties. Thus, the gold standard and almost the only semi-reliable variable is science (Albatch, 2015).

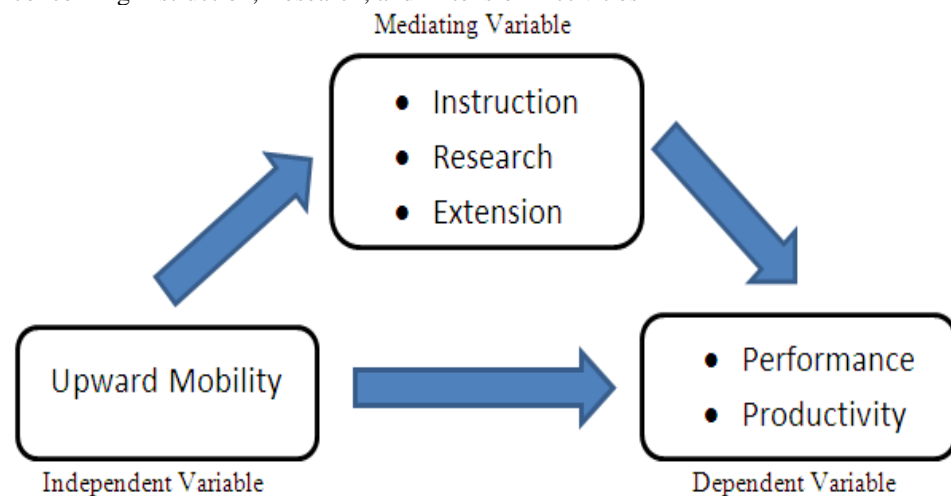
But it's difficult even to calculate study productivity. The global rankings include journals, such as the Science Citation Index, Web of Science or Scopus, or their equivalents for other disciplines, indexed in key global indices. These databases only list a limited number of journals and appear to favor publications in English's international scientific language.

The rankings and other national assessments also count study grants and other prizes. Again for challenging sciences, but not generally for different disciplines, this may be sufficient. Furthermore, the rankings do not consider the substantial gaps between countries and university systems in the amount of available funding. In research universities, what counts for academic productivity?

Conceptual framework

The three (3) dimensions for scoring are listed in the figure below: Instruction (I), Research (R), and Extension (E). For both productivity and performance, the partial ordering of this dimension is $I > R > E$. In figure 1, the logical relations of this dimension are shown schematically.

Figure 1. Logical Connection of Academic Dimension on Performance and Productivity concerning Instruction, Research, and Extension Activities



METHODOLOGY

A descriptive research design was implemented in the analysis. The study respondents were considered faculty members with a professor rank based on the NBC cycle evaluation. The researcher gathered the performance and NBC findings through documentary analysis. The required statistical treatment was used to handle all the data obtained.

The Table of Indicators per Dimension was used to arrive at scores for each dimension compared to main outcome areas in the State Universities and Colleges Leveling Instrument. The collected data is evaluated using Cohen's Kappa Index to test the face validity, with a kappa of 0.84 verbally interpreted as a relatively strong inter-rater agreement. A procedural approach was also used to determine the content's validity, including feedback and expert assessment. A content validity survey was generated; for each item, the content validity ratio is then determined using Lawshe's method with a minimum value of 0.80 for ten (10) panelists and a Cronbach Alpha Coefficient internal consistency measure 0.84 for each item. The indicators created for this study are shown in tables 1 to 3:

Table 1: Instructional Productivity Indicators

Indicator	Evidence	Score
1. Teaching	<ul style="list-style-type: none"> • Subject taught are appropriate to the expected faculty level of expertise and specialization • Subject taught are beyond the normal subjects expected at the current rank • Use of new technology apart from pure lecture • Very satisfactory to excellent teaching performance evaluation. 	4
2. Teaching Aids/ Devices/ Materials	<ul style="list-style-type: none"> • Developed and used instructional materials such as workbooks, textbooks, monographs, and major bodies of published work • Developed interactive software, and e-instructional aids • Provides homework's and check homework's problem set and other out-of-classroom activities 	3
3. Teaching Feedback	<ul style="list-style-type: none"> • Maintains records of student performances and progress • Informs students of their performance based on records • Maintains regular consulting period with a record of students' consultations 	3
Maximum Score:		10

Table 2: Research Productivity Indicators

Indicator	Evidence	Score
1. Research output	<ul style="list-style-type: none"> • Research outputs published in referred journals (most recent) • Research output cited in other literature • Research output is appropriate to the expected faculty level of expertise and specialization 	3
2. Knowledge Transfer	<ul style="list-style-type: none"> • Research output used as the basis for extension programs 	2

	<ul style="list-style-type: none"> • Research output well-dissimulated in media and other forms of communication 	
3. Implementation	<ul style="list-style-type: none"> • Research output resulted in new technology or innovation • Research output produced new database, software/algorithms 	2
4. Community Benefits	<ul style="list-style-type: none"> • Research output benefited community beneficiaries 	1
5. Policies	<ul style="list-style-type: none"> • Research output resulted in new policies, guidelines • Research output cited in policies and guidelines 	2
	Maximum Score:	10

Table 3: Extension Productivity Indicators

Indicator	Evidence	Score
1. Extension Output	<ul style="list-style-type: none"> • Led at least one extension project (Max:2) • Developed and packaged extension projects (Max: 3) 	5
2. Extension Outcome	<ul style="list-style-type: none"> • Beneficiaries of the extension project where Faculty is involved (1 point for every 20 beneficiaries) Max: 4 • Plaque of commendation given by the community 	2
	Maximum Score:	10

The Pearson product-moment correlation coefficient was used to calculate the strength of a linear association between two variables, following the assumptions underlying its use, namely: variables are evaluated on a continuous scale, paired, case independence, with the linear relationship, normally distributed, with homoscedasticity and without outliers.

The researcher uses a significance level denoted by alpha set at 0.05 statistically relevant to assess the level of significance. The null hypothesis is rejected if the measured p-value is less than the alpha stage.

To assess the shift in faculty efficiency and productivity over time, the rate of change was used. The quality of change in performance and productivity was calculated by taking the performance and productivity at time B minus the performance and productivity at time A and dividing the outcome by the total upward mobility time.

RESULTS AND DISCUSSION

For the fourth and first tranches, Table 4 presents the faculty rank with the corresponding monthly salary and rate per teaching hour.

Table 4 indicates that in State Universities and Colleges, the wage for entry-level faculty members is Php22 938.00 for 2019 and Php24 495.00 for 2020, with a corresponding 21 unit workload and a cost of Php248.25 and Php265.10 per teaching hour in the fourth and first tranches, respectively. Faculty members with Php1 711.37 per teaching hour could earn as high as Php158 131. As the rank of the faculty increases, the corresponding salary rise was also observed.

A CCE was developed as the primary basis for the recruitment, classification, and promotion of faculty, as described in the handbook on role classification and compensation. The CCE is a collection of variables consisting of services and accomplishments that assess the faculty's relative performance in the institution for the

assessment period by applying a point system to calculate the rank and sub-rank of the faculty.

Table 4: Faculty Rank, Monthly Salary for Fourth and First Tranches and Rate per Teaching Hour of Faculty Members in University of Rizal System

Faculty Rank	Monthly Salary/ 4th tranche	Per teaching hour /4th	Per hour /4th	Monthly Salary/ 1st tranche	Per teaching hour /1st	Per hour/1st
Instructor I	Php 22,938.00	Php 248.25	Php 173.77	Php 24,495	Php265.10	Php185.57
Instructor II	Php 25,232.00	Php 273.07	Php 191.15	Php26 754	Php289.55	Php202.68
Instructor III	Php 27,755.00	Php 300.38	Php 210.27	Php29 277	Php316.85	Php221.80
Asst Prof I	Php 30,531.00	Php 330.42	Php 231.30	Php32 053	Php346.89	Php242.83
Asst Prof II	Php33,584.00	Php363.46	Php254.42	Php35,106	Php379.94	Php265.95
Asst Prof III	Php36,942.00	Php 399.81	Php279.86	Php38,464	Php416.28	Php291.40
Asst Prof IV	Php40,637.00	Php439.79	Php307.86	Php42,159	Php456.27	Php319.39
Assoc Prof I	Php45,269.00	Php 489.92	Php342.95	Php46,791	Php506.40	Php354.48
Assoc Prof II	Php51,155.00	Php 553.63	Php387.54	Php52,703	Php570.38	Php399.27
Assoc Prof III	Php57,805.00	Php 625.60	Php437.92	Php59,353	Php642.35	Php449.64
Assoc Prof IV	Php65,319.00	Php 706.92	Php494.84	Php66,867	Php723.67	Php506.57
Assoc Prof V	Php73,811.00	Php 798.82	Php559.17	Php75,359	Php815.57	Php570.90
Professor I	Php83,406.00	Php 902.66	Php631.86	Php85,074	Php920.71	Php644.50
Professor II	Php 5,083.00	Php1,029.04	Php720.32	Php96,985	Php1,049.62	Php734.73
Professor III	Php107,444.00	Php1,162.81	Php813.97	Php109,593	Php1,186.07	Php830.25
Professor IV	Php121,411.00	Php1,313.97	Php919.78	Php123,839	Php1,340.25	Php938.17
Professor V	Php137,195.00	Php1,484.79	Php1,039.36	Php139 939	Php1 514.49	Php1,060.14
Professor VI	Php155,030.00	Php1,677.81	Php1,174.47	Php158,131	Php1,711.37	Php1,197.96

It also shows that faculty members' level of performance and productivity increases consistently from instructor to assistant professor to associate professor to professor concerning research.

Table 5: Level of Performance and Productivity of Faculty Members Concerning Instruction, Research, and Extension

	Academic Rank	Performance	Productivity
Instruction	Instructor	8.25	7.38
	Assistant Professor	8.78	8.12
	Associate Professor	9.55	8.88
	Professor	9.63	8.19
Research	Instructor	3.06	1.75
	Assistant Professor	3.69	2.38
	Associate Professor	5.63	3.50
	Professor	9.13	5.44
Extension Services	Instructor	1.56	1.44
	Assistant Professor	3.94	3.38
	Associate Professor	6.38	4.56
	Professor	8.19	5.19

Similarly, Table 5 shows that faculty members' performance and productivity level is gradually growing from instructor to assistant professor to associate professor to professor regarding extension services.

In the teaching and learning process, faculty members play an essential role, thereby addressing instruction delivery's key roles. A higher performance assessment and an improvement in academic rank were rewarded by imparting information and improving student skills. For nearly two decades, faculty members regularly teaching one to three subjects repetitively will enhance performance and sacrifice productivity when achieving a professor status. In university life, faculty members may be expected to deal with essential and daunting topics relevant to any academic rank rise. Still, much of the time, faculty members chose the same subjects taught in their teacher and assistant professor's rank.

Research involvement of faculty members was seen dramatically from associate professor to professor status, with a performance rating far higher than the productivity score. As part of their goal to help the institution reach a much higher level and be qualified as a professor, the degree to which faculty members have a research position depends primarily on its purpose and aspiration.

Research performance of faculty is focused on the degree to which faculty members write and publish research in journals and disseminate findings while writing and publishing quality research output in referred journals is the main characteristic of research productivity and appropriate to the expected level of expertise specialization of faculty.

When a faculty member reaches associate professor to professor, a higher performance score was observed, suggesting a higher engagement rate as the extension service's ability strengthens its relationships with the group. Suppose faculty members are interested in any extension program. In that case, essential knowledge can be exchanged and learned with sufficient university acknowledgment and extra score in performance evaluation.

Via extension programs, the transfer of information and skills to the community must reach a sufficient number of recipients for whom the extension leader and members must plan themselves thoroughly and organize adequate training or extension work that will substantially improve the participants' lives.

Table 6: Significant Relationship Between Performance, productivity and upward mobility in terms of instruction, research and extension services

Upward Mobility	Performance			Productivity		
	I	R	ES	I	R	ES
Instructor To Assistant Professor	0.78 0.00	0.25 0.15	0.23 0.21	0.73 0.00	0.19 0.27	0.20 0.26
Assistant Professor to Associate Professor	0.88 0.00	0.76 0.00	0.72 0.00	0.74 0.00	0.36 0.22	0.31 0.19
Associate Professor to Professor	0.91 0.00	0.92 0.00	0.86 0.00	-0.24 0.086	0.46 0.16	0.42 0.18

Table 6 shows the Pearson correlation between faculty members' upward mobility, performance, and productivity in terms of instruction, research, and extension services.

The correlation between upward mobility and faculty members' performance concerning instruction is 0.78, 0.88, and 0.91, indicating a high relationship between variables. The correlation coefficient is significant since the computed p values are all less than the 0.05 level of significance. The relationship between these variables is positive, which indicates that as faculty members' upward mobility increases, the performance also increases.

The correlation between upward mobility from instructor to assistant professor and performance concerning research and extension services shows a low relationship between variables, indicating no significant relationship. On the other hand, when faculty members move from assistant professor to associate professor and associate professor to professor position, a high degree and significant relationship between variables can be observed.

The correlation between upward mobility from instructor to assistant professor and assistant professor to associate professor and faculty members' productivity concerning instruction indicates a high relationship between variables. The correlation coefficient is significant since the computed p values are all less than the 0.05 level of significance. The relationship between these variables is positive, indicating that as faculty members' upward mobility increases, productivity also increases. However, a low negative relationship was observed from associate professor to professor position concerning instruction and indicated a probability value less than the alpha level. The relationship between these variables is negative, meaning that as upward mobility of faculty members increases from associate professor to professor, productivity decreases.

The correlation between upward mobility from instructor to assistant professor and productivity concerning research and instructions shows a low relationship between variables, indicating no significant relationship. On the other hand, when faculty members move from assistant professor to associate professor and associate professor to a professor position, moderate degree, and no significant relationship between variables can be observed.

Table 7 indicates the marginal rate of improvement in faculty performance and productivity regarding faculty upward mobility.

Over time, the performance of faculty improves concerning instruction, research, and extension services. With wisdom, knowledge of the lesson, and experience in the work they want to do most often, faculty members gave the university power. The faculty's

participation was noted in research activities, presentations at national and international conferences, and publication in a journal.

Table 7: Marginal Rate of Change in Faculty Performance and Productivity Concerning Faculty Upward Mobility

UPWARD MOBILITY	PERFORMANCE			PRODUCTIVITY		
	I	R	ES	I	R	ES
Instructor To Assistant Professor	14.13	16.80	63.47	19.73	16.80	51.73
Assistant Professor to Associate Professor	14.67	36.95	46.48	14.48	21.33	22.48
Associate Professor to Professor	1.24	54.26	28.06	-10.70	30.07	9.77

In terms of instruction, faculty productivity increases over time from teacher to assistant professor and assistant professor to associate professor and decreases marginally from associate professor to professor.

Faculty members have selected subjects they have learned over time while often failing to satisfy the undergraduate students' increasing educational needs due to increasing research and extension services while taking administrative positions and teaching in graduate studies.

The productivity of faculty increases over time concerning research and extension services. Over time, the participation rate in faculty research and extension services is high, but the baseline data showing productivity from teacher to professor is very poor. Most of the analysis findings were not published in a journal or referenced in other research papers.

Table 8: Honoraria for Professorial Lecturers for FY 2018 and 2019

Allotment Code	Account Title	Grand Total
5-01-02-100-01	Honoraria-Professorial Lecturers	Php 6 493 177.02
5-01-02-100-01	Honoraria-Professorial Lecturers	Php 6 992 734.75

For fiscal years 2018 and 2019, Table 8 displays the honorariums for professorial lecturers.

The table shows that the university allocated approximately 7 million pesos annually as a fee for professorial lecturers whose rate was Php 350 per hour for a master's degree lecturer and Php 450 per hour for a doctoral degree holder, the same rate for an assistant professor II who treats undergraduate students with a rate of Php 379.94 per hour of teaching and an assistant professor IV who earns Php 379.94 per hour of teaching.

SUMMARY AND CONCLUSIONS

As the rank of the faculty increases, the corresponding salary increase was also observed.

Regarding upward mobility over time, faculty members' success level is consistently increasing in terms of instruction, research, and extension services.

In terms of instruction, research, and extension services about upward mobility over time, faculty members' degree of productivity is lower than the faculty's performance.

Upward mobility plays a significant role in the performance of the faculty.

Members of the faculty assign performance more weight instead of productivity.

The true measure of performance is productivity.

Performance and productivity principles in terms of upward mobility may significantly affect university performance and progress.

IMPLICATIONS AND RECOMMENDATIONS

The majority of faculty members prepare mobility papers upward.

In each period, faculty members obtained the requisite points needed for upward mobility, leading to a corresponding academic rank increase.

Difficult to catch up with other countries' top universities and boost SUC leveling

Sustaining instruction consistency and relevance while maintaining a balance with research and extension services

The administration may recommend including the graduate school load in assistant professor II's daily workload and above in rank to support accreditation and maintain the quality of instruction, research, and extension.

A finished research-based paper published in an international or CHED cited journal.

Focus on productivity and achieve an excellent performance standard to support the university's goal of achieving a level IV SUC status.

ACKNOWLEDGMENT

The completion of this paper and the research behind it would not have been possible without the University of Rizal System officials' assistance.

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