## Individual Performance Commitment Rating and Work Satisfaction of Pangasinan State University Faculty with Multi-Designations: A Basis for a Mathematical Model

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*Abstract:* Individual Performance Commitment Rating (IPCR) is a tool utilized in the implementation of the Strategic Performance Management System (SPMS) among state universities and colleges in the Philippines. The aim of this study is to standardizing (IPCR) computation for faculty with multi-designations in state universities and colleges in the Philippines and be subjected to acceptability evaluation using technology acceptability model (TAM). In addition, administered in accordance with the rules, regulations and standards promulgated by the Civil Service Commission (CSC). Using a descriptive-developmental design, purposively sampled university and campus officials with multi-designations for the past three school years served as the first set of respondents. Their profile, work satisfaction and method of IPCR computation for the past three years were determined. The second set of respondents who evaluated the acceptability of the mathematical model were IPCR main end users such as the university officials, administrators, and statistics center staff. Evaluation result on the acceptability of the developed model based on usefulness, ease of use, attitude towards usage and intention to use was at very highly acceptability level. It is recommended that such mathematical model in computing the IPCR for faculty with multi-designations be a springboard for discussion for PSU and CSC further evaluation and possible adoption.

Key-Words: - Individual Performance, Work Satisfaction, Commitment, Mathematical Model.

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#### **1** Introduction

Individual Performance Commitment Rating (IPCR) is a tool utilized in the implementation of the Strategic Performance Management System (SPMS) among state universities and colleges in the Philippines. This performance evaluation system is administered in accordance with the rules and regulations and standards promulgated by the Civil Service Commission, a constitutional body which is the central human resource management agency of the Philippine bureaucracy, [1], [3]. SPMS aims to continuously foster the improvement of individual PSU faculty efficiency in terms of their performances with given weights in instruction, research, extension, support to operations and for those with designations, administration function is added, vis'a-vis the organization.

Studies on the implementation of SPMS in selected national government in the country which included examinations on its challenges in performance appraisal were scholarly examined. However, no study has investigated rating an employee with multi-designations. Rating period in Pangasinan State University is done semi-annually or per semester, where fivepoint rating scales are used; 5 being the highest and 1, the lowest. Prior to the start of a semester, the IPC or Individual Performance Commitment for faculty sets all targets to be accomplished. For faculty with two or more designations, two or more administration functions are included in their IPC. IPCRs are submitted at the end of each semester where the unit heads rate the performance of each faculty. Results of the performance shall serve as inputs in determining and providing needed intervention such as mentoring or coaching and in identifying possible incentives or awards for top performers.

However, observation-wise, various ways of computing the ratings of faculty with multidesignations were practiced. This study was aimed at gathering empirical data first, to provide facts for the pre-observation. Findings suggested proof of the pre-observation. The profile, type of multidesignations, method of IPCR computation and work satisfaction of the faculty were alsodetermined. With the goal of standardizing the IPCR computation, a mathematical formula was developed and subjected for acceptability evaluation using technology acceptability model (TAM).

Motivated by the provision of the Republic Act No. 6713 which encourages every department office and agency to conduct research and adapt innovative programs to provide motivation among officials and employees in leveling up public service ethical standards, [14], [15] this research study was thought of.

### 2 Literature Review

Guidelines in the establishment of agency strategic performance management system (SPMS) were communicated and required to all heads of constitutional bodies, departments, bureaus and agencies of the national government, local government-owned government units, and/or controlled corporations (GOCCs) and State University and Colleges (SUC), [13]. Such SPMS was evaluated based on its implementation in selected national government in the country which included the Commission on Higher Education, Department of Education and Department of Interior and Local Government . Studies on SPMS are available publicly examining SPMS in Philippine national agencies, [1], [2]. Further, a study examined the challenges of SPMS and performance appraisal in local governments, [4].

Rating performance on performance management system (PMS) is designed to single designation providing employees in the government sector to focus on their roles and sole administrative function. But none of these had looked into rating an employee with multi-designations.

Job satisfaction is a product of good working environment. Bad working conditions restrict employees to perform their capabilities and achieve full potentials, [6]. Work environment can provide work satisfaction. Poorly designed workstations, unsuitable furniture, poor ventilation, inadequate lighting, excessive noise and insufficient safety measures in fire emergencies and inadequate PPEs are contributory to unsafe and unhealthy workplace which affects the performance of workers, [7], [8].

To be satisfied in the workplace avoidance to occupational hazards should be considered. Literature online suggests ergonomic hazards and psychosocial or psychological hazards or work organizational hazards as two of the six work hazards in the workplace, [16], [17], [18], [19]. Work hazards are aspects of one's occupationspecific context which increases the risk of injury in the workplace, [8]. Result of the study of Ford and Tetrick finds that the more occupational hazards there is, the lower the individual-level psychological empowerment of workers. A significant relationship exists on the perceived productivity and working environment and the morale of workers. Working environment is also significantly related to workers' morale, [5].

To address issues on productivity and increase morale of the workers, the study analysed the existing IPCR implementation on multi-designation and development a mathematical model to address the computation of campus and university multidesignations. The aim of this study is to standardizing (IPCR) computation for faculty with multi-designations in state universities and colleges in the Philippines and be subjected to acceptability evaluation using technology acceptability model (TAM).

### **3** Methods

This study used a descriptive-developmental design. The locale is at Pangasinan State University composed of nine component campuses strategically located in different municipalities in Pangasinan, Northern Philippines. Eleven university and campus officials with multi-designations for the past three school years served as the first set of respondents. The sample size was equivalent to 20% of the population. Respondents were chosen through purposive sampling. The respondents of the study should have a multi-designation whether in campus level or university. Furthermore, administrator respondents pertain to the group of respondents who are either a faculty member with multiple administrators/managers designation, of the institution who is the main end user of the IPCR system as tool of managing faculty performance evaluation. А survey questionnaire was administered to determine their profile, their multidesignations, way of computing IPCR, and their work satisfaction. Work satisfaction was rated using ten rating scales, 1 being the lowest and 10, highest. The second set of respondents who evaluated the acceptability of the mathematical model were 10 university officials, administrators, campus officials and statistics center staff and statistician.

At the developmental side, a mathematical model was developed to standardize the IPCR computation for faculty with multi-designations taking into consideration their total performance rating and the plus factor with multiplicative components that append points to their final rating.

For the acceptability test, the researchers explained the formula to the evaluators and simple computations were illustrated. Thereafter, the technology acceptability model (TAM) using an evaluation questionnaire was administered among the HRMDO personnel, Vice Presidents, College Deans, Department Chairs and mathematicians. Indicators in the TAM include perceived usefulness, ease of use, attitude towards usage and intention to use, [9], [10], [11], [12], [13]. A five-point rating scale was used with 1 as not acceptable and 5 as very highly acceptable. Statistical tools used in the study were frequency, percentage, mean and grand mean.



Fig. 1: Research Framework

The research framework in figure 1 shows that the performance of faculty with multi-designations is based on the SPMS. Faculty who are given designations are based on their qualifications and experiences which they need in performing their administrative functions which are added to their four-fold functions of instruction, research. extension and support to operations. Faculty functions are based on their targets set which are anchored on the annual operational plan and strategic development plan of the university and campus. With weights for each function based on the SPMS set by the University PMT, IPCR is computed through a standardized mathematical formula duly evaluated for its acceptability.

### **4** Results and Discussion

Most of the faculty with multi-designations are males, belonged to the age group of 31 to 40 years old, were married, doctoral degree holder, with diverse academic rank ranging from instructor to professor and have rendered services to PSU for 15 years and below.

Table 1. Profile of the Faculty with Multi-
Designations

Variable	Observation	Frequency	Percentage
Age	31 to 40 y-o	1	63.6%
	41 to 50 y-o	3	27.3%
	61 y-o and above	1	9.1%
Sex	Male	9	81.8%
	Female	2	18.2%
Highest Educational	With Doctoral Units	1	9.1%
Attainment	Doctoral Graduate	10	90.9%
Academic Rank	Instructor	3	27.3%
	Asst. Prof.	3	27.3%
	Assoc. Prof.	4	36.4%
	Prof.	1	9.1%
Length of Years in PSU	5 years & below	2	18.2%
	6-10 years	4	36.4%
	11-15 years	3	27.3%
	16-20 years	1	9.1%
	25 years & up	1	9.1%

It can be gleaned from table 1 that there were varied types of multi-designations among the respondents, by which the combined campus level and university level designations dominated within the three-school year period, i.e. 36.4% in the school year 2018 - 2019, 63.6% in 2019 - 2020 and 54.5% in the school year 2020 - 2021.

Table 2. Type of Multi-Designations of Faculty

		School Year				
	2018	2019	2019	2020	2020	2021
Type of Multi- Designation	Freq uenc y	%	Freq uenc y	%	Freq uenc y	%
Dual Campus Level	1	9.1	2	18.2	1	
Dual University	0	0	0	0	0	9.1
Campus level and University Level	4	36.4	7	63.5	6	54.3

Table 2 shows dual university designations, there were two (2) of the respondents who functioned with two administrative functions in the school year 2020 - 2021, while another two of them were appointed with dual campus level designations in the school year 2019 - 2020.

 

 Table 3. Method of Computing IPCR among the Multi-Designated Faculty

	School Year					
Method of IPRC	2018	2019	2019	2020	2020	2021
Computation / Submission	Frequency	%	Frequency	%	Frequency	%
Computed the IPCR of the campus level designation only	1	9.1	1	9.1	3	27.3
Computed the IPCR of the university level designation only	0	0	1	9.1	10	9.1
Submitted the IPCR of Designation only	1	9.1	1	9.1	0	0
Computed the IPCR by taking the average of the administrative functions and add to the other functions	1	6.1	4	36.4	2	8.2
Computed the average of the IPCR which were separately computed	2	18.2	2	9.1	2	18.2

Table 3 proves that there were various methods of computing the IPCR of the multi-designated faculty. The highest frequency was on the method of taking the average of the administrative functions and add to other functions in the school year 2019 - 2020with 36.4%. Three (3) of the respondents submitted their IPCR by considering their campus designation only, ignoring their university level designation in the school year 2020 - 2021. Others computed their IPCR separately with their designations and divide it by the number of their designations. There was only one of them who only consider computing the university level and ignoring the campus designation.

In terms of work satisfaction which is shown in table 4, the faculty members with multi-designations were highly satisfied with their working environment (mean = 7.89) and very highly satisfied with their immediate supervisors' treatment and esteem needs (mean = 8.46). Respondents were highly satisfied with the physical working conditions such as the equipment, furniture, supplies, lighting and air-conditioning for both offices of their multi-designations, with the work activities relevant to their skills and the opportunities for improving their competence level, with the teamwork in the organization, and with the career advancement opportunities of their competence in general. The respondents rated highly moderate the internet connection provided by the university/ campus to them.

Table 4. Level of Work Satisfaction

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	Mean	Rating
1. Work Environment	7.89	Highly Satisfied
2. Immediate Supervisor's Treatment and Esteem Needs	8.46	Very Highly Satisfied
Overall Grand Mean	8.24	Very Highly Satisfied

They were also highly satisfied with the sufficiency of information related to work provided to them by both their immediate supervisors, highly satisfied with the reasonable work expectations to them by both their immediate supervisors, with the responsibility of immediate supervisors toward them, with the immediate supervisors' trust to them and to their fellow co-workers, with the conflict resolution skills of their immediate supervisors, with the management and professional skills of their immediate supervisor and their heads' communication skills to solve problems. These is evidence that the IPCR / PBB has helped boost the motivation and productivity of employees, which lead to individual and agency-wide can improvements, [1].

For the developmental design, a mathematical formula was developed aiming to standardize the computation of IPCR for faculty with two or more designations. The formula is:

$$(\mathbf{PR})_{\mathrm{T2}} = (\mathbf{PR})_1 + (\mathbf{PF})_2 \rightarrow equation 1$$
,

where:

 $(PR)_{T2}$  is the total performance rating for faculty with two (2) designations;

 $(PR)_I$  is the performance rating in the first designation which is the higher level;

 $(PF)_2$  is the plus factor with the following multiplicative components:

a) the complement of the performance rating int the first designation which maintain the limiting value of the overall performance rating, i.e. 5.0

b) the proportion of the administrative part only of the second designation (PR)2

#### or

**PF** =  $[g_1(\mathbf{PR})^c_1] [g_2((\mathbf{PR admin})_2)] \rightarrow equation 2$ Combining equation 1 and equation 2, the mathematical formula is:

$$(\mathbf{PR})_{\mathrm{T2}} = (\mathbf{PR})_1 + [ \ \underline{5 - (\mathbf{PR})_1}{5} ) (\mathbf{w}_2 \ (\mathbf{PR})_2 ] ]$$

Recursive formula for total performance of faculty with more than 2 designations is:

$$(\mathbf{PR})_{\text{Ti}} = (\mathbf{PR})_{\text{Ti}-1} + (\mathbf{PF})_{\text{i}}$$
$$(\mathbf{PR})_{\text{Ti}} = (\mathbf{PR})_{\text{Ti}-1} + \left[\frac{5 - (\mathbf{PR})_{\text{Ti}-1}}{5}\right] (\mathbf{w}_{\text{i}} (\mathbf{PR})_{\text{I}}]$$

where *i* is the number of designations, i.e. i = 2, 3, 4...

For faculty with three designations, i = 3

$$(\mathbf{PR})_{T3} = (\mathbf{PR})_{T2} + [\underline{5 - (\mathbf{PR})_{T2}}_{5}] (\mathbf{w}_3 (\mathbf{PR})_3)$$

The model was tested by the researchers by substituting hypothetical IPCR rating values of faculty with two designations. Result of the sample computation appends the rating for the first designation with the administrative function rating of the faculty in his/ her second designation. Unlike with taking the average which lowers the rating of the designation with higher designation, the developed mathematical model will give a final rating that is higher than either of the two ratings which were computed separately.

Before the acceptability test, the researchers explained the formula to the evaluators and simple computations were illustrated. Thereafter, the technology acceptability model (TAM) using an evaluation questionnaire was administered among the HRMDO personnel, Vice Presidents, College Deans, Department Chairs and mathematicians.

Table 5. Acceptability of the Developed Mathematical Model

		Grand	
		Mean	Descriptive Rating
			Very Highly
1	Perceived Usefulness	4.80	Acceptable
2	Perceived Ease to Use	4.10	Highly Acceptable
			Very Highly
3	Attitude towards Usage	4.90	Acceptable
			Very Highly
4	Intension to Use	4.75	Acceptable
			Very Highly
	<b>Overall Grand Mean</b>	4.64	Acceptable

Table 5 shows the results of the four constructs, the attitude towards usage earned a grand mean of 4.90 or very highly acceptable. The evaluators rated the attitude towards usage of the mathematical model as very highly acceptable (grand mean = 4.75) and the perceived usefulness as very highly acceptable (4.80). Ease of use, however, is rated highly acceptable (grand mean = 4.10). The developed ICPR mathematical model streamlined the process of evaluation and have a more agile methodology adopted which may help the effective implementation of IPCR in government institutions, [2], [19].

## **5** Conclusion

In this paper, it was verified that no standardized formula was used in the computation of IPCR in Pangasinan State University. Though their submission of duly computed rating was compliant to the measure set by the university PMT, they chose their final rating based on their preference or convenience. And since the acceptability of the developed mathematical model was very high, it is recommended that such model be considered for possible adoption in the university or other concerned SUCs in the Philippines or abroad. Further, such model may serve as a springboard for discussion by the Civil Service Commission for possible policy making.

And since the study shows very high satisfaction on the work environment, immediate supervisors' knowledge & skills and the esteem needs of the respondents, the University administration may continue practicing multi-designations, while taking care of their officials and providing them more opportunities to grow professionally.

The proposed IPCR mathematical model can be utilized specially university that have adopted a multi-designation. This instrument promotes continued employee effectiveness with multi designation and measures the quality of efficiency of the employees in providing professional services to the established norms.

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