

MOTIVATION IS A MEDIATING FACTOR BETWEEN JOB DESIGN AND JOB PERFORMANCE: CASE STUDY IN KOTA KINABALU POLYTECHNIC, MALAYSIA

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Abstract

This research will observe the response of the lecturers of The Kota Kinabalu Polytechnic via the changes in job design after central administration of polytechnic upgrade the standard of education in Malaysia. The purpose of restructuring the job design is to improve job performance among employees. Two years after the change in job design, the researchers conducted a study to see whether the new job design has a positive relationship with job performance and whether motivation is a mediating factor. The researchers' uses quantitative method to analyze data obtained from questionnaires distributed to the selected sample. SPSS will be used to analyze these data. The researchers has developed a method in which the independent variable is job design (job enlargement, job rotation and job enrichment). Meanwhile motivation is taken as a mediating factor and job performance is taken as the dependent variable. The polytechnic has 245 lecturers and survey questionnaires were distributed to all of them, out of which 231 responded to the questionnaires distributed. The results from this questionnaire will be able to show how job design is affective in motivating job performance; these findings will provide an impact on the polytechnic administration as an indicator in making improvements to achieve the desired goal.

Key words: job design, motivation and job performance

Since 2nd of January 2008 the Department of Polytechnic and Community College (DPCC) has changed its main administration from the Ministry of Education to the Ministry of Higher Education. On 16th September 2009 DPCC has undergone restructuring. This change aims to produce innovative human resources and better quality work proficiency. Dato 'Haji Imran bin Idris, former Director General of DPCC said the organization needs to be committed to providing quality, efficient and customer friendly service to a high level of objectivity, integrity, confidentiality, and professionalism through interactive channels to improve their performance (BLPK, 2010).

Problem Statement

The main focus of this paper is to study the effect of changes made to the job design for lecturers in polytechnics and community colleges. Changes made by DPCC on 2nd January 2008, has resulted significant changes in job design mainly of the teaching staff, which are the lecturers. The restructuring is an effort to enrich the quality of the employability of graduates and the quality of education in polytechnics' to be consistent with national needs. As a result of the restructuring, the teaching staff of polytechnics and community colleges experienced a significant change in the aspect of their work. Those who were appointed before January 2nd, 2008 were given the option to remain under the Ministry

of Education Malaysia (MOE) as trained teachers, under the salary scheme DG (Malaysian Educationist Training & Expertise Credentials). While those who accept the restructuring will use the DH salary scheme (Scheme of Higher Education) and placed under the Ministry of Higher Education (MOHE). As a result of this restructuring, there were dissatisfactions among the teaching staff (Pekeliling Perkhidmatan Bilangan @ Circular 33, 2007) due to the addition in their job scope was considered a burden.

The purpose of this study is to observe the effectiveness of the restructuring of job design that was carried. Maxwell, (2008) stated that job design consists of three main branches namely job rotation, job enlargement, and job enrichment. With proper methodology these three can motivate employees' performance. Endorsing this fact, Hackman – Oldman's employment characteristics also prove that the five cores in this model motivate employees, indirectly may also affect the employees' performance (Gary and Rastogi, 2005). This research is to observe if motivation is a mediating factor between job design and job performance.

Research Questions

In this study, the researchers have raised some questions related to the relationship of job design on motivation and work performance. With this restructuring of job design made by DPCC, some of the questions posed are as follow:

1. Is there any significant relationship job design on motivating employee performance?
2. Is motivation the mediating factor of job design between job performances?

Purpose of Research

The purpose of this study is to review on the restructuring made by DPCC on the job design of the academic staff of Kota Kinabalu Polytechnic (KKP). DPCC can use the result of this study to improve or maintain certain aspects of the job design which are considered to achieve the goal of the restructuring. The following are some of the purpose of this study.

1. To identify the significant relationship of job design on motivating employee performance.
2. To identify that motivation is the mediating factor of job design between job performances.

Importance of Research

The Department of Polytechnic and Community College (DPCC) under the supervision of MOHE is still in the early stage of implementation to compete in the global market. Therefore, the results from this study will show the early effects of changes or restructuring of job design on motivating employee performance. However, this study points more towards Kota Kinabalu Polytechnic (KKP) since the study is done on the HEE in this polytechnic.

From the research findings, ideas can be provided to the DPCC and particularly the KKP, to make improvements to the human resource management or job design in order to achieve the mission and vision of DPCC towards a more global level. It is also necessary to note that there are factors other than job design that determine employees' productivity. The education sector has become bigger and more complex in the mid-twentieth century. Management began to improve methods for job design by using observation, measurement and analysis. Human resource management also needs to improvise in developing job methods, and provide better economic incentives. The KKP management needs to study job methods meticulously in order to identify the best way to do a specific job. In fact, the KKP management must not only be seen to be favoured by the employees, but also take into account the

method used to increase production without disregarding the welfare of the employees and their compensation.

Scope of Research

Population and samples in this study have been taken from among the Kota Kinabalu Polytechnic academic staff which comprises of 245 lecturers (BLPK, 2010). Higher Education Employee (HEE) staffs were among those elected to the position of Grade DH29, DH31/32, DH33/34, DH41/42, DH43/44, and DH47/48. Kota Kinabalu Polytechnic has seven departments, the Department of Commerce, Department of Mechanical Engineering, Department of Electrical Engineering, Department of Civil Engineering, Department of Hospitality, Department of Mathematics and Computer Science and Department of General Studies which is involves in the management of teaching and learning. This research has been completed within one to two years based on the research plan. This research focuses on the impact of job design in motivating performance. Therefore, the result is based on the implementation of the study until the date when the selected samples are tested in accordance to the hypothesis formed by the researchers.

Research Goals.

At the end, the study will answer the relationship of job design on motivating and job performance, which can be seen clearly based on quantitative methods chosen by the researcher. This is important for the management of human resource and DPCC, particularly the management of Kota Kinabalu Polytechnic to evaluate the feedback of their actions. Improvement of employment or, more precisely, job design needs to undergo restructuring in order to improve the existing weaknesses (Ivancevich, et al., 2008). The researcher also hope that the findings of the study will be taken seriously for management decision making in determining the scope of employment for employees.

Research Highlights

Job design refers to the first example where the management determines duties and responsibilities and the process by which management decided duties and authorities (Ivancevich et al., 2008). The instructors at JPCK have responsibilities and duties to be carried out professionally, which includes student management, research, commercialization, advisory services, networking and collaboration (Circular No. 33, 2007). The overall duties and responsibilities entrusted to the employees encompass three main categories: Job rotation, job enlargement, and job enrichment (Maxwell, 2008).

Job rotation involves creating varieties for the employees. Job rotation allows employees to periodically change their job scope, moving them from one specialization to another. Normally, the rotation program sets a new employee to work for a certain period in the various departments, business units or geographic location (Robbins et al., 1997). This program can set a variety of purposes to be achieved. First, job rotation enables the company to evaluate the performance of employees, not all employees have the tendency to like or dislike a particular job (Maxwell, 2008). Job rotation allows workers to control various aspects of the journey of the organization's culture. This method helps employees to learn about various aspects of the business and enable new employees to get acquainted with more people in the organization (Ivancevich et al., 2008). Workers can adapt to foreign environments, this allows a person to become familiar with the culture and the customs of foreign cultures without preventing employees to feel comfortable. At the end, job rotation can prepare managers and executives for the future. This allows future managers to have more scope of business or experience for future consideration. This knowledge will be applicable in the future when they are in management positions. It is important to get work experience before overseeing others. Job rotation

can take place for a certain period, but has the tendency to last six to eight months. If it is shorter than this period, workers may not be able to learn the required skills.

The first great ability to overcome a number of weaknesses related to the scientific management approach is job enlargement, a movement that began in the late 1940s and continued until the 1950s (George and Jones, 2007). The expansion includes giving additional work and responsibilities to the employees while carrying the original task in which all the tasks given have the same challenges and responsibilities (Maxwell, 2008).

Apart from job rotation and job enlargement, job enrichment is very important in maintaining employee's enthusiasm and productivity in the long term. Employees look for jobs that require activities such as decision making, autonomy, variety, and challenges. The most effective job enrichment approach is changing task from day to day work or increase individual participation in decision making that affects that individual's employment (Maxwell, 2008).

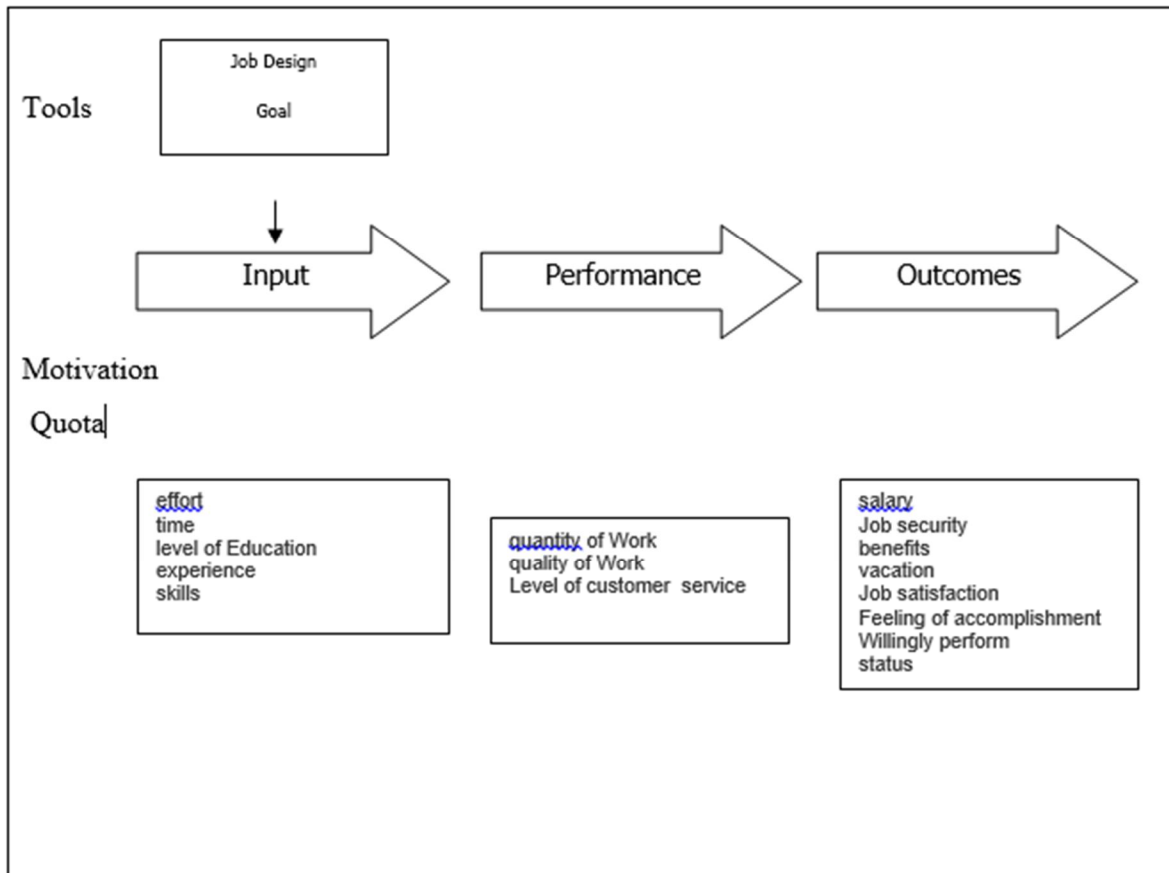
Motivation can be defined as a high level of willingness and dedication to achieve the organization's target which is in line with the capacity to meet the requirements of a person (Robbins et al., 1997). Motivation generally refers to efforts made based on the objective which is based on individual behaviour on the job. There are three elements to define motivation; they are effort, goals and the organization's requirements (George and Jones, 2007).

It can be said that employees that are motivated are in tension. To ease this tension, they should exert effort. The greater the tension the higher will be the level of effort. If this effort is directed towards satisfying needs, it will indirectly reduce the tension. Great effort will reduce tension and it should be in line with organizational goals. Thus, according to the definition of motivation the individual needs are compatible and consistent with organizational goals. If this happens the individual will exert more effort, but this is not necessarily productive.

Here it clearly shows that motivation starts from the needs, goals; desires to be achieved and there must be consideration. Organizations need to give ideas to enable them to achieve their wants and needs. Indirectly productivity will increase and overall management's objectives will be achieved (Maxwell, 2008). Supporting this statement, (Orpen, 1997) in his study proves that the management's relation in giving direction to the workers' idea motivate their performance.

Employment is a process associated with certain tasks, techniques, equipment and procedures should be applied to carry out tasks (George and Jones, 2007). Organizations generally try to plan work and to motivate employees to perform well, enjoy their work, and receive acceptable results. Job design affects employee motivation and the level of their involvement (see figure 1). When employees are motivated to contribute more (to work harder, more efficient, and more creative) and do their jobs more effectively, it improves organizational effectiveness.

Figure 1: Motivation Tools



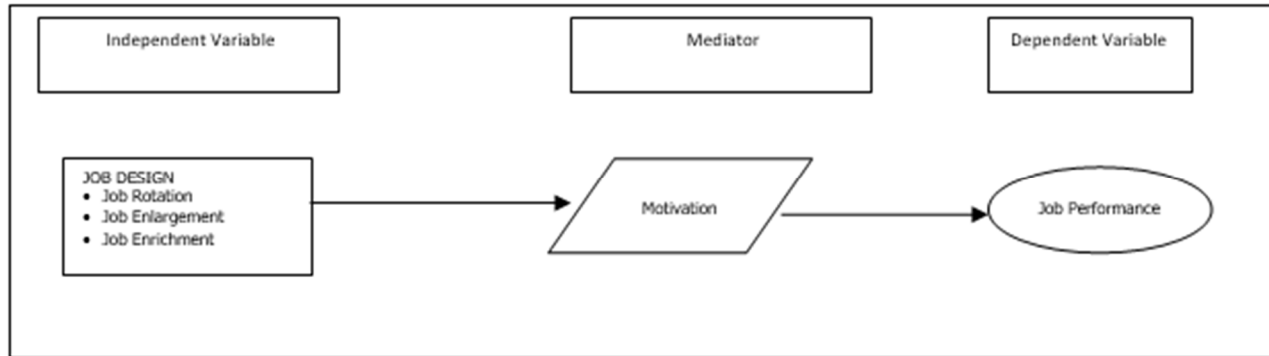
(Source: George, J. M., and Jones G. R. (2007). Understanding and Managing Organizational Behaviour (5th Ed.), Upper Saddle River, New Jersey: Pearson Prentice Hall.

The difference between motivation and performance is that performance refers to the assessment that determines how well or poor the individual can perform a certain task, while motivation is a factor that influences the performance of an employee (George and Jones, 2007). According to (Jui and Silverthorne, 2008), there are three types of performance. One is the size of the output level, total sales of more than what is required over a period of time, the production of a group of employees which is reported to the manager, and so on. The second type involves measuring the performance with the person whose performance whose are being considered. The third is self appraisal and self rating. Consequently, the self-appraisal and self-rating techniques were useful in encouraging employees to take an active role in determining their own purposes. Thus, performance measures the achievement of business and social goals, and responsibility from the perspective of the evaluator.

Design of Study

The researchers have established a research design in which the dependent variable is job design (job rotation, job enlargement and job enrichment). Meanwhile, motivation variable is taken as a mediator factor. Next, employee performance is taken as the dependent variable.

In figure 2: illustrates the study design research.



The researchers' illustration of the study design is based on a previous research literature. According to (Maxwell, 2008) job design consists of job rotation, job enlargement and job enrichment which are influential in motivating employee's performance. Therefore, the researchers have selected job design, which is composed of three items, namely job rotation, job enlargement and job enrichment, as an independent variable. Job expansion, which according to (Adomi, 2006), can motivate an employee's performance. Job expansion according to (Ivancevich et al., 2008) can improve performance. Supporting this statement, (Gary and Restogi, 2006) also states that job design motivates employee's performance. Based on the work of (George and Jones, 2007) and (store Robbins et al., 1997) job enrichment too, can improve the performance of an employee. This statement is also supported by (Feder, 1999) which states that job enrichment will affect job performance While Herzberg theory states that the movements in job enrichment, which is the human wants cause a person to be motivated to work. In fact previous studies clearly show that motivation is a mediating factor because motivation is one of the factors that motivate an employee's performance.

The researchers use quantitative methods to analyze data obtained from survey forms distributed to the selected sample. SPSS 16 is the method for analyzing the data. Questionnaire will be divided into several sections to facilitate the analysis.

The study hypothesis

Based on the conceptual framework of the research design on the relationship variables, it can be summarized as follows:

Hypothesis 1 Job design has positive relationship in motivating employees.

H1a: Job rotation has a positive relationship in motivating employees.

H1b: Job enlargement has a positive relationship in motivating employees.

H1c: Job enrichment has a positive relationship in motivating employees.

Hypothesis 2: Motivation has a positive relationship with job performance.

Hypothesis 3 Motivation is a mediating factor in the relationship between job design and performance.

H3a: Motivation is a mediating factor in the relationship between job rotation and performance.

H3b: Motivation is a mediating factor in the relationship between the job enlargement and performance.

H3C: Motivation is a mediating factor in the relationship between job enrichment and performance.

Population

In accordance with the scope of this research, the researchers take the Kota Kinabalu Polytechnic academic staff (KKP) as the study population. The population of this study is 245 lecturers (BLPK, 2010). HEE staff (School of Higher Education Officer) are among those elected to the position of Grade DH29, DH31/32, DH33/34, DH41/42, DH43/44, DH47/48. Kota Kinabalu Polytechnic has seven departments, the Department of Commerce, Department of Mechanical Engineering, Department of Electrical Engineering, Department of Civil Engineering, Department of Hospitality, Department of Mathematics and Computer Science, and General Studies Department which is involved in the management of teaching and learning. Study population as described by Sekaran and Bougie, (2009), refers to a group of people or things that lead to the topic of the research questions. Therefore, the study population in this paper focuses on the academic staff KKP only. In this study population, 56 employees is from the Department of Mechanical Engineering, 39 from the Department of Electrical Engineering, 40 from Civil Engineering Department, 40 from Commerce Department, 15 from Department of Hospitality, 25 from Department of Mathematics, 25 from Computer Science and 30 from Department of Chemistry.

Samples

Sampling is an important aspect of research because inappropriate use of samples will reduce the validity and reliability of the research. Sampling is the process of selecting a number of related subjects from a population to be used as respondents (Piaw Yan Chua, 2006). Based on the total population of 245 people a sample size that can be used based on the determination of sample size tables Krejcie and Morgan (1970) is between 140 to 148 (Sekaran and Bougie, 2009).

To obtain the sample size the researchers have used probability sampling method implemented by selecting a random sample of subjects, where subjects in the sample has all the features found in the population. For this reason the KKP HEE consists of seven departments, and the researchers have used the cluster sampling method. The researchers shall be made aware of all HEE questionnaires in each relevant department. The number of answered questionnaires that was returned is as follows: 53 respondents from For the Department of Mechanical Engineering, 36 respondents from Department of Electrical Engineering, 38 respondents from Department of Civil Engineering, 38 respondents from Department of Commerce, 14 respondents from Department of Hospitality, 24 respondents from the Department of Computer Science Mathematics and 28 respondents from Department of General Studies.

Number of respondents is more than the sample size determination Krejcie and Morgan (1970). If you see in detail the number of respondents is more than 90 percent of the size of the population. This indirectly indicates the sample has a high reliability. According to Sekaran and Bougie, (2009) if the sample size is high, it reflects the population more accurately.

Findings

The researchers use SPSS 16 to analyze the findings from questionnaires distributed to respondents. To see the relationship of each variable based on the hypothesis the researchers made a correlation analysis to each variable. Table 1 shows the following correlation analysis and the relationship between two variables.

Table 1: Pearson correlation analysis

	Job Rotation	Job Enlargement	Job Enrichment	Performance	Motivation
Job Rotation	1				
Job Enlargement	.380**	1			
Job Enrichment	.518**	.564**	1		
Performance	.396**	.391**	.634**	1	
Motivation	.398**	.378**	.604**	.978**	1

Note: The level of significance: * $p < 0.05$ and * * $p < 0.01$

The above table clearly shows that the results from this study; job design which comprises of job rotation, job enlargement and job enrichment has a positive relationship. That is, if job design to increases, motivation will increase. But when comparing all the three scopes of job design, job enrichment has a stronger relationship than job rotation and job enlargement. The relationship between motivation and performance is very strong and positive. This clearly shows that motivation significantly influences the performance of an employee.

The researchers also perform simple regression analysis and multiple regressions to see more clearly the relationship of variables to answer the research questions. The researchers perform a simple analysis of the variables of motivation and performance and results obtained are as follows Table 2:

Table 2: Regression Analysis between Motivation and Performance

Dependent Variable	Independent Variable		Std. Coefficients Beta (β)
Performance	Motivation		0.978*
	R ²	0.956	
	Adjusted R ²	0.956	
	Sig. F	4.972E3*	

Note: The level of significance: * $p < 0.05$ and * * $p < 0.01$

Based on the above table, it can be identified that motivation has strong impact on performance due to the beta value 0.978 and a significant value 0.000 which is less than 0.05. Therefore, hypothesis 2 is accepted.

While for job design and motivation the researchers use multiple regression analysis techniques, and the results from multiple regression analysis can be seen in Table 3 which describes the relationship job design variables and motivation. Thus, it clearly shows job enrichment with beta value 0.524 can be considered as significant, because the significant value of 0.000. While the others which have value exceeding 0.05 is rejected. Therefore, hypothesis H1a and H1b is rejected and only H1c is accepted.

Table 3: Multiple Regression Analysis between Job Design and Motivation

Dependent Variable	Independent Variable		Std. Coefficients Beta (β)
Motivation	Job Rotation		0.111
	Job Enlargement		0.040
	Job Enrichment		0.524*
	R ²	0.376	
	Adjusted R ²	0.367	
	Sig. F	45.529*	

Note: The level of significance: * $p < 0.05$ and ** $p < 0.01$

To test the effects of the mediators of employee motivation in the overall relationship between job design and performance (H3), the present study uses hierarchical regression model. A series of multiple regressions analyzes to be carried out as a condition to test the relationship between the independent, dependent variables, and the mediators following Baron and Kenny (1986). First, the independent variable must have a significant effect on the mediator, when regression analysis was conducted between mediators and independent variables. Second, the independent variable must have a significant effect on the dependent variable, when the regression analysis performed between the dependent variable and the independent variables. Third, the mediator must have a significant effect on the dependent variable, when the regression analysis performed on the two independent variables and mediator variables. If these conditions are taken into account when making predictions, the effects of independent variables on the dependent variable must be less in the third equation than in the second equation. Mediator variable is perfect if it has no effect when the mediator is controlled (Baron & Kenney, 1986, p. 1177). In other words, when the mediator is added to the regression model, a significant relationship between independent variables and the dependent variables either absent or not significant, and this shows a perfect mediator. If the above relationship is very weak, but significant, this is termed a partial mediator or mediators half.

Table 4: The Effect of Motivation Mediator on the relationship between Job Design and Job Performance

Dependent Variable	Variables	<i>Std. Beta</i> <i>(β)</i> (Model 1)	<i>Std. Beta</i> <i>(β)</i> (Model 1)	Results
Performance	Independent Variable			
	Job Rotation	0.089	-0.005	Not Mediator
	Job Enlargement	0.024	-0.015	Not Mediator
	Job Enrichment	0.577*	0.007	Perfect Mediator
	Mediator variable			
	Motivation		0.996*	
	R	0.641	0.993	
	R ²	0.411	0.986	
	Adjusted R ²	0.402	0.985	
	F Change	49.267	8470.321	

Note: The level of significance: * p < 0.05 and **p < 0.01

While for the job design and job performance, the researchers use hierarchical regression analysis. Results from hierarchical regression analysis can be seen in Table 4 which describes the relationship that exists between the variables of job design and performance. The table shows that only job enrichment is acceptable as a perfect mediator. Therefore, hypotheses H3a and H31b are rejected and only H1c is accepted.

Conclusions and Recommendations

On the whole, this study has answered the research question whether motivation is a factor mediator between job design and job performance. The finding of this research is that the relationship between job rotation together with job enlargement and motivation is positive but very weak. In fact, there is no significant effect. So this clearly shows that only job enrichment has significant effect on motivation. Motivation has a very strong positive correlation with job performance and the linear relationship is significant. This clearly shows that motivation is a factor mediator between job design and employees' performance at KKP.

As a suggestion for a future study the researchers can look at the factors that exist in job enlargement and job rotation that reduce the percentage of influence on employees' motivation. Although according to previous researchers job rotation and job enlargement can reduce stress and motivate employees, on the whole this is not a suitable practice in the education sector especially within the population of this research.

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