

ORIGINAL ARTICLE

Adaptation, technology management and job performance in public management, 2019

ABSTRACT

In institutions, changes can be observed in different departments over time, which requires constant adaptation, with the technological field requiring constant and permanent adaptation, since it requires employees to use technological tools, involving all levels and human resources in the achievement of the objectives pursued. The present study aims to assess workers' adaptation to technology management in relation to work performance at the Fondo de Cooperación para el Desarrollo Social in 2019. At the methodological level, the study is applied and has a non-experimental design, considering a processing sample of 40 employees. The result obtained was a value of 0.84 according to Spearman's correlation, which allowed confirming the proposed hypothesis.

Keywords: adaptation; change; performance; management; technology.

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INTRODUCTION

Currently, there is a lack of identification on the part of workers in public institutions, while resistance to change in technology management emerges. This inference was the reason for conducting this study and assessing how such attitudes and competencies develop in these scenarios which, as a whole, help management and, therefore, the success of services or products. A relevant aspect that is presented as independent variable in this research is adaptability to change, where human behavior is evidenced when human beings modify their behavior in the face of special situations or contingencies. In this context, the theoretical arguments underlying the development of the study are shown.

Nothing is permanent

An analysis published by Combe (2018) recalls Heraclitus of Ephesus with his wise words about change and movement. This is confirmed daily with the transformations that are happening across the world, with humanity having to experience unimaginable moments due to the pandemic and witnessing the benefits of digital tools used in remote scenarios. This has led to adaptation processes, changing paradigms, perceptions, and others. It is not a change in doing but in the feeling of that doing. It is about assuming that change with the skills and abilities that one has, together with the right attitude.

While it is true that it would be comfortable to keep the same position and not have to make changes, this would lead to failure, marginalization, and, oftentimes, ceasing to exist in the market. Adapting to these changes is a strength that will allow for continued competitiveness, so it is important to see adaptation as a benefit, as a compass that will help position the company in the market and avoid its disappearance.

These changes can be observed among workers, especially among executives in organizations, who develop the guidelines and management policies that must respond to the demands of modernity, making changes in administrative and economic systems. It is important that this is also replicated in the academic context.

Change and adaptability in organizations

If change is considered as passage from one place or situation to another, it has always existed. According to Pérez-Vallejo *et al.* (2017), it becomes a natural need in human activity, which is why institutions must be constituted as systems that are open and in permanent adaptation to change.

It is important to consider the variables that promote or are a result of change: technology, administrative processes, strategies to be applied, and relevant management procedures. These do not move by themselves; they need external forces that are elemental, such as customers, suppliers, and competitors. Similarly, internal variables such as human capital and policy guidelines—including the vision, mission and those strategies that are applied based on the achievement of objectives—must also be analyzed. Another point to consider is to understand that every organization is a property that arises from change; obviously, the organization is the one that leads that change, but subject to regeneration.

Causes of change

These causes occur in both scenarios, external and internal. Sandoval (2014) points out the new trends that will appear in the market: consumers and new technologies that bring new competitors, styles, and ways of thinking. At the same time, new needs arise that are framed as external causes, since they cannot be controlled by organizations. They are a product of the changes and demand adaptability and a new management style in companies. Although it is true that it is sometimes not easy to leverage them and learn to perceive them, it is necessary to coexist with them or, in many cases, to face them.

Internal causes are those directly linked to the organization: changes in its structures, mergers, new processes resulting from internal decisions, new visions; in other words, they are the company's responsibility. It is therefore very important to take into account the institutional objectives and to aim in that direction.

When to change

In order to survive in the face of competition, changes must take place in a timely manner, as failure to consider such changes may result in disappearance. According to Sandoval (2014), these change processes are:

- **Change by planning.** Sufficient time is available to select the relevant paths for the achievement of objectives, so medium- and long-term actions can be planned. Activities and strategies can be reoriented in due time.
- **Change by inertia or imitation.** Generally, it occurs as a consequence of fads or trends, without taking into account a diagnosis or analysis of reality. Sometimes, despite having the best intention or attitude, processes fail because their management arguments are weak.
- **Change by reaction.** In these scenarios, despite having enough time, there is an advantage in considering a reaction to competition. However, sometimes the appropriate decisions are not made and the reaction adopted is not related to the moment, since the response comes late—causing a loss of positioning in the market.
- **Change by stress or crisis.** Although there are signs of change, they are ignored or were not perceived in due time. As a result of the crisis, mistakes can be made and lead the organization to an undesired setting.

All of the above allows considering a proactive attitude that considers the right time to develop the appropriate strategies or mechanisms to solve the problems, or the organizations will have to assume failure and, in the not-so-distant future, the company's closure.

Technology and adaptability

Undoubtedly, information and communication technologies have transformed people's processes and activities. Today, they are basic management tools because they not only help interconnection from the point of view of communication, but also make work environments more dynamic. In a positive sense, these digital tools are present in human activity and are

important in developing both the institutions' work-related and economic level. If viewed from their negative side, they have caused frustration in workers and have even caused them to quit their jobs because they do not have the required knowledge or are not able to adapt to the use of these technologies. Some people between the ages of 40 and 65 have not been able to identify with technological advances and their access to them has made management difficult (Arias, 2021). Therefore, it is relevant to have management policies in place to promote permanent training programs to ensure the application and management of technology, understanding its rapid evolution and the difficulty of learning at a certain age.

Among the benefits offered by technology are the immediate access to communication through different media, efficiency optimization in work activities, facilitation of educational and business processes such as training, forums, conferences, etc., as well as simplification in the search for information and research. It must be taken into account that technology application and management must be framed in a legal and value-based framework.

Performance and efficiency

Rodríguez and García (2012) point out that economic science assumes the responsibility of explaining how humans manage to satisfy their needs in the face of scarce resources. In other words, workers rationally turn to economics not because it is an obligation, but because they are motivated by the benefit that such activity brings to their duties. If we take into account that management directs everything that makes it possible to achieve what has been planned, it is necessary to implement strategies based on excellence, foresight and innovation, as well as creativity in order to generate products and services that enable effective organizations and, in turn, motivated collaborators in the present. Robbins and Judge (2009) define motivation as a factor that influences the intensity and persistence of the effort to achieve the goals. Finally, by establishing a difference, economics seeks to choose resources efficiently, while administrative management aims to achieve objectives efficiently.

Job performance

This concept has been written and spoken about so many times that it has become well known in the field of management, as it is a key factor in the management of organizations. It is not only present in institutions of entrepreneurial nature, but also in educational contexts, since similar professional training processes are put into practice. Thus, Chiavenato (2011) states that job performance is an effective demonstration of the worker's activity, which allows competition in organizations. However, growth is not always being achieved, since a 2019 report indicates that Peru ranked third in employee turnover, which suggests that workers do not comply with the assigned duties, with the cause often lying in an inadequate selection of the workers based on the assigned duties (Conexión ESAN, 2019). Hence, it is convenient to evaluate the performance to observe the behaviors or actions, which can be measured through the capabilities that contribute to business development and to the achievement of objectives.

METHODS

The technique used in the study was a survey of 45 workers of the la Unidad de Recursos Humanos en el Fondo de Cooperación para el Desarrollo Social (FONCODES), considering in this case 31 questions based on the variables with the dimensions and indicators of the study. The instruments were questionnaires that were validated by expert judgment and Cronbach's Alpha statistic. Due to its nature, the study is applied nature and of non-experimental design, using Spearman's correlation to test the hypotheses.

RESULTS

The results are presented considering the overall appraisal of the independent variable:

Adaptation to Change with its three dimensions (*Attitudinal Level*, *Coping Capacity*, and *Skills Management* for technological tools). Table 1 presents the general appraisal levels with respect to the variable *Adaptation to Change*.

Figure 1 shows the levels of the *Attitudinal Level* dimension as part of the variable *Adaptation to Change*, with most responses corresponding to a high level (84%).

Figure 2 shows the levels of the *Coping Capacity* dimension as part of the variable *Adaptation to Change*, with most responses corresponding to a high level (76%).

Figure 3 shows the levels of the *Skills Management* dimension as part of the variable *Adaptation to Change*, with most responses corresponding to a high level (84%).

Based on the dimensions, it is noted that *Attitudinal Level* achieves a high level, as well as *Coping Capacity* and *Skills Management* for the use of technology.

The results of the dependent variable on *Job Performance Level* are shown in Table 2, which presents the general appraisal levels with respect to the variable *Job Performance*.

Figure 4 presents the levels of the variable *Job Performance*, with most responses corresponding to a high level (84%).

Figure 5 shows the levels of the dimension *Institutional Commitment and Teamwork* as part of the variable *Job Performance*, with most responses corresponding to a high level (80%).

Figure 6 shows the levels of the dimension *Level of User Care* as part of the variable *Job Performance*, with most responses corresponding to a high level (53%).

Table 1

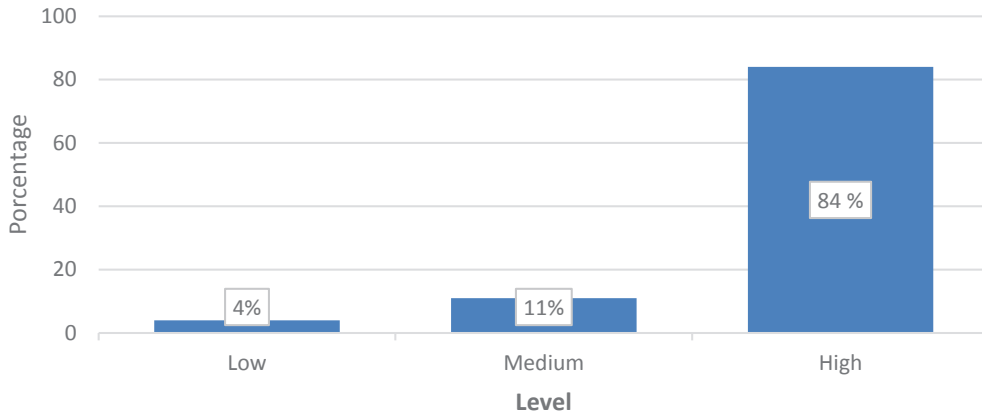
Result of overall assessment of variable Adaptation to Change

Level	Dimension 1: Attitudinal Level	Dimension 2: Coping Capacity	Dimension 3: Skills Management	Adapting to Change for technology management
Low	[5 - 11]	[4 - 9]	[6 - 14]	[15 - 35]
Medium	[12 - 18]	[10 - 14]	[15 - 22]	[36 - 54]
High	[19 - 25]	[15 - 20]	[23 - 30]	[55 - 75]

Note. Prepared by the authors, 2023.

Figure 1

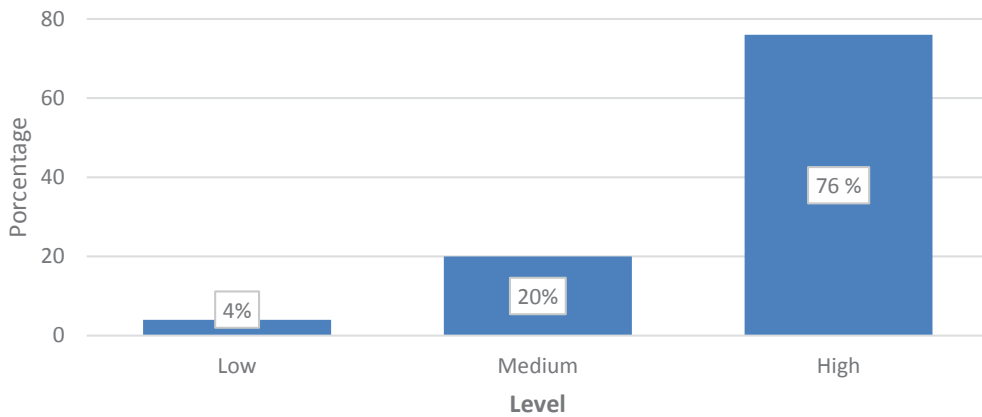
Attitudinal dimension levels



Note. Prepared by the authors, 2023.

Figure 2

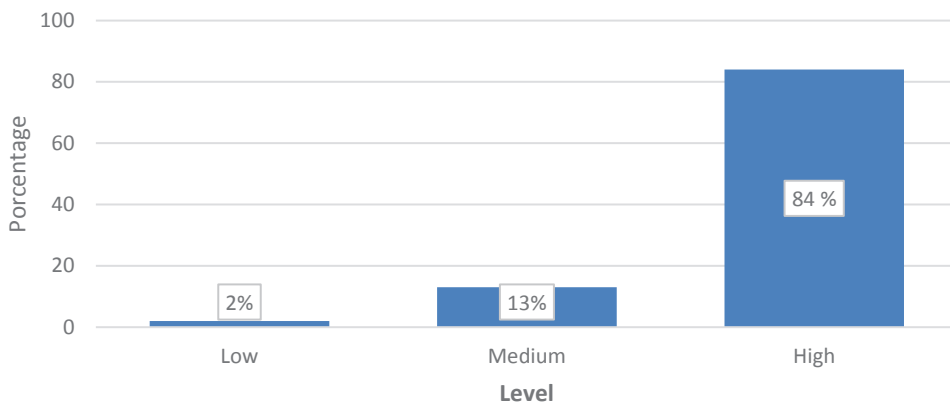
Coping Capacity dimension levels



Note. Prepared by the authors, 2023.

Figure 3

Skills Management dimension levels



Note. Prepared by the authors, 2023.

Table 2

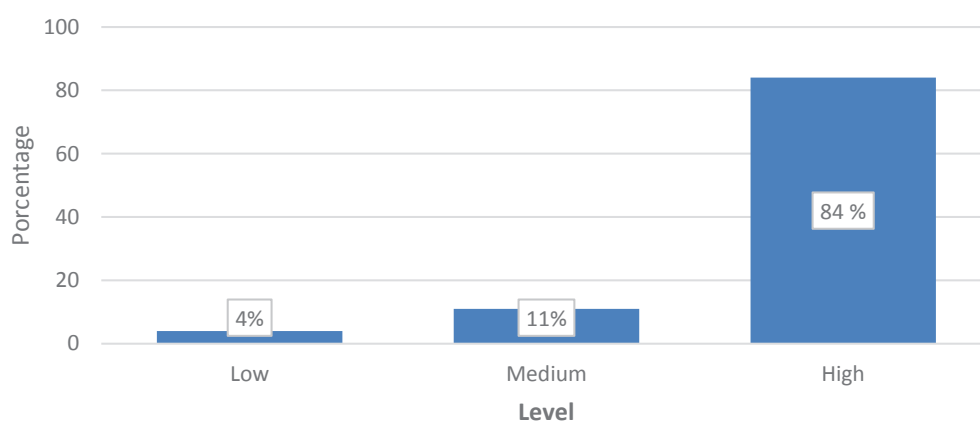
Result of general appraisal of variable Job Performance Level

Level	Dimension 1: Efficiency in their duties	Dimension 2: Institutional commitment and teamwork	Dimension 3: Level of user care	Job Performance
Low	[4 - 9]	[4 - 9]	[8 - 18]	[16 - 37]
Medium	[10 - 14]	[10 - 14]	[19 - 29]	[38 - 58]
High	[15 - 20]	[15 - 20]	[30 - 40]	[59 - 80]

Note. Prepared by the authors, 2023.

Figure 4

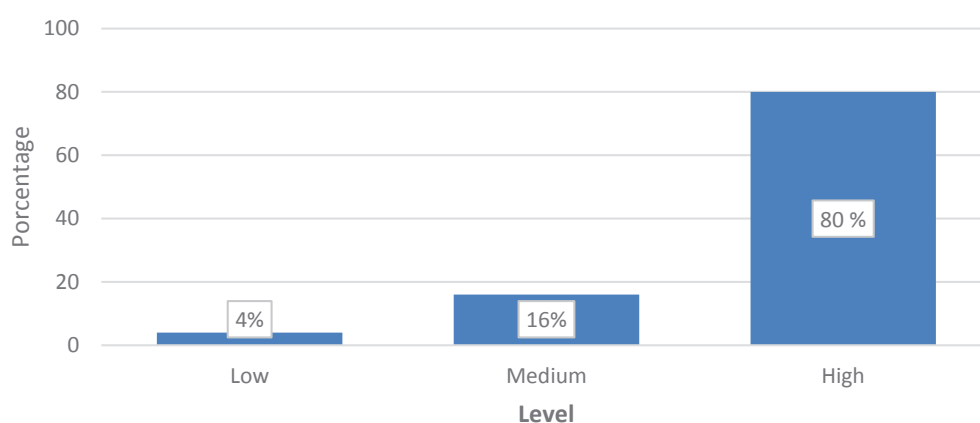
Job Performance levels



Note. Prepared by the authors, 2023.

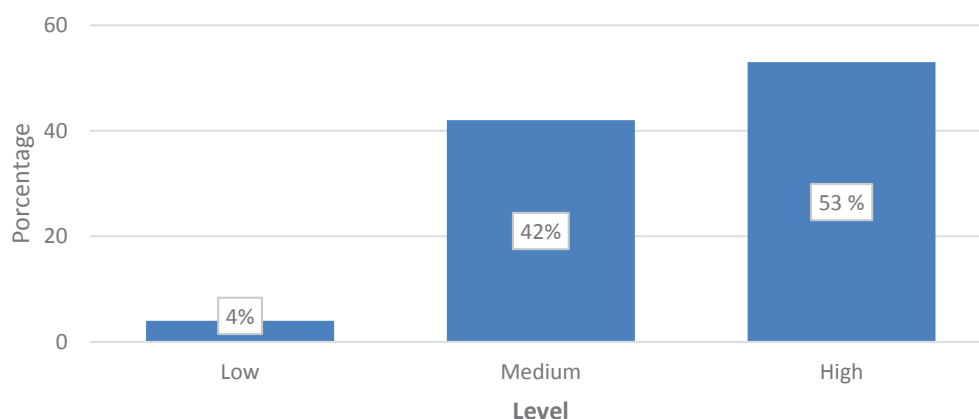
Figure 5

Institutional Commitment and Teamwork dimension levels



Note. Prepared by authors, 2023.

Figure 6
User Care dimension levels



Note. Prepared by the authors, 2023.

Table 3
Correlations

		Adaptation to Change	Job Performance Level
Spearman's Rho	Correlation coefficient	1.000	.841**
	Sig. (bilateral)	.	.000
	N	45	45
Spearman's Rho	Correlation coefficient	.841**	1.000
	Sig. (bilateral)	.000	.
	N	45	45

Note. ** The correlation is significant at the 0.01 level (bilateral). Prepared by the authors, 2023.

In this variable, it can be seen that the three dimensions have achieved a high level, with the dimension *Level of User Care* featuring also high values at the medium level with 42%.

Based on Spearman's correlation, the results show a positive relationship with Spearman's Rho = 0.841 between the study variables: Adaptation to Change for the management of technology and the level of Job Performance, which allows us to point out a high correlation. The significance level of 5% allows the conclusion that the adaptation to change for the management of technology by workers has a direct relationship with job performance in the Human Resources Unit at FONCODES in 2019.

DISCUSSION

The result presented by Hernández (2016) is the interest of workers in technology and

training programs, which allow them to perform activities in less time, which is beneficial for serving users in the end. It is important to value information which, with its technological support, contributes to timely dissemination, processing and legal frameworks. Another research study conducted at the national level is presented by Diez (2016), who reached the following results: information technologies in a district from Tarapoto are not handled adequately, which means that workers are not performing effectively at work. On the other hand, the result reported by Valdivia (2019) is that most participants have the skills and abilities to use digital tools and, to the extent that they may continue using virtual platforms, this will have an impact on the digital competencies of the servers, which is demonstrated by a Pearson coefficient of 0.441.

At the international level, Salazar (2019) describes the evolution of the term *technostress*, which is understood as an emotional as well as physical reaction that arises as a product of technology management, whose effects can be negative depending on the processes of the organization's management and on how the worker copes. These arguments allow confirming the hypothesis of a direct relationship between the adaptation to change for the management of technology by workers and their job performance in the Human Resources Unit at FONCODES.

CONCLUSIONS

- The results show that when people adapt to change using technology there is a direct relationship with their performance, which allows the achievement of institutional objectives.
- If a proactive attitude level is considered for this technology management, i.e., if employees adapt to this change in a natural way without being forced or afraid, the results show that there is a direct relationship with the performance of duties.
- Having the ability to cope with the situation—which sometimes becomes difficult due to technology management—to adapt to these changes by applying the available skills, which are easy to apply when we have the predisposition and institutional identification, will result in good job performance. The study shows a direct relationship between coping capacity and technology management skills with job performance.

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Competing interests

The author declares that there is no conflict of interest.

Author's Contribution

Sharon Andreina Tejada Calderón (lead author): Conceptualization, data curation, formal analysis, research, methodology, project management, validation, visualization, writing (original, review and editing).