

## Research Paper

# Identifying and Ranking Managers Productivity Indicators Using Shannon Entropy Analysis

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**Keywords:**

Productivity indicator, managers, education, Shannon entropy.

**Abstract**

**Introduction:** Promoting productivity in education not only contributes to socio-economic development but also through the training of efficient and creative human resources can lead to the development of the country. The main purpose of this study was to identify and rank the productivity indicators of the managers of Khorasan Razavi offices.

**research methodology:** The present research intends of purpose is in research area and classification development and intends of how data collection is in exploratory mixed research group and was done in two qualitative and quantitative phases. The statistical population of the study in qualitative stage were professors and experts familiar with the topic of productivity 13 educational management professors were selected by theoretical sampling method. In the quantitative phases of research the statistical population were academic professors of educational management that 13 people were selected by census sampling method. In order to collect data the researcher was used from interview and researcher made questionnaire.

**Findings:** The research questionnaire consisted of 20 items and 4 components. To answer the first question was used from interview and thematic analysis method and also has been identified 4 major indicators (individual 'managerial' 'organisational' environmental) and 20 categories. From Shannon entropy analysis was used to rank indicators. And the results showed that the managerial category with 0.252 Significance factor had the most importance and environmental category with 0.248 significance factor had the least importance among indicators.

**Conclusion:** According to the findings of the study these four presented indicators are able to evaluate the productivity of the managers of education offices and they can consider these indicators.

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## Extended Abstract

### Introduction:

Today, productivity is more as an intellectual perspective and an attitude and way of thinking to continue progress and improvement, and in the depth of its meaning, it is an attitude to rationalize activities. Efforts to increase productivity and develop management knowledge in the world today is a necessity to the extent that it can be said that the effort to increase productivity is the most serious struggle that management is facing at the turn of the 21st century. Promoting productivity in education not only contributes to socio-economic development, but can also enhance the country through the training of efficient and creative human resources. If we accept the importance and role of education in improving the future of society, we must also accept the importance of educational management. If the educational managers of the society have sufficient productivity, without a doubt, the educational system will also have effectiveness, efficiency and consequently high productivity. Numerous researches have been done on the development of productivity indicators in various organizations and organs, but the determination of these indicators has been neglected for the managers of education departments.

### Context:

Productivity in education is important in two ways. One is productivity in the system of the Ministry of Education (internal productivity) and the other is the effective role of education in increasing the productivity of other organizations and sectors of the country that are the result of national and long-term productivity.

### Goal:

The goal of present study is to identify and rank the productivity indicators of The managers of Khorasan Razavi offices.

### Method:

The present research interms of purpose is in research area and classification development

and interms of how data collection is in exploratory mixed research group and was done in two qualitative and quantitative phases. The statistical population of the study in qualitative stage were professors and experts familiar with the topic of productivity 13 educational mangement professors were selected by theoretical sampling method. In the quantitative phases of research the statistical population were academic professors of educational mangement that 13 people were selected by census sampling method. In order to collect data the researcher was used from interview and researcher made questionnaire.

### Findings:

The research questionnaire consisted of 20 items and 4 components. To answer the first question was used from interview and thematic analysis method and also has been identified 4 major indicators (individual ‘ managerial ‘ organisational‘ environmental )and 20 categories. From shannon entropy analysis was used to rank indicators. And the results showed that the managerial category with 0.252 Significance factor had the most importance and environmental category with 0.248 significance factor had the least importance among indicators.

### Results:

Promoting productivity in education not only contributes to socio-economic development but also through the training of efficient and creative human resources can lead to the development of the country. Education is a variable that affects productivity more than other factors and shows its role in the long run and in consecutive times. In fact, it is education that creates the culture of society, shapes it, fertilizes it, and can influence individual variables and create culture. It is clear that, considering the institutional role of education, the productivity of this device is very important.