Web information system and management of the graduate follow-up standard in a Public Institute of Higher Technological Education, Peru

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Abstract

The objective of the research was to establish the relationship between the web information system and the follow-up standards for graduates in a Public Higher Technological Education Institution, Peru, during 2022. Materials and Methods: It corresponds to a non-experimental design of descriptive correlational design. Results: It was shown that 67.4% of the graduates of this institution obtained a medium level in the use of the Web Information System, 19.6% acquired a higher level and 13.0% showed a minimum level, 50.0% of the graduates had a medium level, with respect to the graduate follow-up standard variable, 26.1% acquired a minimum level and 23.9% showed a high level. Conclusions There is a significant and positive relationship, obtaining a Spearman’s Rho coefficient of 0.873, between the web information system and the graduate monitoring standards of the Public Higher Technological Education Institution, Peru.

Keywords: System, information, web, standards, monitoring.

1. Introduction

Teachers have the great task of training the country’s future professionals in their various areas and professions, whose performance in the classroom must guarantee a contribution to society; it must be in line with the advances in knowledge and teaching strategies, and they must be updated in such a way that they can provide quality care to students¹–³ This research is based on the relevance of an information system in the network with respect to the registration of our graduates, since this will make it possible to learn permanently and optimize the study plans in accordance with the new requirements of social circumstances, because one of the strengths of this kind of system is that it makes it possible to know the state in which each graduate is and through the data collected it is possible to test the labor market.⁴–⁷ The web system developed will seek to update the information of the graduates who are not linked.⁸,⁹ The two processes are essential in the conceptualization of the personality of the graduate and their respective labor and institutional conditions, because if these data are not considered, it will not be possible to develop the following processes, such as the conceptualization and implementation of different types of software.¹⁰,¹¹
We can emphasize that the context of higher education has changed significantly, bringing as a consequence fundamental aspects that lead to changes that are framed to provide solutions to problems and requirements in a dynamic environment.\textsuperscript{12–14} Thus, today, higher education institutions invest great efforts in quality planning.\textsuperscript{15–17} However, the examination of quality brings as a consequence the specification of the web information system, which makes it possible to make decisions that are generated in higher educational institutions. In addition, the follow-up and identification of our graduates in the labor sector is of great importance, because it allows us to diagnose the efficiency of our curriculum.\textsuperscript{18–22}

For these reasons, it is fundamental for us to postulate the relevance of the web information system in the follow-up of the graduates of the Instituto de Educación Superior Tecnológico Público Huarmey, a case that will allow us to establish a link between the graduates and the institute, the content is organized according to the study of the problems and theoretical aspects of the subject.

### 2. Methods

The research is basic, since the theoretical and practical knowledge of the web system was used. A non-experimental design, because the variables were not manipulated. The study was transversal because the instruments were applied at a single moment, with the purpose of looking for the correlation of the variables. The research is descriptive, because its intention was to investigate the event and values in which the variables are stated. After processing the questionnaires, we proceeded to analyze and describe the results, being represented with the respective tables and figures for this purpose we used Microsoft Excel software and the SPSS 25.0 statistical package for the respective validation, processing and contrasting of the hypotheses, with the statistical results we inferred the interpretations and decision making to contrast the hypotheses.

### 3. Results

#### Table 01. Web Information System and Alumni Tracking Standards

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Web Information System</th>
<th>Graduate follow-up standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spearman's Rho</td>
<td>Correlation coefficient</td>
<td>.873**</td>
</tr>
<tr>
<td>Web Information System</td>
<td>Sig. (bilateral)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>46</td>
<td>46</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (bilateral).**

Table 01 shows a correlation of $r=0.873$, with a sig. of less than 5%, which affirms the alternative hypothesis and refutes the null hypothesis. Therefore, there is a relationship between the web information system and the follow-up standards for graduates of the Instituto de Educación Superior Tecnológico Publico Huarmey, during 2022. The correlation evidences a very good magnitude.

#### Table 02. Web Information System and Alumni Profile

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Web Information System</th>
<th>Graduate profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spearman's Rho</td>
<td>Correlation coefficient</td>
<td>.865**</td>
</tr>
<tr>
<td>Web Information System</td>
<td>Sig. (bilateral)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>46</td>
<td>46</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (bilateral).**

Table 02 shows a correlation of $r=0.865$, with a sig. of less than 5%, which affirms the alternative hypothesis and refutes the null hypothesis. Therefore, there is a relationship between the web information system and the profile of the graduate of the Instituto de Educación Superior Tecnológico Publico Huarmey, during 2022. The correlation evidences a very good magnitude.

#### Table 03. Web Information System and Employment Status of Graduates

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Web Information System</th>
<th>Graduate's employment status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spearman's Rho</td>
<td>Correlation coefficient</td>
<td>.781**</td>
</tr>
<tr>
<td>Web Information System</td>
<td>Sig. (bilateral)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>46</td>
<td>46</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (bilateral).**

Table 03 shows a correlation of $r=0.781$, with a sig. of less than 5%, which affirms the alternative hypothesis and refutes the null hypothesis. Therefore, there is a relationship between the web information system and the employment status of the graduate of the Instituto de Educación Superior Tecnológico Publico Huarmey, during 2022. The correlation evidences a very good magnitude.
**4. Discussion**

The new requirements associated with the sintering of the TICS in the solution of problems and the need to promote the growth of input skills and the use of data in work circumstances, varies the processes that go around it, also influencing the structuring of training processes in educational institutions. 

The results shown in the general hypothesis show that there is a relationship between the web information system and the control standards for graduates of the Instituto de Educación Superior Tecnológico Publico Huarmey, during 2022. The correlation shows a very good magnitude. Similarities are also found in the work of Maje (2020) in his research whose objective was: To develop and implement an Information System for Academic Management and Monitoring, to automate manual processes and provide complete, organized and reliable information to the ESFM - Warisata. Where he concludes with the implementation of the Academic Follow-up and Management Information System, he was able to improve the processes of academic procedures of the ESFM - Warisata, regarding the elaboration of academic records and semester grades and grade centralizers per semester and per subject, in addition to having reports and statistics per semester of the graduates, among others.

In the specific hypothesis 1 it is evident that there is a link between the web information system and the profile of the graduate of the Instituto de Educación Superior Tecnológico Publico Huarmey, during 2020. The correlation shows a very good magnitude. In in the research of Guevara et al. (2019) whose objective was to postulate a data system for the management of graduate control processes that makes it possible to optimize quality. Methodology: A survey of the entity's graduates was implemented, thus showing that the entity communicates with them, however, it is deficient in the sources used since they are not combined, which corresponds to the need to have a system that includes all the data that makes it possible to make educational decisions. Results: The proposed system includes two aspects of relevant information, that of the graduates and that of the entity. Conclusion: Studies on graduate retention and labor market insertion are of enormous relevance for universities and Higher Technological Institutes (IES). Through them, these IES are able to have data on the adaptation of their graduates in the labor market.

Specific hypothesis 2 proves that there is a link between the web data system and the employment situation of the graduate of the Instituto de Educación Superior Tecnológico Publico Huarmey, during 2022. The correlation shows a good magnitude. Similarly in in his research Mendoza (2019) entitled: "Transactional information system (SITE) to improve the follow-up of the graduate of the faculty of industrial engineering and systems of the Universidad Nacional Hermilio Valdizán de Huánuco". The purpose of the study was to determine the incidence of the transactional information system in the control of graduates. Methodology: an applied and correlational study of quasi-experimental type was carried out, 19 professors of the profession of Industrial Engineering were related to the study, which in different ways are included in the control of the graduate of the profession, the data collection was carried out after the implementation of the data system for 15 days as a pilot

Table 04 shows a correlation of $r=0.673$, with a Sig. of less than 5%, which affirms the alternative hypothesis and refutes the null hypothesis. Therefore, there is a relationship between the web information system and the profile of the graduate of the Instituto de Educación Superior Tecnológico Publico Huarmey, during 2022. The correlation evidences a good magnitude.

Table 03 shows a correlation of $r=0.781$, with a Sig lower than 5%, which affirms the alternative hypothesis and refutes the null hypothesis. Therefore, there is a relationship between the web information system and the employment situation of the graduate of the Instituto de Educación Superior Tecnológico Publico Huarmey, during 2022. The correlation evidences a good magnitude.

### Table 04. Web Information System and Employment Status of Graduates

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Web Information System with the Satisfaction of the Graduate</th>
<th>Correlation Coefficient</th>
<th>Sig. (Bilateral)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spearman's Rho</td>
<td>Web Information System</td>
<td>Correlation Coefficient</td>
<td>1.000</td>
<td>.673**</td>
</tr>
<tr>
<td></td>
<td>Sig. (Bilateral)</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>46</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Satisfaction with the Institution</td>
<td>Correlation Coefficient</td>
<td>.673**</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Sig. (Bilateral)</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>46</td>
<td>46</td>
<td></td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (bilateral).
test, pertinent time to know and value the virtues of this computer system, solving questions and attending to the suggestions of the professors. Results: 73.7% of the sample mentioned that they would use the information system, while 26.3% indicated that they would not use it. On the other hand, 68.4% of those sampled stated that this system makes it possible to know the professional growth of the graduate. In this sense, taking into account the results of the variables examined, it is worth mentioning that 68.4% say that they would use the transactional system because it makes it possible to include outgoing graduates in the labor market. Conclusion: Universities are undergoing different transformations in the way they provide education, due to the fact that globalization has widely influenced every educational design and data entry. Specific hypothesis 3 shows that there is a linkage in the web information system and the satisfaction of the graduates with the Instituto de Educación Superior Tecnológico Público Huarmey, during 2022. The correlation shows a good magnitude. The same in Condori (2017) in his research whose objective was: to determine whether the systematized information cooperates in the management of graduates. Methodology: The Extreme Programming methodology is used, which turns out to be the one that has the greatest distinction of the skillful processes in software development, with a Quasi-Experimental structure, where the possible proposal was statistically used. Results: The answers corresponding to "CA" (Totally agree) are 44.98 percent, the answers corresponding to "A" (Agree) are 40.82 percent, those corresponding to NAD (Sometimes agree sometimes disagree) are 14.29 percent, and those corresponding to "D" (Disagree) are 0.00. Conclusion: The information system cooperates with the management of the outgoing of the Professional School of Systems Engineering of the Universidad Nacional del Altiplano.

5. Conclusions

Regarding the first hypothesis it is concluded that. There is a relationship between the web information system and the follow-up standards for graduates of the Instituto de Educación Superior Tecnológico Publico Huarmey, during 2022. The correlation shows a very good magnitude. Regarding the second hypothesis it is concluded that. There is a relationship between the web information system and the profile of the graduate of the Instituto de Educación Superior Tecnológico Publico Huarmey, during 2022. The correlation shows a very good magnitude. Regarding the third hypothesis, it is concluded that there is a relationship between the web information system and the satisfaction of the graduates with the Instituto de Educación Superior Tecnológico Público Huarmey, during 2020. The correlation shows a good magnitude.

References


