ABSTRACT

Purpose: The objective of the study was to determine the relationship between strategic planning and digital competencies in teachers of educational institutions.

Theoretical framework: The conceptual approach according to David (2013), strategic planning refers to the development of three main stages, which are the formulation, implementation and evaluation of the strategy. In relation to digital competencies, connectivism should be highlighted, since this comes from educational technological knowledge, which have been favorable within an effective learning approach (Gašević et al., 2015; Brooks, 2015), this encourages the use of tools, to improve the research process; as well as teaching that is based on the interconnectivity of the participants.

Method/design/approach: This research uses a quantitative approach. The subjects of this study are 170 teachers from educational institutions in San Vicente, Cañete - Peru. The variables of this study are strategic planning and digital competencies. The level of study is correlational, as it seeks to establish the existence of correlations between the study variables (Sánchez & Reyes, 2017). Being necessary to know the level of association between the study variables. Spearman's Rho test analysis techniques were used to test the hypothesis.

Results and conclusion: The result of this study was that there is a correlation between the variables of Strategic planning and digital competencies in teachers of public educational institutions of San Vicente, Cañete-Peru being rho=0.357 and p=0.000<0.05.

Implications of the research: This research contributes to the understanding of strategic planning that is determinant for the good performance of successful educational institutions based on the development of digital competencies in teachers of public educational institutions.
**Originality/value:** The results obtained in this study are relevant and coherent in a socio-educational context that demands the adoption of actions that contribute decisively to the improvement of educational practices and the engagement of the school community.

**Keywords:** strategic planning, digital skills, formulation, implementation, evaluation.

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**PLANEJAMENTO ESTRATÉGICO E COMPETÊNCIAS DIGITAIS EM INSTITUIÇÕES EDUCACIONAIS PÚBLICAS SAN VICENTE, CAÑETE**

**RESUMO**

**Objetivo:** o objetivo do estudo foi determinar a relação entre o planejamento estratégico e as competências digitais em professores de instituições educacionais.

**Quadro teórico:** A abordagem conceitual, de acordo com David (2013), o planejamento estratégico refere-se ao desenvolvimento de três etapas principais, que são a formulação, a implementação e a avaliação da estratégia. Em relação às competências digitais, o conectivismo deve ser destacado, pois decorre do conhecimento tecnológico educacional, que se mostrou favorável em uma abordagem de aprendizado eficaz (Gašević et al., 2015; Brooks, 2015), o que incentiva o uso de ferramentas para aprimorar o processo de pesquisa, bem como o ensino baseado na interconectividade dos participantes.

**Método/projeto/abordagem:** a abordagem quantitativa é usada nesta pesquisa. Os sujeitos deste estudo são 170 professores de instituições educacionais em San Vicente, Cañete - Peru. As variáveis deste estudo são o planejamento estratégico e as competências digitais. O nível do estudo é correlacional, pois o objetivo é estabelecer a existência de correlações entre as variáveis do estudo (Sánchez & Reyes, 2017). É necessário conhecer o nível de associação entre as variáveis do estudo. As técnicas de análise do teste Spearman's Rho foram usadas para testar a hipótese.

**Resultados e conclusão:** O resultado deste estudo foi que existe uma correlação entre as variáveis de planejamento estratégico e competências digitais em professores de instituições educacionais públicas em San Vicente, Cañete-Peru, com rho=0.357 e p=0.000<0.05.

**Implicações da pesquisa:** Esta pesquisa contribui para a compreensão do planejamento estratégico, que é determinante para instituições educacionais bem-sucedidas com base no desenvolvimento de competências digitais em professores de instituições educacionais públicas.

**Originalidade/valor:** Os resultados obtidos neste estudo são relevantes e coerentes em um contexto socioeducacional que exige a adoção de ações que contribuam decisivamente para a melhoria das práticas educacionais e o engajamento da comunidade escolar.

**Palavras-chave:** planejamento estratégico, habilidades digitais, formulação, implementação, avaliação.

**1 INTRODUCTION**

Currently, there are situations in the global context, which make our coexistence
with everyone else represent greater challenges and efforts to be able to generate competitiveness and face new contingencies in different areas such as: culturally, socially, economically and above all, everything in education. Such is the impact of the latter, that at an international level there is great concern due to the closure of educational institutions due to the risk of mass infections due to Covid-19. Isolation measures had to be established, which led to studies being resumed in schools. Another problem was establishing the means by which teachers were going to carry out the learning sessions and finally how managers were going to face these problems in achieving the objectives of the institution (Quiroz et al., 2020).

According to the Information System of Educational Trends in Latin America (Siteal, 2018), according to the evidence obtained in Guatemala, it can be mentioned that, regarding the educational aspect, there are great difficulties in access and equality, since there is no greater investment in the area of physical infrastructure, as well as in technological innovation; There are classrooms in poor condition, lack of equipment; and on the other hand, in the aspect of educational quality, it shows very low rates of pedagogical management.

Based on this, the International Institute for Educational Planning (IIEP Unesco, 2021) considers that strategic planning, prepared appropriately, is a substantial instrument in the optimization of educational management, since, when considering programming and Strategic planning, as well as the functions of each level, provide a starting point to make management viable and achieve the achievement of goals and objectives in the pedagogical area.

Likewise, technological advances have modified the behavior of individuals and the social environment. Due to this, in Spain, through the Digital Agenda 2025, prepared in 2018, the proposal is to “reinforce digital skills in all citizens and workers” with the aim that at least 80% of citizens obtain basic skills in the digital field at the end of this period. Under this consideration, Spain begins this program having a relatively high position in the ranking in Digital Economy and Society, ranking 11 out of 28 in the global DESI index; but at the same time, it has not very encouraging results in terms of the Spanish population in general, since 43% lack these basic digital skills.

At the national level and according to the Ministry of Education (Minedu, 2020), it emphasizes that students at any educational level must access a quality educational service, which is a priority and can be achieved in all institutions in the country. having
them as the main actors of change. To achieve this, it is essential that there is adequate and necessary educational management that seeks educational progress by prioritizing the requirements of the students, through the teamwork that the management area can achieve.

Likewise, the National Strategic Digital Technological Plan in Basic Education prepared between 2016 and 2021, by the Minedu, established five essential points that must be implemented over time; Of these points, both the first and the third are the ones that focus attention on the situational analysis of teachers and their digital competencies. According to these analyses, it was reported that 10,184 teachers lack any update in this type of digital skills; It also mentions that 70% did have access to some type of advice, but that only 8% had digital competence and used it as a technology integration tool within the classrooms.

In this sense, Gallegos (2023) points out that strategic planning has an essential role in educational institutions because it provides guidance towards achieving objectives and is relevant for the realization of work plans. in addition to establishing basic criteria for the execution of institutional activities. The study showed the existence of a significant relationship between strategic planning and collegiate work (rho=0.715 and p=0.000<0.05).

Huaihuas (2023) pointed out that strategic planning is the guideline that makes it possible to adequately establish institutional objectives and coherently establish the relevant actions to optimize management processes; Likewise, the digital skills of teachers must be strengthened to provide a better educational service and improve digital skills in teachers. The results showed that there is a relationship between strategic planning and digital competencies in basic education teachers (rho=0.506 and p=0.000<0.05).

Linares (2022) in his research stated that the digital competencies of teachers in the educational service are a decisive factor for the achievement of student learning, in a world in which technology advances rapidly and the demands are increasingly greater. Because it is necessary to take actions to develop an educational policy for the implementation and integration of ICTs in schools. A relationship was found between digital skills and teaching performance (r=0.884 and p=0.000<0.05).

Martos & Mejía (2021) in their study pointed out that strategic planning is a tool aimed at improving management processes by enhancing the capacity for action in the
execution of plans designed to achieve quantifiable objectives and goals. By virtue of this, an educational institution will raise quality standards and institutional positioning linked to parameters of effectiveness, efficiency and educational quality. A significant association was found between strategic planning and educational quality (Chi square=21.862 and p=0.001<0.05).

Narduchi (2021) pointed out that strategic planning is the essential basis in the process of establishing essential organizational guidelines and makes it possible to establish a clear vision of an institution by aligning the objectives to be achieved; It is considered a fundamental stage to carry out successful management. The results indicate a significant relationship between strategic planning and administrative management (rho=0.735 and p=0.000<0.05).

Villalba (2021) maintained that digital competencies are determining factors in carrying out the teaching and learning process, which is why in the context of remote education it allowed learning activities to be carried out effectively; Thus, it also facilitated the use of online digital resources, supporting the work of teachers in educational institutions. The results show that the application of digital skills workshops significantly influences the teaching performance of an educational institution (U=250.0000 and p=0.035<0.05).

Regarding strategic planning in the public sector, theoretically or practically, the methods can vary both in the aspect of the branch or the root, that is, strategic planning is not something unique, on the contrary, it is a set of procedures, concepts and tools that are used together, and combined to develop various approaches or theories (Bryson et al., 2018). In some cases, strategic planning appears to be used as a root method, but in different circumstances. Branch methods are required, since there are various objectives and multiple stakeholders with responsibilities, which may be in conflict, mainly in those organizations whose purpose is not profit or profit (Brown et al., 2016).

The conceptual approach according to David (2013), strategic planning refers to the development of three main stages, which are the formulation, execution and evaluation of the strategy. It allows any organization to develop a future plan, so that after starting its activities, it can influence the results, through strict control of the steps to follow.

Likewise, strategic planning in education is mentioned as a great challenge to be applied; since there is a true understanding regarding the advantages it has in the
educational community. In this area, one of the observations to mention is the expansion of the use of technology in the educational field; which currently present large gaps in all processes, both administrative and pedagogical (Díaz et al., 2022).

Regarding the theories of digital competences, connectivism must be highlighted, since it comes from educational technological knowledge, which has been favorable within an effective learning approach (Gašević et al., 2015; Brooks, 2015), this encourages the use of tools to improve the research process; as well as teaching that is based on the interconnectivity of the participants. Connectivism has been developed through the inclusion of data analysis, in which various factors are established to interact online, which leads to greater learning, especially at a social level (Siemens, 2019). In the same way, there is the digital transformation of those factors that are included in connectivism, which are related to the learning that achieves improvements in interconnectivity processes (Mangaroska and Giannakos, 2019).

2 METHOD

The research was basic because the study of the research variables was in-depth: (i) Strategic planning; and (ii) Digital skills. The research design was non-experimental, there was no manipulation of the variables, they were only observed to know the relationship between the constructs (Pino, 2018).

The approach was quantitative since statistical techniques were used that allowed numerical procedures to be carried out through frequency distribution tables and correlation coefficients (Hernández & Mendoza, 2018).

The level of study is correlational, since it is about establishing the existence of correlations between the study variables (Sánchez & Reyes, 2017). It is necessary to know the level of association between the study variables.

The study population consisted of 170 regular basic education teachers. The study sample was made up of 120 teachers from educational institutions. The study units have the same basic study characteristics (Ávila, 2016).

The technique used was the survey to collect the information (Valderrama, 2015). The instrument was two questionnaires that were applied with the purpose of collecting information from the respondents (Sánchez & Reyes, 2015). The validation of the instruments was examined by experts in methodology and evaluation of research instruments. In this sense, the research process leads to an in-depth analysis of the nature
of the object of study in light of scientific principles and complying with the methodological and epistemological requirements (Soto, 2021).

The reliability of the instruments was carried out through a pilot test, for this the Cronbach's Alpha statistic was used and was obtained for the Strategic Planning variable ($\alpha=0.961$) and the Digital Competencies variable ($\alpha=0.919$). The coefficient allows obtaining the measure of internal consistency of the constructs under study that quantifies the correlation between the component items of the research instrument (González & Pazmiño, 2015).

**3 RESULTS AND DISCUSSION**

Below are the statistical results obtained after processing the information collected in the field work. In table 1, based on the evidence obtained, it can be seen that 53.3% of those surveyed indicate that strategic planning is regular, 30% of the participants express it as efficient and 16.7% indicate that it is of a deficient level. Likewise, 39.2% of participants report strategy formulation as regular, which means that they are not yet clear about this step that allows automating processes that improve performance. In this sense, 44.2% of those surveyed mention that the execution of strategies shows between a regular and efficient degree, this occurs because teachers are involved with the establishment to achieve the proposed purposes. Finally, 57.5% of the participants thought that the strategy evaluation is regular, that is to say that the teachers are mostly unaware of the diagnosis or analysis carried out on the institution's problems, as well as the responses to address it.

<table>
<thead>
<tr>
<th>Level</th>
<th>$F$</th>
<th>$%$</th>
<th>$F$</th>
<th>$%$</th>
<th>$F$</th>
<th>$%$</th>
<th>$F$</th>
<th>$%$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deficient</td>
<td>20</td>
<td>16.7</td>
<td>32</td>
<td>26.6</td>
<td>14</td>
<td>11.6</td>
<td>12</td>
<td>10.0</td>
</tr>
<tr>
<td>Regular</td>
<td>64</td>
<td>53.3</td>
<td>47</td>
<td>39.2</td>
<td>53</td>
<td>44.2</td>
<td>69</td>
<td>57.5</td>
</tr>
<tr>
<td>Efficient</td>
<td>36</td>
<td>30.0</td>
<td>41</td>
<td>34.2</td>
<td>53</td>
<td>44.2</td>
<td>39</td>
<td>32.5</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>100.0</td>
<td>120</td>
<td>100.0</td>
<td>120</td>
<td>100.0</td>
<td>120</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Prepared by Chamorro et al (2023)

In table 2, in relation to the information collected, it is considered that 53.3% of those surveyed indicate that digital skills are regular, 45% mention it as efficient and 1.7% reveal that it is deficient. That is, the majority of teachers have not yet fully defined the knowledge and skills intended for the use of technological resources. Likewise, 68.3% responded that they have an efficient level of instrumental competencies, which means
that the majority of teachers agree that they are necessary and useful as tools to achieve the objective, while 65.0% of them indicated that they have a regular level of didactic skills, which means that the majority of teachers still do not know how to implement in the learning sessions and the possibility for students to continue learning through this new modality and 52.5% expressed that the level of cognitive competencies is average, which means that the majority of teachers are not yet sure that students can learn, think, remember and pay attention in this current technological situation.

Table 2. Frequency distribution of the Digital Skills variable and its dimensions

<table>
<thead>
<tr>
<th>Level</th>
<th>V2: Digital skills</th>
<th>Dimension 1 Instrumental skills</th>
<th>Dimension 2 Didactic skills</th>
<th>Dimension 3 Cognitive competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>Deficient</td>
<td>2</td>
<td>1.7</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>Regular</td>
<td>64</td>
<td>53.3</td>
<td>37</td>
<td>30.8</td>
</tr>
<tr>
<td>Efficient</td>
<td>54</td>
<td>45.0</td>
<td>82</td>
<td>68.4</td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>100.0</td>
<td>120</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Prepared by Chamorro et al (2023)

Table 3 shows the result of the Kolmogorov-Smirnov normality test, which shows that the data do not present a normal distribution (sig. <0.05), in this sense a non-parametric statistical test was used to through Spearman's rho coefficient. In this sense, Flores & Flores (2021), the data normality test provides a guarantee of robustness in the statistical analysis.

Table 3. Normality test results

<table>
<thead>
<tr>
<th>Graphic</th>
<th>Kolmogorov-Smirnov gl statistician</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic planning</td>
<td>.108</td>
<td>.002</td>
</tr>
<tr>
<td>Strategy formulation</td>
<td>.134</td>
<td>.000</td>
</tr>
<tr>
<td>Strategy execution</td>
<td>.126</td>
<td>.000</td>
</tr>
<tr>
<td>Strategy evaluation</td>
<td>.138</td>
<td>.000</td>
</tr>
<tr>
<td>Digital skills</td>
<td>.148</td>
<td>.000</td>
</tr>
<tr>
<td>Instrumental skills</td>
<td>.180</td>
<td>.038</td>
</tr>
<tr>
<td>Didactic skills</td>
<td>.176</td>
<td>.023</td>
</tr>
<tr>
<td>Cognitive skills</td>
<td>.111</td>
<td>.001</td>
</tr>
</tbody>
</table>

Source: Prepared by Chamorro et al (2023)

Table 4 shows that the results found using Spearman's Rho statistic (r = 0.357; p = 0.000 < 0.05) indicate that the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, the presence of a correlation between the Strategic Planning variables with Digital Competencies in public educational entities San Vicente, Cañete,
2023 was determined. Likewise, this result is an association between direct, positive and moderate variables (Hernández & Mendoza, 2018). Therefore, the presence of a correlation between Strategic Planning with Digital Competencies in public educational entities San Vicente, Cañete, 2023 was determined.

### Table 4. Correlation between strategic planning and digital competencies

<table>
<thead>
<tr>
<th>Rho Spearman</th>
<th>Strategic planning</th>
<th>Digital skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correlation coefficient</td>
<td>0.357</td>
</tr>
<tr>
<td></td>
<td>Sig. (bilateral)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
</tr>
</tbody>
</table>

Source: Prepared by Chamorro et al (2023)

In table 5, a significant correlation is seen between the dimensions of strategic planning and digital competencies; In this sense, it can be seen with the strategy formulation (rho=0.313 and p=0.001<0.05), with the strategy execution (rho=0.320 and p=0.000<0.05) and with the strategy evaluation (rho=0.403 and p=0.000< 0.05). The results obtained allow us to analyze the close correlation that exists between the dimensions of strategic planning and digital competencies in teachers of educational institutions; being in all cases direct and positive at a moderate level; A fact that allows us to confirm the importance of this finding and that it will be feasible to carry out the pertinent actions to raise the level of management of those responsible for educational institutions.

### Table 5. Correlation coefficient of dimensions strategic planning and digital skills

<table>
<thead>
<tr>
<th>Statistical test</th>
<th>Dimensions of Strategic Planning</th>
<th>Sig.</th>
<th>Digital skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spearman's Rho</td>
<td>Strategy formulation</td>
<td>0.001</td>
<td>0.313</td>
</tr>
<tr>
<td></td>
<td>Strategy Execution</td>
<td>0.000</td>
<td>0.320</td>
</tr>
<tr>
<td></td>
<td>Strategy evaluation</td>
<td>0.000</td>
<td>0.403</td>
</tr>
</tbody>
</table>

Source: Prepared by Chamorro et al (2023)

The general objective of the research was: Establish the relationship between strategic planning and digital competencies in public educational entities, San Vicente, Cañete. The data analysis was carried out, whose interpretation was: that there is a relationship between the variables under study; observed, with a Spearman's Rho (r = 0.357), demonstrating a direct and positive correspondence: therefore, the alternative hypothesis is admitted and the null is denied, which establishes a relationship between the variables strategic planning and digital competencies, in the educational entities. These results lead to mentioning that it is important to carry out strategic planning.
considering the realities of each institution, within this planning, the use of digital tools must be applied, which will help improve management, being accepted by the educational community.

When verifying the relevant results, it is evident that 53.3% maintained that strategic planning demonstrates a regular level, therefore, it refers to digital competencies, it is also seen that 53.3% place it at the regular level, which means In both variables, there are spaces in which we have to work coherently in order to optimize management in educational institutions.

This evidence is consistent with Huaihuas (2023), who in his study verifies the relationship between strategic planning and digital competencies, with 56.7% of teachers expressing that strategic planning has a regular level and, on the other hand, 53.6% of teachers Teachers also declare that digital competence has a regular level. It was concluded, after all the analysis, that both variables have a moderate relationship, according to statistical values Spearman's Rho = 0.464.

Furthermore, there is agreement with Rivera (2023), he determined the relationship between strategic planning and administrative management; so much so that strategic planning reflects 50% at the regular level; On the other hand, the administrative management variable reflects 52.2%, which shows that the level of this variable is regular. He concluded that, according to these results and at the same time having a statistical analysis of Spearman's Rho equal to 0.963, that strategic planning and administrative management have a very high positive correlation. Likewise, Gallegos (2023) pointed out that strategic planning has an essential role in educational institutions because it provides guidance towards achieving strategic objectives, with a significant relationship between strategic planning and collegiate work (rho=0.715 yp= 0.000<0.05).

In this same line of ideas, Martos & Mejía (2021) asserted that strategic planning is a tool aimed at improving management processes, enhancing the capacity for action in the execution of plans designed to achieve objectives and quantifiable goals, found a significant association between strategic planning and educational quality (Chi square=21.862 and p=0.001<0.05).

Bertranou's theory (2019), which mentions that the changes or variations within the context in which the organization operates must be taken into account, in order to establish mechanisms that help take advantage of positive circumstances and mitigate negative ones. . Esquivel et al. (2017) emphasizes that care must be taken to ensure that
the plans comply with the established periods; With this, it is possible to ensure that the efforts of collaborators and their teams come to fruition, according to the programmed strategies. Also, Luján et al. (2021) mentions that action plans must be monitored so that the strategic management system is sustainable, both at the community and organizational levels, that is, as a long-term application of an organizational system with a vision of scope; With this, priority is given to verifying the actions to be carried out based on the pre-established goals in the plan. Honores et al. (2022) indicates that organizations must focus their efforts on the implementation of strategies that provide support to the actions in an institution.

Furthermore, Amaya et al. (2021) mentions that it is systematic, whose objective is the growth of an organization, considering the objectives, goals or others, it identifies what the threats are, what the uncertainties are and contrasts them with reality; Based on this, improvement proposals can be issued for the current context of the organization. On the other hand, Guerrero et al. (2020) mentions that planning begins with the analysis of the current context, looking for the needs of the organization and also the weaknesses it has; Taking them as a basis, we can start making future proposals that improve the position of the organization and then control the actions to follow. Furthermore, Díaz et al. (2020) specify that strategic planning directs the organization to meet its goals and objectives to support the efficient use of inputs. Complements Oviedo et al. (2018) when mentioning in their study, about the essentiality of strategic planning, as a model that serves for the preparation of a future operations plan, which serves for the sustainability of the organization, projecting the achievement of its objectives, according to your vision.

In relation to the study, it agrees with Linares (2022) indicated that the digital competencies of teachers in the educational service are a decisive factor for the achievement of student learning, he found a relationship between digital competencies and teaching performance (r= 0.884 and p=0.000<0.05). Likewise, Villalba (2021) maintained that digital skills are determining factors in carrying out the teaching and learning process. Thus, in the context of remote education, the results show that the application of digital skills workshops significantly influences the teaching performance of an educational institution (U=250.0000 and p=0.035<0.05). Siemens Connectivism is an educational theory that emerged in the digital age that uses new technologies for its application and illustration. In 2004, Siemens coined this term and implemented it structurally. According to this theory, learning requires specific skills related to actions
that allow people to function in a digital environment.

By making use of technology in the learning process, a wide field is opened to discover and learn more, emphasizing the importance of establishing connections between concepts. The objective of connectivist learning is to keep knowledge updated and valid in the present, although its possibility of being modified according to the argument is also recognized. In summary, connectivism applies the elements of networks to specify both knowledge and the summary of learning (Kenneth, 2012).

4 CONCLUSION

It is concluded that strategic planning is an effective tool that allows educational institutions to have a specific view based on the mission, vision and strategic objectives that will help achieve the goals established in the plans, projects and activities that are developed in the institution with the purpose of contributing to the improvement in the educational service provided to the student community; By virtue of this, the best efforts must be made in order to clearly specify the paths that must be achieved, for which collaborators must provide their commitment to compliance through coherent and relevant actions.

It is concluded that teachers are committed to training for better teaching performance at this time when technology is advancing rapidly and pedagogical processes require it, in this sense it is necessary to develop digital skills that will help carry out learning sessions in a dynamic way and students will expand their cognitive skills. Finally, the research opens the doors to continue delving into the study developed and will serve as a source for future research.
REFERENCES


