

Training Strategy To Strengthen Digital Competencies Through The Use Of Icts/Icsts In The Business Sector

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ABSTRACT

Digital competencies are those knowledge or skills that contribute to the cultural transformation and digitization of a company, allowing the safe use of all those tools and technology to streamline and improve the achievement of objectives. In the Public Company of Production and Strategic Development, of the State Technical University of Quevedo, insufficiencies are detected to visualize the products and services offered by the company, for which digital competencies are required to meet the demands of customers and the community. The bases and foundations of the research are determined, the digital skills system is designed and the strategy that allows training workers to raise the quality of their products and services. It is proved that the effectiveness of the training program mediated by information and learning technologies influences the development of digital competences.

Keywords: digital competencies, instructional design, training strategy.

INTRODUCTION

The current era is characterized by a globalized society, defined by rapid and constant changes, in which digital information dominates and expands. This development has widely and rapidly changed the production system of the economy, strongly affecting the business structure. In this context, the digital transformation of a company is not only a competitive advantage, but also a necessity to survive in an ever-changing future. For companies to adapt to this reality, it is essential to have professionals with the right digital skills and, above all, leaders who can lead this profound process of change.

Likewise the Technologies of the information and the communication (ICT) have transformed Not just the economic ecosystem and the form to do business, but also the media, medicine, Structures public and private, and the How it is created, acquires and Share the knowledge. Companies need to join this process of digital transformation so as not to tarry. The technology,

if used correctly, offers a enormous potential for create New Opportunities and opening new markets, offers A wide rangeofOpportunitiesin economic relations thatTurnaround Digital pillarsand tools thatFormThe basis of whatIt's called the new economy or The economy of the information (Arceo et al., 2019).

Digital transformation can be achieved by integrating technology into all areas of a company to change the way it operates. The aim is to optimise processes, increase competitiveness and offer customers new added value. This means a change in the mindset of organizational leaders and employees. It is a commitment to new working methods for the future that exploit the full potential of digitalization (Alvarez, 2018).

Digital networks and new communication platformsAllowto companiesincreaseEfficiencyof itsRelations withthecustomers, but forExploit to the fullestThis potentialherselfMustfulfillTwo conditionsBasic.On the one hand, the framework in whichOperate the organizationit must have the necessary technological infrastructure, forOn the other hand, the structural unit must implementProcesses offormationin the development of digital competencesto make itmoreCompetitive (Oubiña, 2020).

Therefore, companies and organizations need to develop training strategies that facilitate entrepreneurs to strengthen their digital skills and thus adapt, operate efficiently and transform their companies using technology, thus fostering innovation and new business models and most importantly. , This competition involves the organization's employees, customers, suppliers, business partners and related parties. An ICT-mediated learning environment is in the interest of learners to increase the quality of products and services and demonstrate a proactive attitude as specific skills are developed. Integrate ICT-based strategies in Learning and Knowledge Technologies (TAC), facilitating collaboration, simplifying the educational process and enabling the immediate use of multiple virtual tools.

MATERIALS AND METHODS

To carry out the research, the methodology proposed by , was used for the design of training strategies, integrated into the strategic planning of the Public Company of Production and Strategic Development of the State Technical University of Quevedo (PRODEUTEQ-EP). It was carried out in four different phases. The ADDIE model of instructional design was selected, for the conception of the courses, which will be interwoven in each of the stages of the strategy, in a harmonious way, since some phases of the design are adapted, with the stages of the strategy.(Chiavenato, 2019)(Corica et al., 2010)

Phases developed in the elaboration of the strategy:

1.- Diagnosis of training needs

Through this stage, the needs for the formation of digital competences were evaluated, knowing the strengths and opportunities of the environment, this because the company is public subscribed to the UTEQ. It corresponds to the analysis phase of the ADDIE model, which proposes to define the problem to be solved and the characterization of the trainees. Based on training needs, the teaching staff that will teach them, such as the team of designers of the learning resources and objects, were also determined.

2.- Development of plans and programs

It corresponds to the design and development phase of the ADDIE model, in which learning objects, evaluation activities and tools integrated into the EVA Moodle program were defined and created, to enrich the possibilities of communication between all the participants of the process (social networks, streaming platforms, special Internet information management tools, etc.).

- Setting training objectives
- Structuring training content
- Design of instructional activities
- Selection of teaching resources
- Design of a training program or course

3.- Delivery or execution of the training

The implementation phase of the ADDIE model, the course was executed and the piloting of the contents and activities is carried out.

4.- Determination of the process of evaluation of the results

In the ADDIE evaluation, the achievements were verified and the processes adjusted, as well as the fulfillment of the objectives was analyzed. For the approval of the proposals, the Delphi method was used, which allows to build the communication process of different experts in groups in order to provide criteria around the research question. The design guarantees anonymity, creates an interactive process using comments and guides by statistical measurements of the group's responses. According to the complete review presents the key methodological parameters to consider, developed as follows:(López, 2018)

- Selection and formation of the panel of experts.
- Number of experts.
- Panel quality.
- Interactive process in rounds.
- Criteria to consider for the completion of the process: consensus and stability.

RESULTS

Initial diagnosis

A survey was conducted to diagnose the contextual and digital skills that PRODUTEQ-EP employees must have to improve work performance and improve the quality of products and services. In 2022 the company had 21 workers, including 1 technician, 12 professionals and 8 masters. Therefore, 95.23% have university education, which helps the development of the educational process and professional preparation. Likewise, the technical training of one of the workers guarantees practical experience, the basis of any competence. This conformation promotes cooperation in the achievement of institutional objectives (Figure 1).

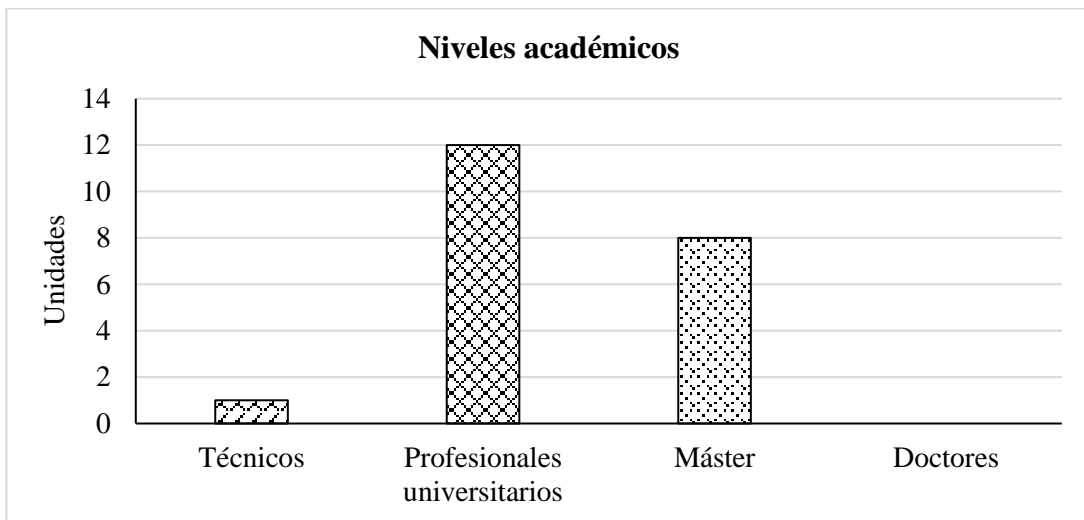


Figure 1. Academic composition of the PRODEUTEQ-EP staff

An assessment of the technology scenario confirmed that UTEQ has an Academic Management System (EMS) remote learning platform that can be accessed by company staff to develop ICT-based training offerings. Employees can access it through computer and mobile phones. The digital skills diagnosis found that 18 employees needed technological tools to work; only 3 workers master the tools needed to advertise products and services; These 18 workers use general search tools but do not use computer infotechnology tools for the management of specialized, professional and technical information; none are aware of technical and vocational training channels through videos, webinars, or other forms of training (Figure 2).

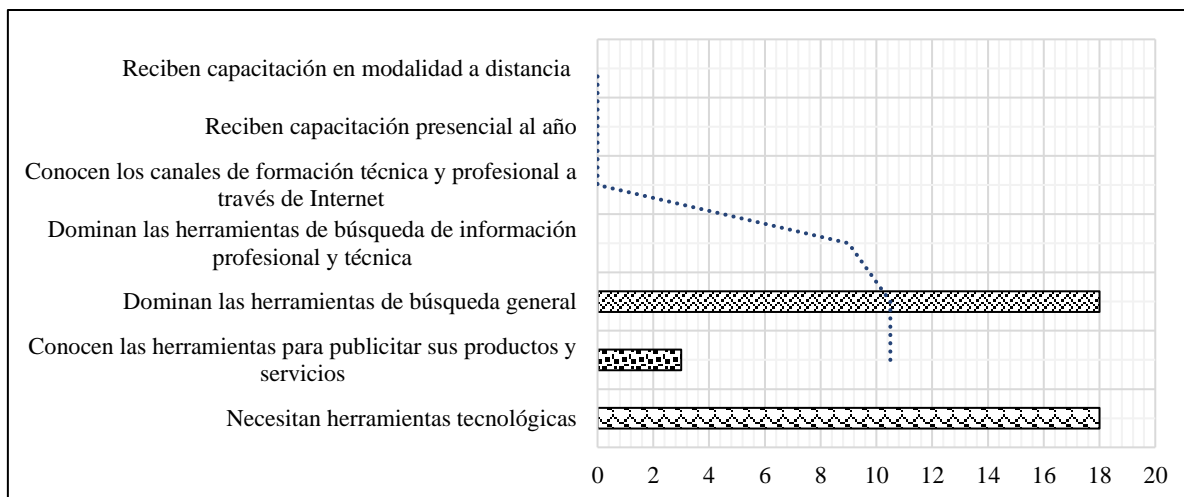


Figure 2. Diagnosis of PRODEUTEQ-EP's digital competences

Table 1 shows the products and services of PRODEUTEQ-EP, which shows the variety of lines of work, ranging from those with an economic to social contribution.

Board 1. PRODEUTEQ-EP products and services

Programmes	Services	Products
School of Professional Drivers "ESCUTEQ"	<ul style="list-style-type: none"> Driving course to obtain the "Type License" C 	
Professional Training Center "CECAPRO"	<ul style="list-style-type: none"> Training courses Endorsement of courses in the area of health Sale of English books English Language Certifications 	
Production of Goods and Services "PROCOMBISE"	<ul style="list-style-type: none"> Construction Sale of cocoa plants. 	Manufacture of chairs, tables, furniture
Mediation and Conflict Resolution Centre of the public company PRODEUTEQ-SOLUTEQ	<ul style="list-style-type: none"> Training Courses for Mediators Mediations 	

When analyzing the products and services, the need to train digital skills that contribute to promote and develop the necessary actions to develop technological surveillance, to know new proposals for constructive design and furniture manufacturing, simulators to learn to drive, design of distance courses for training, tools for selling books online, among others. As well as

the skills that allow maintaining customer loyalty, interaction and immediate response and visualization of the different offers to the community.

It is verified that there are no difficulties in accessing technology, but 100% admit to having communication and interaction problems with customers (students) for not knowing the appropriate digital tools for it. 80.95% of workers report having insufficient digital skills in general and, in particular, for the design of training proposals, in this case those who participate in the School of Professional Drivers "ESCUTEQ", in the Professional Training Center "CECAPRO" and in the Center for mediation and conflict resolution "SOLUTEQ" are more involved; although it is sensitive in any other PRODEUTEQ-EP service.

On the other hand, they refer problems with the organization and management of time and something very significant, only 9.52% declare to reject the use of technology, made the talk, after the survey, it is verified that the cause is in the ignorance of the tools that are needed to improve their function. This assessment shows that training to train digital skills in workers is a need that must be addressed. From this diagnosis derives the proposal the competences that are required to respond to the demands of PRODEUTEQ-EP.

System of business digital competences to be formed

The subject has the ability to use the results at the right time, when they are most required to solve a given problem. In the system of digital business competencies of PRODEUTEQ-EP, mediated by technologies, the use of ICT / TAC is proposed to support the training of workers to raise the quality of the processes and services offered in the entity through the following model: (Figure 3).



Figure 3. Model of the digital skills training system for PRODEUTEQ-EP workers". (Elaboration: Author).

This system is composed of four competences: instructional design, implementation in the e-learning platform, application of TAC and use of visualization tools, dissemination of products / services and interaction with customers. Although they are given in unity, because the model represents a system, it is necessary to separate them to analyze and explain the actions and tools they intend to use.

Instructional design.

It refers to the use of a design model for the development of training courses mediated by technology, constitutes the first stage, which provides the worker with the necessary data to undertake the process he performs, whether training or production of goods and services. It allows to characterize the competences of the recipients of the course, the technological contexts and problems to be solved. In this research, the ADDIE model, described above, was selected.

This process is worked from two dimensions, it corresponds to the stages of analysis and design of the ADDIE model.

- a) Pedagogical dimension
 - Select diagnostic instruments.
 - Define the problem to be solved.
 - Determine training needs.

- Define the objectives.
 - Propose teaching-learning strategies.
 - Plan activities, resources and forms of evaluation.
- b) Technological dimension
- Select the appropriate tools for updating the contents.
 - Use search engines and metasearch engines to search for information. Examples of search engines and metasearch engines: ScienceDirect, Google Scholar, Google Semantic, Base.
 - Use the academic directories, scientific newspaper libraries, portals for the dissemination of scientific production, thesis repositories and specialized databases that you use. Examples: DOAJ, Redalyc, Scielo, Dialnet, Latindex, MIAR, OpenThesis, etc.
- Although certain tools are proposed in this system, the possibility of incorporating new technologies is assumed, to the extent that the applications that support the development of the processes carried out in PRODEUTEQ-EP evolve.

Implementation in the e-learning platform.

It refers to the efficient use of the UTEQ e-learning platform, SGA, for the assembly of the course. This information processing is worked in two dimensions:

- a) Pedagogical dimension:
- Analyze, evaluate, select the contents, resources, activities to include.
 - Take into account the principles of Distance Teaching to present guidance guides that facilitate self-management of learning.
- b) Technological dimension
- Use different formats to present information.
 - Include videos of presentation to the course and to the different topics. This competence is closely related to the third, since, depending on what is obtained in the analysis of the context and needs and, taking into account the advantages of the WMS platform, resources can be included, such as learning objects, in formats that support the self-management of knowledge.

Application of TAC

With the proper mastery of TACs, ICT is redirected towards a more formative and pedagogical use. They allow the creation of didactic resources to promote the development of skills for autonomous learning as a premise of solid knowledge, through dynamics and training practices based on the didactic uses of digital technology. Thanks to its attributes of interactivity, the learner becomes the protagonist of the construction of his own knowledge, adjusting the process to his individualities, style and pace of learning; as well as interconnectivity that facilitates the combination of

different media and digital resources for multitasking purposes, breaking the barriers of space and time.

a) Pedagogical dimension

- Plan the process appropriate to the defined needs to meet the objectives of the course.
- Select the contents and technologies that make up the learning object.

b) Digital Dimension

- Select the appropriate format of the learning object and the type of tool.
- Create the learning objects, according to the selected format: simulators, tutorials, videos, posts, concept maps, simulators, etc.

Proposed tools: OBS Studio, eXelearning, cmapTools, Car Driving School Simulators, among others.

Use of visualization tools, disclosure of products / services and interaction with customers.

It refers to the capacity that allows PRODEUTEQ-EP workers to develop relationships with other professionals linked to their profession and work individually and collaboratively to raise the quality of the services they offer and their own training.

a) Pedagogical dimension

- Work individually and collaboratively.
- Actively participate in social networks in order to develop a digital identity, to disseminate disseminate and expand the visibility of products and services.
- Include promotional materials on social networks.

b) Digital Dimension

- Use social networks to interact with customers and promote the company's products and services.
- Integrate professional virtual communities.

Social networks are generators of knowledge and encourage interactions through groups and common spaces for the exchange of information and collaboration, social and user relationships, all based on a network environment. Example: Facebook, LinkedIn, Twitter and Youtube; Investigative Social Media, ResearchGate, Academia.edu. Virtual research communities allow the sharing of information that provides a basis for learning and collaboration around a type of professional activity, so learning and collaboration are a goal in themselves, so that as long as it is beneficial for their own professional practices, members can continue to participate and strengthen the network.

The YouTube tool becomes a meeting point for those who want to exhibit and watch a video; which makes it a favorable resource for training and promotion activities.

Strategy for the formation of technology-mediated research competence in higher education teachers.

Once the system of digital business skills required by PRODEUTEQ-EP workers was defined, the training was carried out through a strategy supported by ICT/TAC, which constitutes a practical-methodological instrument for facilitators and trainees. The improvement strategy is staggered, progressive, developer and integrative. It is configured in four stages with the objectives and actions for its execution: (a) Diagnostic stage; (b) Design stage of training based on diagnosis by teachers/facilitators; (c) Formative stage of digital competence in workers/technicians/professionals mediated by ICT/TAC; (d) Stage of evaluation of the formation of digital competence.

Diagnosis of PRODEUTEQ-EP workers. The diagnosis was based mainly on determining the mastery of technological tools to improve professional performance and comprehensive and professional training. The diagnosis was made through the postgraduate training platform of the UTEQ, to favor that each worker knows their results individually.

Analysis of the diagnosis made. Based on the results obtained, in this action an exchange can be established between the teachers/trainers who participate in the postgraduate actions and the workers who receive the training to share the strengths, potentialities, opportunities and weaknesses detected. The causes, potentialities and limitations of the formation of digital competence must be analyzed, through a SWOT matrix. The use of the e-learning platform can facilitate a personalized exchange between the facilitators and the trainees who will participate in the training and support the evaluation of the diagnosis through the analytical tools defined by the platform. In addition, a forum can be used to discuss the results and a face-to-face meeting, if deemed necessary, to agree on the planning and purposes of the training, individually and collectively, which will help workers to strengthen digital competence according to their specific work needs, and thus, transform professional performance according to workers.

Design stage of the training based on the diagnosis by teachers or facilitators**Setting up investigative professional learning situations**

This action I consider a systematic methodological work in a collective and individual way, by the teacher trainers. The knowledge, motivation and needs of the participants to strengthen digital competence were kept in mind. For this integration of learning situations, the cardinal elements that define the logic of the formation of digital competence mediated by ICT/TAC

in PRODEUTEQ-EP workers were taken into account and professional learning situations were modeled by considering the following aspects:

- Main professional problems that the worker can face, depending on the function performed (trainers, trainers, producers of goods and services, mediators or psychologists).
- Specify how the training process will be implemented by recreating the logic of problematization and how the results achieved will be put into practice.
- Design training programs, in face-to-face and blended-learning modalities, that respond to the causes that prevent the development of research competence mediated by ICT/TAC.
- Assess other alternative consultation tools: private groups on social networks (Whatsapp, Telegram, Facebook, others).

Implementation of the courses in the SGA platform.

This action involved the assembly of the designed course, taking into account the principles of ID, using the advantages of the UTEQ EaD platform, SGA.

- Creation of resources and activities on the platform.
- Implementation of learning objects according to the particular training (simulators, reference materials, concept maps, tutorials, videos, etc.).
- Include learning guides to guide learners.
- Define the publication dates of delivery of the evaluations, using the options of the platform.

At this stage it was achieved:

- Creation of learning objects using tools for the development of simulators, cmapTools for concept maps, eXelearning to create rich reference materials, OBS Studio, for videos, YouTube channels, etc.
- Courses implemented in SGA.
- Exchange groups in social networks, which bring together teachers and students, to promote the exchange and clarification of doubts.

Formative stage of digital competence in workers, technicians or professionals mediated by ICT and TAC.

This stage is developed demanding an active and reflective participation with the guidance of the trainers, as they act in a leading way, which acquires great value for their professional performance from exercising and practicing it in this context.

Instruction for the gestation of the products and services required by PRODEUTEQ-EP. Within the framework of this training action, the development of business digital competence went through the elaboration

of proposals that improve each of the products and services in which the trainees are involved, taking into account their role in PRODEUTEQ-EP, the awareness of the ethical, axiological, cognitive and purely pedagogical elements with which it must operate to assume a response to the business problems raised; it is carried out with Innovative and creative perspective, which allowed:

- Set general and specific purposes.
- Specify the actions, tasks to be developed both general and specific.
- Establish the resources, methods and methodologies to be used.
- Determine the resources and technological means to be used.
- Define the impacts of the proposals on professional and social practice.
- Development by the students of proposals that improve the processes they carry out in PRODEUTEQ-EP and that contribute to solving the problems detected in the initial diagnosis.
- Integrate ICT/TAC tools in the proposal, so as to demonstrate the training of the digital skills required by PRODEUTEQ-EP of its workers.
- Execute the proposal, as a criterion to obtain a real assessment and adjust it to the conditions of a changing context.

Depending on what has been learned, the use of different digital platforms is recommended, such as: Scholar Google, Semantic Gloogle, BASE, Dialnet, Redalyc, among others. So there is also a special emphasis on the use of web 2.0 tools to visualize the results obtained, advertise products and services that allow better management of the company's customers.

Stage of evaluation of the formation of digital competence.

A global and integrative evaluation was carried out with which the feasibility, validity and impact of the training was measured, according to the criteria and indicators, which measure the system of digital business competences required by the company PRODEUTEQ-EP.

Analysis of the expert survey

The Delphi method was used for the selection of experts. To choose the sample, experts with more than 10 years of experience as professionals and teachers linked to the training of digital skills, with mastery in the use of web 2.0 tools for business management and the use of EVA for training, as well as experts in the development of strategies, were taken into account. Of the 36 experts initially selected to participate in the survey, 30 met the requirements, of which 66.6% had a High level of competence and 33.3% Medium. The distribution by teaching categories was 43.33% Auxiliary and 56.66% Tenured, by scientific categories it was 16.66% Master's and 83.33% Doctors (Figure 4).(López, 2018)

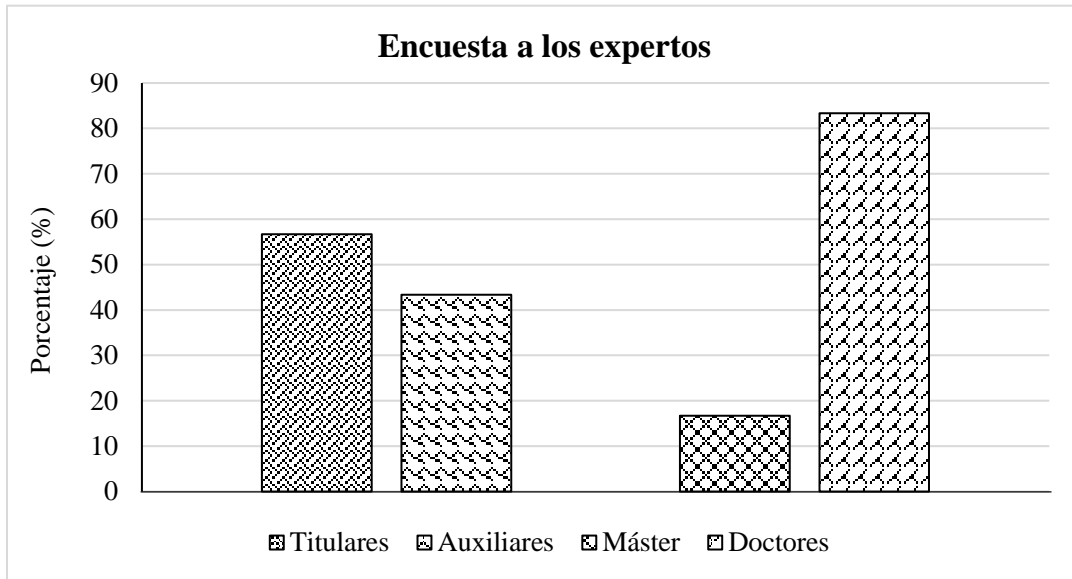
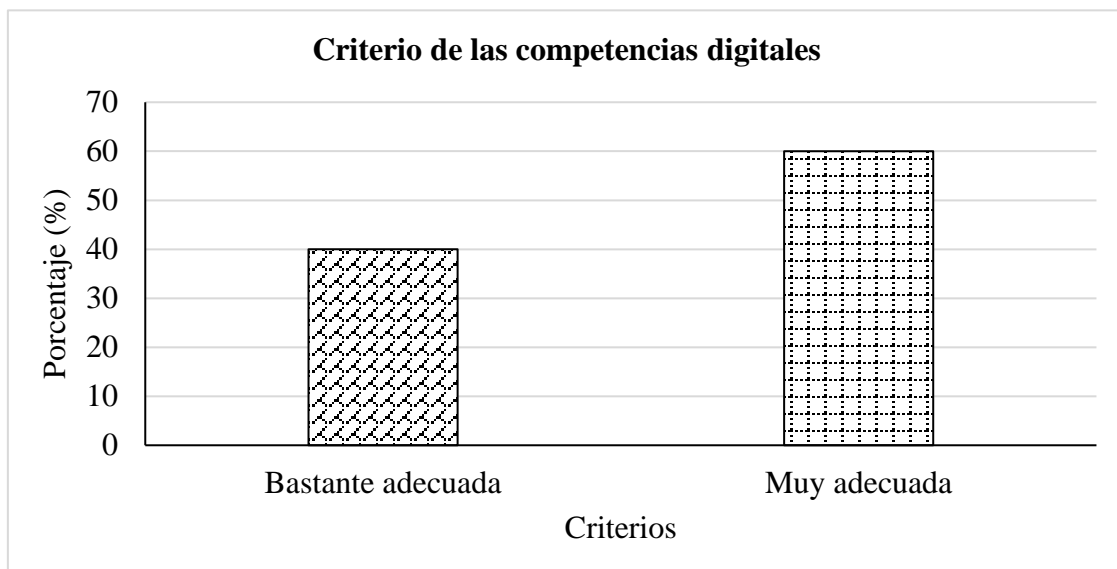


Figure 4. Expert survey analysis

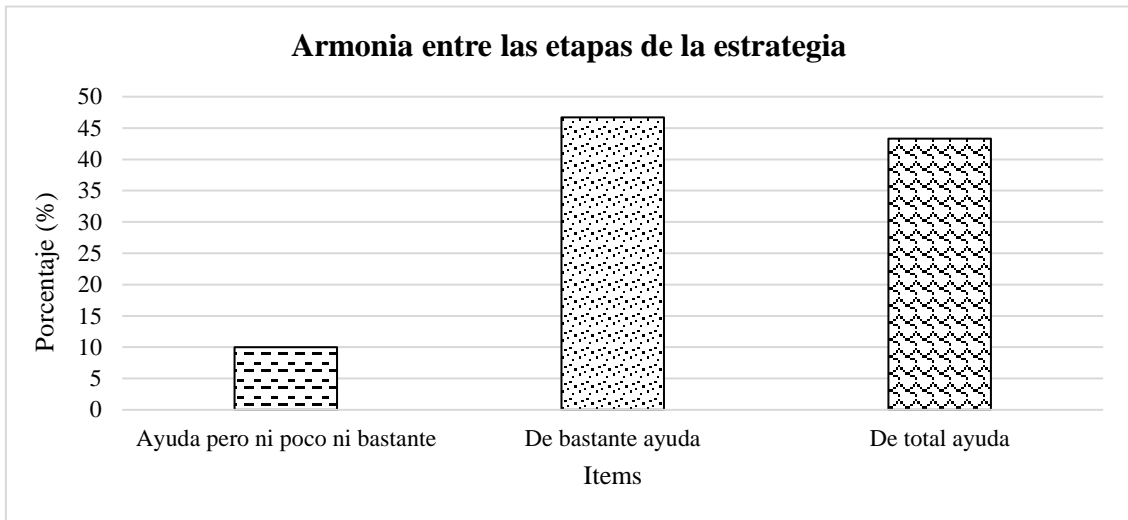
the results of the survey of experts related to how or at which they consider that the strategy contributes to developing business digital competences. It can be seen that at least a fairly adequate evaluation was obtained and the median tendency is to be very adequate since 60% came to evaluate it in this way (Figure 5).

Figure 5. Criteria for the digital competences of professionals



The opinion of the experts related to the harmony between the stages of the strategy and the contribution to the system of digital competences defined for workers, allows us to verify that evaluations of "enough" or "total" help

also predominate, reaching 90%. Only in 3 cases (10%) is there a mid-term evaluation: "help, but neither little nor enough" (Figure 6).



resources defined in the strategy they consider most useful to achieve the purpose of developing digital skills. The Cochran test confirms that there are highly significant differences between the markings of the different resources; But no finds significant differences in the first group of most frequent resources and the second group of less frequently reported resources (Figure 7).

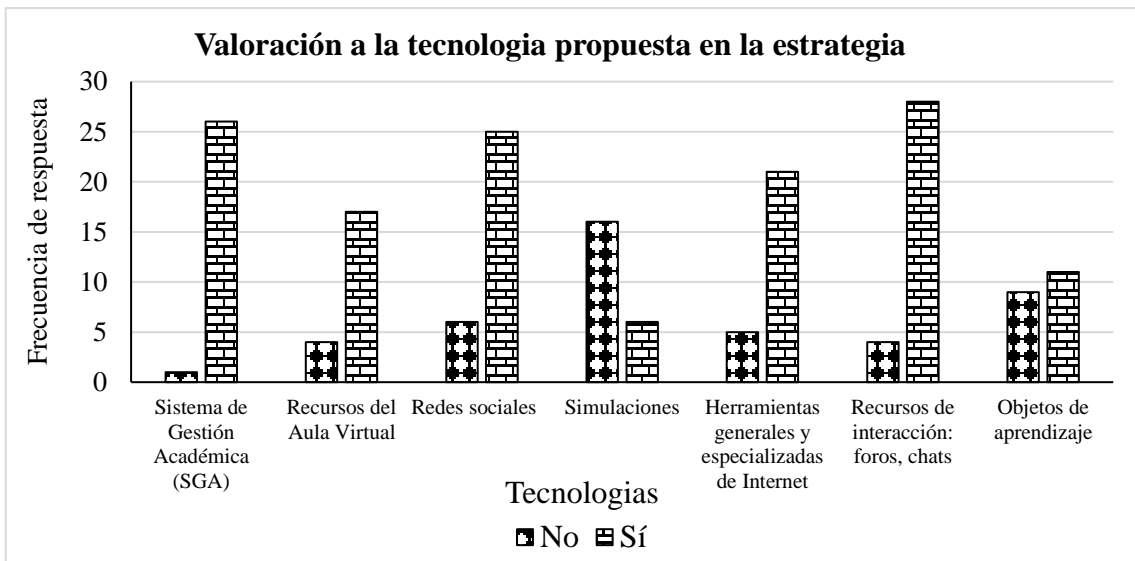
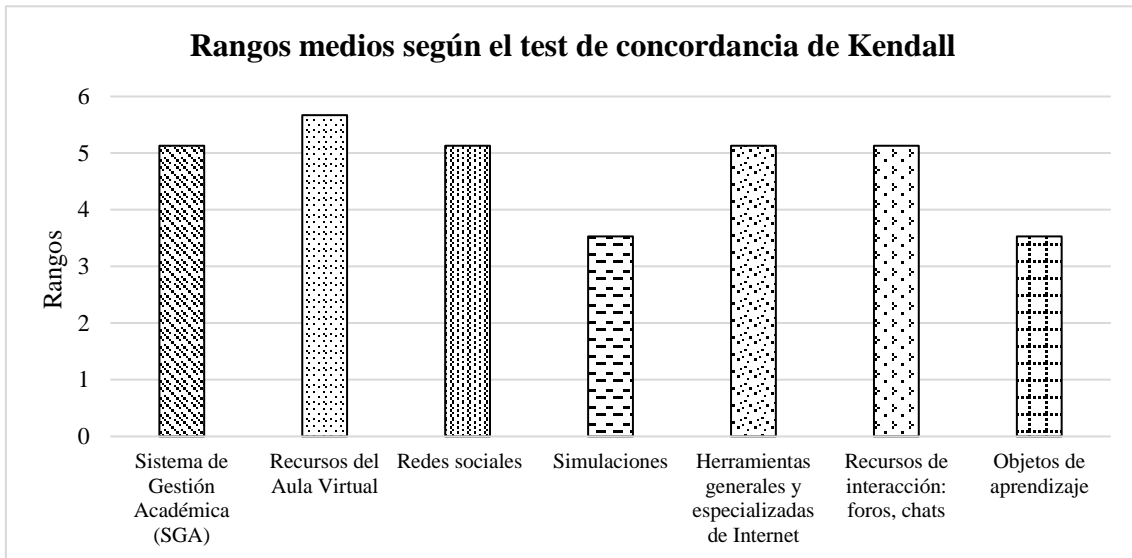


Figure 7. Assessment of experts in relation to the technology proposed in the strategy

The above information is supplemented by the order of importance explicitly given by the experts to each of the resources. This should not be confused with the frequency with which each of the resources were flagged, as an appeal may have been flagged more frequently, but by explicitly requesting the order of importance that the expert attaches to it may not necessarily be one of the first. To determine to what extent there is a concordance in the order assigned by the experts, a Kendall concordance test is applied. The

agreement, measured by the coefficient of agreement is not very high ($W=0.324$) but is quite different from zero (which would be a total disagreement). The average ranges of the responses are significantly well marked and therefore a consensus order of the importance assigned to the resources can be reached from them. Thus, the Academic Management System (SGA, e-learning platform), Virtual Classroom Resources, Social Networks, General and Specialized Internet Tools, Interaction Resources: forums, chats and less valued Simulations and Learning Objects are evaluated as the most important (Figure 8).



and collaborative work of students show that the criteria that some or no total support is achieved with 63.4% of responses to this item predominate, there were no worse opinions (Figure 9).

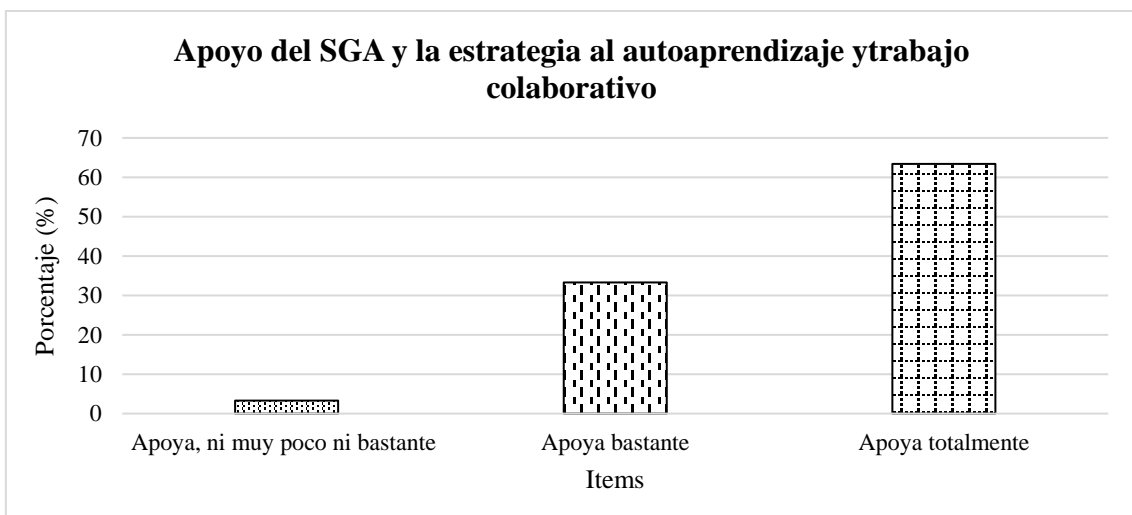
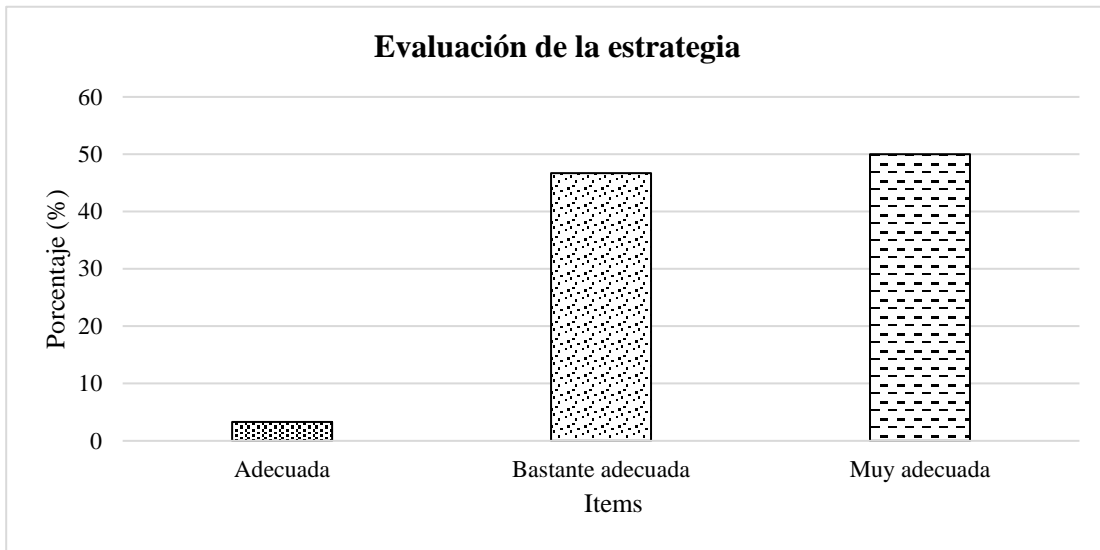


Figure 9. How the strategy and EMS supports self-learning and collaborative work

Finally, when consulting the experts on the Training Strategy to strengthen digital competences through the use of ICTs/TACS in PRODEUTEQ-EP,

formed in 4 stages, with actions that contribute to forming the previously defined competence system, the vast majority of evaluations were quite or very adequate and only one case, evaluated it as adequate (Figure 10).



DISCUSSION

Accelerated changes in business processes demand that technicians, professionals and managers are increasingly better prepared and ready to solve problems and needs with effective solutions. The better human groups manage to become intelligent collectives, open cognitive subjects, capable of initiative, imagination and quick reaction, the better they ensure their success in the highly competitive business environment, this coincides with , when it states that everything is based, in the long term, on the flexibility and vitality of production networks, of transaction and knowledge sharing.(Levy, 2004)

According to the research developed, it is observed that ICT has a positive impact, not only in the daily life of individuals, but also in the labor and professional aspects, there must be access to an efficient infrastructure and effective education in terms of digital skills since 46.7 7 50% of experts consider it quite adequate and very adequate, according to (Scheel, 2005) points out that the competitive performance of a company is achieved when technologies are used to establish synergies between core business activities, as well as to support industrial structures and their external drivers, for their part. (Estavillo, 2016)and, consider that the adoption of digital tools can cheapen, speed up and considerably facilitate routine tasks that require numerous transactions.(Salas & Rodríguez, 2021)

The innovative process is not only about incorporating new technologies into the classroom, or changing one learning model for another; requires sound decisions based on knowledge of the needs of the learning community and the way in which individuals learn, especially in this century, in which

technological tools are more and more common, easy to acquire and manage, according to , they note the need for instructional design to be coupled with an adequate pedagogical approach, or andragogic, as the case may be, since the characteristics of the apprentices also influence decision-making regarding the type of tasks and the level of demand; In the case of this work, it was found that the participants have a minimum degree of undergraduate studies, have worked for more than three years and are between 30 and 40 years of age.(Pool & Pech, 2015)

The use of self-learning educational tools helps improve the quality of knowledge, strengthens and optimizes the activities of the company, according to the experts surveyed in the research 63.4% affirms that through the Academic Management System that is achieved enough or total support, reviews that in the mid-90s of the last century, Content Management Systems (CMS) emerged, software for content management. When this content management evolves, having educational purposes, it did not take long for integral systems for learning management, the Learning Management System (LMS), to emerge. These systems receive different denominations: Virtual Learning Environment (VLE), Course Management System (CMS), Learning Platform (LP), and in Spanish, learning platform, digital or virtual environments for learning (EVA), these environments or virtual learning platforms are fully articulated in the conception of distance education as mediated didactic dialogue. The success of an EVA will not necessarily be given by the use of state-of-the-art technological resources, but rather, by the adequate structuring and planning of learning activities, the selection of effective communication strategies, as well as by the continuous and timely monitoring of the training activities stipulated in the proposed planning. That is why the proper design of these courses must be a priority of teachers, at any level of education.(García, 2020)

When an organization plans the training of its employees, the most important investment should be oriented towards quality in the methodological design of the programs, since this variable is the one that has the greatest impact on the achievement of the final objectives of the course: new knowledge by the subjects learning, for , the training covers both the appropriation and the development of knowledge, Skills and behaviors. , in its research on MSMEs, considers that, in order to apply ICT in an effective way, which is reflected in an increase in productivity and innovation, it is necessary for companies to accompany the incorporation of technologies with the definition of strategies, management policies and work organization systems aimed at making communication and learning processes visible.(Gambetta, 2015)(Leibowicz, 2011)

The exposed research demonstrates the need, interest and growing commitment of companies and organizations to train in digital skills, which favor the quality of processes, raise productivity and meet the demands of

services according to the era of knowledge and information, it comes to agree with , by stating that training processes have evolved over time, due to changes in the world economy and technology. These transformations have dictated increasingly diverse patterns on job training and education needs.(Abarca, 2016)

CONCLUSIONS

There are limitations that affect the quality of processes, there is insufficient visibility of the products and services offered by the company; poor planning of face-to-face professional development (training), which limits job tenure or causes dropouts from training courses.

Limited use of the faculty, as a source of knowledge and professional updating and insufficient use of options to maintain interaction with customers.

Priority should be given to the use of training strategies based on ICT/TAC, which integrates pedagogical, didactic and technological aspects in instructional designs, which contributes to the development of digital competences of PRODEUTEQ-EP professionals, in order to adapt to changes, raise creativity, dissemination of products and services,

REFERENCE

- Abarca, A. Y. (2016). Training processes helped by ICT in the workplace. *Journal of Modern Languages*(25). <https://doi.org/https://doi.org/10.15517/rIm.v0i25.27710>
- Alvarez, A. H. (March 1, 2018). USMP Digital. Retrieved from <https://www.administracion.usmp.edu.pe/revista-digital/numero-1/que-es-la-transformacion-digital-en-las-empresas/>
- Arceo, M. G., Ramos, M. E., & Acosta, D. I. (2019). A vision of the digital skills of entrepreneurs in Villahermosa, Tabasco. *VinculaTégica EFAN*, 5(2), 1323 - 1335.
- Chiavenato. (2019). *Personnel management, the human capital of organizations*. McGraw Hill.
- Corica, J. L., Aguilar, M. D., Portalupi, C., & Bruno, A. (2010). *Instructional Design Fundamentals for the design of distance education materials*. Editorial Virtual Argentina.
- Estavillo, F. M. (May 11, 2016). *Digital skills and competitiveness*. Mexico City, Mexico : Instituto Federal de Telecomunicaciones.
- Gambetta, M. (2015). Training strategies developed in a state-owned corporate environment in Uruguay. *Cuadernos de Investigación Educativa*, 6(2), 71 - 88. <https://doi.org/http://dx.doi.org/10.18861/cied.2015.6.2.37>

- García, A. L. (March 30, 2020). LMS. Virtual platforms or virtual learning environments. Advantages and functionalities. (Mediated university contexts). Spain.
- Leibowicz, J. (March 2011). ICT-based training strategies for MSMEs. (Project: Research and development of ICT-based training methodologies for MSMEs). Montevideo, Uruguay: CINTERFOR.
- Levy, P. (2004). Collective intelligence: for an anthropology through cyberspace. BIREME.
- López, G. E. (2018). The Delphi method in current research in education: a theoretical and methodological review. *Education XXI*, 21(1), 17 - 40.
- Oubiña, B. J. (2020). Digital transformation, social networks and e-commerce in the business strategy against covid-19. *Economists*, 170, 140 - 155.
- Pool, C. F., & Pech, C. S. (2015). Instructional design of the virtual course for operators in the new accusatory system of the state of Yucatan. In E. P. Sánchez, & C. E. Cisneros, *Innovation and evaluation of higher education* (p. 216). Pearson.
- Salas, R. E., & Rodríguez, P. P. (2021). Las competencias digitales en TIC aplicadas en las organizaciones. *International Journal of Information Systems and Software Engineering for Big Companies*, 7(1), 25 - 35.
- Scheel, C. (2005). Creating economic value added through enabling technologies. *Journal of Integrated Design and Process Science*, 9(4), 41-59.