Google Forms en la evaluación diagnóstica como apoyo en las actividades docentes. Caso con estudiantes de la Licenciatura en Turismo

Google Forms in the diagnostic evaluation as support in the teaching activities. Case Students Bachelor of Tourism

Formulários do Google na avaliação diagnóstica como suporte nas atividades de ensino. Caso com os alunos do curso de Turismo

Hermelinda Patricia Leyva López
Instituto Politécnico Nacional, Escuela Superior de Turismo, México
hleyval@ipn.mx
https://orcid.org/0000-0002-5896-908X

Monserrat Gabriela Pérez Vera
Instituto Politécnico Nacional, Escuela Superior de Turismo, México
mperezve@ipn.mx
https://orcid.org/0000-0002-0697-5744

Sandra Mercedes Pérez Vera
Instituto Politécnico Nacional, Escuela Superior de Turismo, México
sperezv@ipn.mx
https://orcid.org/0000-0002-7721-8943

Resumen

Como herramienta digital de apoyo a las actividades docentes, se exploró el uso de las tecnologías de la información y la comunicación (TIC) en la creación y uso de formularios elaborados con Google Forms. Para ello se realizó un estudio cualitativo de diseño no experimental de tipo exploratorio-descriptivo. Y se diseñó un instrumento para identificar los conocimientos previos con que ingresaron los estudiantes de la unidad de aprendizaje de Tecnologías de la Información y la Comunicación de la Licenciatura en Turismo en la Escuela Superior de Turismo (EST) del Instituto Politécnico Nacional (IPN). Los resultados obtenidos en la sección sociodemográfica, proporcionaron información sobre la conformación de los grupos en cuanto al predominio del sexo, edad y situación civil, entre otros datos; en los usos académicos de la red, información sobre éstos y el tiempo

invertido por día, las habilidades personales de los alumnos con respecto al uso de las TIC (y sus saberes previos), por último, en el área de rendimiento académico y situación económica con que ingresaron los estudiant4es, datos que identificaron la pertinencia de canalizarlos al área respectiva con el fin se solicitar apoyos económicos para la continuidad de sus estudios. Finalmente se obtuvo información relevante para adecuar el modelo de evaluación y el plan didáctico de la asignatura, enfocado en el desarrollo de competencias, siendo algunos usos de la red para asuntos académicos y otros para la adquisición de habilidades personales.

Palabras clave: competencias, cconocimientos previos, Google Forms, herramienta digital, modelo de evaluación, TIC.

Abstract

As a digital tool to support teaching activities, the use of information and communication technologies (ICT) in the creation and use of forms developed with Google Forms was explored. To this end, a qualitative study of non-experimental design of exploratory-descriptive type was carried out. And an instrument was designed to identify the previous knowledge with which the students of the Information and Communication Technologies learning unit of the Tourism Degree at the Higher School of Tourism (EST) of the National Polytechnic Institute (IPN) entered. The results obtained in the sociodemographic section, provided information on the conformation of the groups in terms of the predominance of sex, age and civil status, among other data; in the academic uses of the network, information about these and the time invested per day, the personal skills of the students with respect to the use of ICT (and their previous knowledge), finally, in the area of academic performance and economic situation with which the students entered, data that identified the pertinence of channeling them to the respective area in order to request economic support for the continuity of their studies. Finally, relevant information was obtained to adapt the evaluation model and the didactic plan of the subject, focused on the development of competences, being some uses of the network for academic matters and others for the acquisition of personal skills

Keywords: acquired knowledge, students, Google Forms, digital tool, ICT.

Resumo

Como uma ferramenta digital para apoiar atividades de ensino, o uso de tecnologias de informação e comunicação (TIC) na criação e uso de formulários desenvolvidos com o Formulários Google foi explorado. Para tanto, foi realizado um estudo qualitativo de delineamento não experimental do tipo exploratório-descritivo. E foi elaborado um instrumento para identificar os conhecimentos prévios com os quais ingressaram os alunos da unidade de ensino de Tecnologias de Informação e Comunicação do Curso de Turismo da Escola Superior de Turismo (EST) do Instituto Politécnico Nacional (IPN). Os resultados obtidos na seção sociodemográfica, forneceram informações sobre a conformação dos grupos em termos do predomínio do sexo, idade e estado civil, entre outros dados; nos usos acadêmicos da rede, informações sobre estes e o tempo investido por dia, as habilidades pessoais dos alunos com relação ao uso das TIC (e seus conhecimentos prévios), enfim, na área de desempenho acadêmico e situação econômica com a qual os alunos ingressaram, dados que identificaram a pertinência de canalizá-los para a respectiva área, a fim de solicitar apoio econômico para a continuidade de seus estudos. Por fim, foram obtidas informações relevantes para adaptar o modelo de avaliação e o plano didático do tema, com foco no desenvolvimento de competências, sendo alguns usos da rede para questões acadêmicas e outros para a aquisição de habilidades pessoais.

Palavras-chave: competências, conhecimento prévio, Formulários Google, ferramenta digital, modelo de avaliação, TIC.

Introduction

Every educational process involves a permanent update in the teaching-learning process, where the demands and educational needs change. That is why, in order to provide a quality education, it requires the incorporation of information and communication technologies (ICT) in different contexts and see them as an ally in the development of skills, abilities and skills for teachers and for students.

The United Nations Educational, Scientific and Cultural Organization (Unesco, 2016) and the United Nations Educational, Scientific and Cultural Organization (OECD)

have proposed competences and standards regarding ICTs since the pedagogical dimension; They establish the need for teachers to take ownership of these in educational practice, with the purpose that leds serve to evaluate their actions, as well as to add them in the implementation of educational strategies (OECD, 2016).

ICT can modify and favor the teaching-learning processes oriented to the construction of meaningful learning (Coll, 2004, 2008), by using software and office tools available online, some of them, free of charge and easily accessible, to guarantee the permanent updating in the formation and professional life proposed, in this case, in the New Educational Model (NME) for the National Polytechnic Institute (IPN, 2004).

ICTs are also immersed in all our activities through technological devices used inside and outside the classroom, which requires teachers to be at the forefront with their use and adaptation in the classroom, to develop new methodologies and reformulate the teaching, implementing the necessary strategies that allow them to gather the necessary information for their teaching work. Burbules and Callister (2001) and particularly Barbero (2006), suggest "reorganizing teaching thinking about the new features of production of knowledge, such as hypertextuality, interactivity, connectivity and community" (p.16). Without a doubt, "the contexts of use and their purpose determine the capacity to transform teaching and improve learning (Coll, 2008, p. 17).

Diaz (2006) points out that making a diagnosis about what the student knows or wants to know, through the assessment of their knowledge, skills and dispositions, allows them to manifest their true potential and motivates them towards new learning.

In the IPN, the above has been considered. This is mentioned in its publication An Educational Model for the IPN (2004), where a series of prospects are established for 2025; in one of them it is mentioned that a diversified education offer, with an adequate use of cutting-edge ICT, offers ample training possibilities (p.60).

Also, reference is made to the design of the plans and programs of study, and points out the following as important:

> It will be important to consider that flexibility does not imply a reduction in the effort necessary to guarantee a high quality education. Likewise, the intensive use of communication and information technologies more appropriate to the level and specific content of the training should be considered. The combination of

modalities will allow a greater coverage and adaptation to the multiple needs of the aspirants. (p. 103).

Regarding the conceptualization of the evaluation, it is considered as a process that contributes to the improvement of quality, and that offers information to make value judgments and make decisions (p.120).

For the academic units to carry out the above, it is necessary to consider the General Rules for the Operation of the IPN academic model already mentioned, which indicate that, with respect to the recognition of studies, accreditation and certification of competences, consider that previously acquired knowledge can be recognized. For this, the structure of the model allows the design of general exams by area that can be supported by students of any level, without having to have studied the corresponding subjects to that area. Likewise, examinations will be designed based on the contents of the programs of the courses or training experiences so that the students can demonstrate that they have the knowledge, skills and attitudes required in a particular subject (IPN, 2004, p.146).

Theoretical foundation

The orientation of the IPN education, indicated by the Secretary of Public Education and cited in An Educational Model for the IPN (2014b), is "to prepare students to contribute to the welfare and progress of the Mexican community ... from the school the student must be interested in the life of the country, by their needs, by the way of satisfying them and by the problems of society "(p 42).

The theoretical courses focused on the transmission of knowledge no longer respond to the needs and expectations of future graduates in Tourism; It requires the acquisition of knowledge and high-level skills for the solution of academic and everyday problems (Díaz, 2006).

Unesco, in the document "World Declaration on Higher Education in the 21st Century: Vision and Action" (1998), proposes a new educational model centered on the student. In such a way that, in order to achieve a teaching focused on student learning, the application of innovative practices is required, based on obtaining the previous knowledge that students have the starting point for the adequacy of the plan didactic and the evaluation model; all of which will be the guide in the teaching-learning process in the subject in question, namely, Information and Communication Technologies.

In addition to the above, the IPN considers necessary an educational model designed in such a way that it facilitates the acquisition of the necessary tools so that students of all levels learn throughout their lives, have the bases for their permanent updating and acquire the competences for a successful practice of their profession in the local, national and international fields. This without neglecting the opportunities to grow and consolidate in the aspects of human and social development (IPN, 2004, p.180).

Perrenoud (1999) cited in the Manual for the redesign of plans and programs within the framework of the New Educational and Academic Model (2004a), defines the competencies as follows:

> Ability to act effectively in a defined type of situation, a capacity that relies on knowledge, but is not limited to them. To deal with a situation in the best possible way, we must generally make use of and associate several complementary cognitive resources, among which are the knowledge they use, integrate, mobilize knowledge (p.30).

While the OECD characterizes them in the following terms:

> The set of knowledge, skills and abilities that can be learned, allow individuals to perform an activity or task in an appropriate and systematic way, and that can be acquired and expanded through learning (2017, p. 3).

On the other hand, the previous knowledge indicates in its epigraph Ausubel, Novak and Hanesian (1983), are: "the most important factor that influences learning, is what the student already knows, find out this and teach him accordingly". Thus, this knowledge produces an interaction between the most relevant knowledge of cognitive structure and new information, favoring differentiation, and favoring differentiation, its evolution and stability of the entire cognitive structure.

Put in such terms, then, for the evaluation and identification of previous knowledge of the students, it can be found that there is a variety of instruments focused on obtaining information, such as observation, surveys, interviews, checklists , the questionnaires, all of which constitute a means to gather information necessary for the object of study.

To address one of the premises of the educational model listed above, it is considered necessary to use ICT. Currently, there are different tools to create forms such as Typeform (which allow to use multimedia elements), Formdesk (with a variety of features for its

design, management and obtaining information available not all in the free version), and Google Forms, which allows to see the results online already plotted or download them in an Excel spreadsheet.

Google has implemented a variety of office tools for use in the cloud, such as spreadsheets, presentations, text documents and the creation of forms such as Google Forms, which does not have a definition as such. , but gives a description of what can be done; Google Forms allow you to plan events, send a survey, ask questions to a certain audience (students, in this case) or collect other types of information easily and efficiently, according to your own description, which, it is considered, partially reflects the true range of uses offered. In this investigation, it is a questionnaire with a series of questions formulated with the information that is intended to be obtained. The questionnaire can be sent or published online to be answered by the recipients, according to the pedagogical or didactic scenario in which it is applied, obtaining the results in virtual form or in a spreadsheet, for its use, storage and consultation in the cloud from your cell phone, tablet or personal computer, always through the Google email account. The information is not properly in the mail, it is stored in Google Drive, which is another of the technological tools that this company has.

What does the Google Forms tool allow?

➢ Create, edit, modify, adapt and publish online forms (to conduct opinion surveys, inscriptions, information gathering, etc.).

➢ Insert images and videos to the form.

➢ Choose the theme of the form using predesigned templates or images and own logos.

➢ A varied typology of question and answer options (multiple choice, text to complete, short answer, paragraph, choose from a list, etc.).

➢ Work individually or collaboratively at a distance.

➢ Edit, chat and comment in real time together with other people.

➢ Share forms on websites, by mail or by sending a link, granting editing or read-only permits.

➢ Download and print forms.

➢ Automatically generates a first treatment of basic statistics

➢ Export the data in a spreadsheet to perform different analyzes and have it available in Google Drive.

➢ Share the results of the form with other Google users.

➢ Observe the results in graphic representations. (Valijas de herramientas TIC, 2016, p. 1).

As a recapitulation, there is a wide variety of opportunities for use with ICT and this is a particular experience, which shows the use and application of digital forms to obtain useful information for teaching activities during the period August-December 2017. Specifically, it was intended to obtain information regarding previous knowledge available to students entering the Tourism Degree. It is a digital instrument developed and applied in Google Forms, which is not ruled out as a reference for other studies. The starting point was to share the use of Google Forms in the diagnostic assessment as support in teaching activities in the context and case already mentioned.

Methodology

The research is exploratory-descriptive, not experimental (Hernández, Fernández and Baptista, 2010); the experience of the creation, application and obtaining of information of the 88 students enrolled in the subject Information and Communication Technologies that is taught in the first semester of the Degree in Tourism in the EST of the IPN, in the school system was collected , during the August-December 2017 semester. It was also developed in Google Forms and answered through a link that was provided at the time of its application.

The subject is located in the branch of the basic institutional subjects, in the curricular map of the degree in question. The programs are designed by units (and each one is not developed in particular) and the educational model is by objectives. The new educational model establishes a need to focus on competences and that is centered on the students, which is not contemplated in the plans and programs of study, for which the didactic plan and the evaluation model according to the detected requirements are designed in the diagnosis at the beginning of the semester, diagnosis made and applied through the online questionnaire developed in Google Forms.

The didactic planning for Catalano, Avolio and Sladogna (2004), mention the following:

A project on how to teach, an alternative to specify each module in a specific context. It should not be thought of as a single path to follow, since it would be acting inconsistently with the pedagogical principles of the competence approach. The need to recover the previous knowledge, experiences, interests and problems raised by the participants, as well as the significance of the teaching and learning processes in the specific contexts in which they are developed. (p.178).

While for Alonso (2009), it is about:

Design a work plan that includes the elements that will intervene in the teaching-learning process organized in such a way as to facilitate the development of cognitive structures, the acquisition of skills and modification of students' attitudes in the time available for a course within of a curriculum (p. 1).

In the didactic planning, the educational practice is organized from the elements of the context in which the action takes place, the characteristics of the students and the resources that are available. It is elaborated from the analysis, justification and sustenance with which the didactic intervention strategies chosen for the process are given meaning and with the scopes that are expected of the students, as well as the way in which the evaluation will be carried out.

The evaluation model should make it possible to measure the achievements of planning and correspond to it, the evidence from the activities, the formative nature, as well as allow to ratify the competences and products of the activities of the teaching.

For the development of the instrument with Google Forms, the following variables were determined:

- ➢ The subject of the survey
- ➢ The type of information to obtain (demographic, school, etc.).
- ➢ Be creative in its preparation
- ➢ The creation and obtaining of the questionnaire with open and closed questions.
- ➢ That he had options to review and correct or improve it before its application.
- ➢ Diversify the forms with images, texts and other support elements.

The questionnaire for prior knowledge was applied on the first day of class to the 88 students enrolled in the subject already specified in the August-December 2017 period; It was made through the Internet, and had the following sections:

1) Provide sociodemographic information (name, age, sex, marital status, school of origin, if it was your first choice, if you work, time from home to school, etc.) to know how the groups are formed.

2) Academic uses of the network (if you have a computer, operating system used, if you have Internet, the hours you spend surfing the Internet and how much of that time you spend on academic activities and how many hours you spend at leisure, number of email accounts, uses provided to these, among others) to know the time invested to these per day.

3) Personal skills in the use of ICT. (level of use of the word processor, databases, programs, creation of web pages, presentations, programs for video editing, use of different browsers, communication tools, storage in the cloud, to mention a few) to know the competences with what counts (previous knowledge).

4) Academic performance (average, if you have a technical degree, if you have a scholarship), your academic and economic situation to identify the relevance of channeling them to request financial support for the continuity of your studies.

Results

The questionnaire for prior knowledge provided the following information:

In the section corresponding to sociodemographic information, 87.5% comes from public institutions: 51.1% of vocational, 22.7% of baccalaureate and 13.6% of high school, mainly, and in smaller amount of the Cedntro of Technological, Industrial and Services Studies (CETis) , of the National College of Professional Technical Education (Conalep) and La Salle University. (see figure 1).

Figura 1. Institución de procedencia

¿Institución de procedencia?

88 respuestas
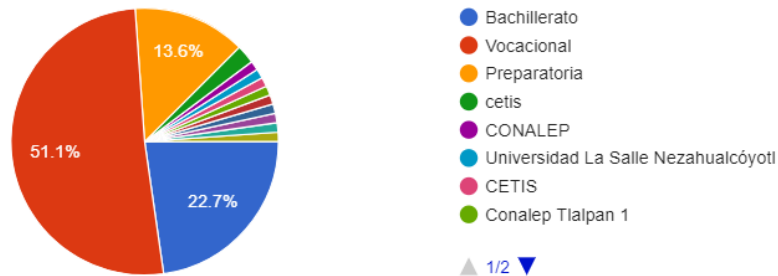
Fuente: Elaboración propia

Of the 88 students surveyed, who entered the bachelor's degree when they finished their high school studies, 75% said that the EST was their first option, while 18.2% mentioned that it was the second option. It is worth noting that 77.3% did not have a career change in their plans, 22.7% said that possibly. (see figure 2).

Figura 2. Elección de la carrera

¿La Escuela Superior de Turismo fue?

88 respuestas
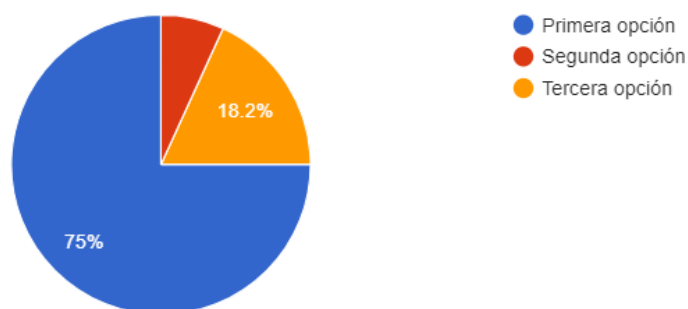
Fuente: Elaboración propia

In this race the female sex predominates with 86.4%. (see figure 3).

Figura 3. Sexo de los encuestados
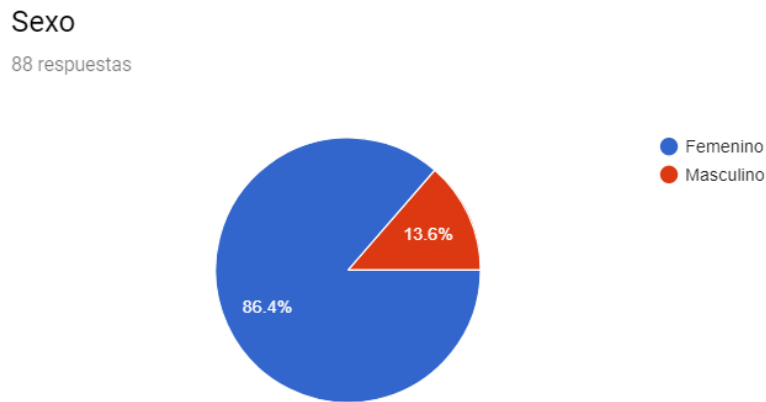
Fuente: Elaboración propia

Regarding the civil status of the students, 98.9% are single. And their age range is as follows: 61.4% are between 17-18 years, 25% between 19-20 years, 11.4% between 20-21 and only 2.2% are older than 21 years (see Figure 4). Regarding their occupation, 86.4% are exclusively students, while 13.2% work (it is worth mentioning that their work is not linked to the career they study).
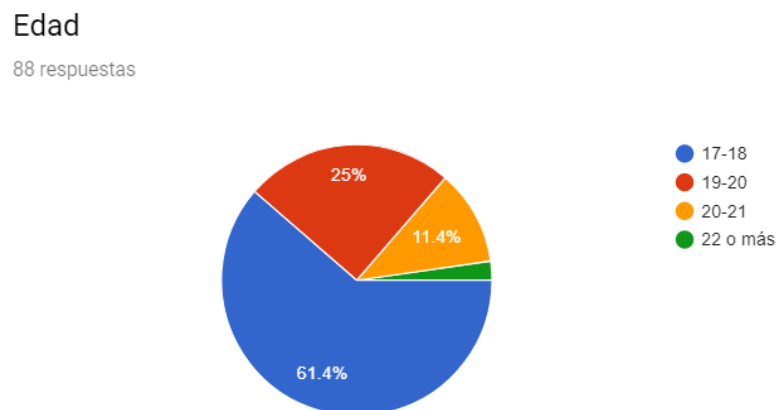
Figura 4. Edad

Figura 4. Edad.

Fuente: Elaboración propia

In Mexico City, 62.5% and the rest, 37.5% in the conurbated zone. Half of the respondents take a 2 hour range to get to school, while for 28.4% the route takes them between 0.5-1 hour and 21.6% of 2-3 hours (see figure 5). They live with parents and siblings 11.4%, with mother or father or grandparents 89%.

Figura 5. Tiempo para llegar a escuela

¿Qué tiempo tardas en llegar a la escuela?
88 respuestas

- 30 minutos a 1 hora
- 1:30 a 2:00 horas
- 2:00 a 3:00 horas
- Más de 3:00 horas

50%
21.6%
28.4%
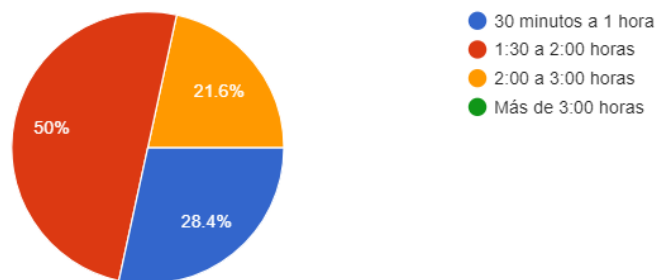
Fuente: Elaboración propia

Academic uses of the network

It has personal equipment, 81.8%, also, the majority, 85.2%, uses the Google Chrome browser (see Figure 6); 92% have a Windows operating system, and 87.5% have Internet access.

Figura 6. Navegador utilizado

¿Navegador que utilizas?
88 respuestas

- Microsoft explorer
- Firefox Mozilla
- Chrome google
- Opera
- NO TENGO

85.2%
9.1%
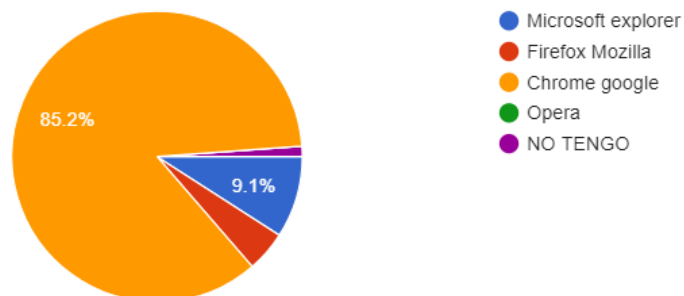
Fuente: Elaboración propia

On the other hand, 45.5% of respondents report that a week is connected from four to seven hours and 38.6% less than three hours. Of this time, 37.5% is dedicated to activities related to their studies (see figure 7). And regarding mail addresses, 95.5% have from one to three accounts.

Figura 7. Tiempo de la conexión dedicado a los estudios.
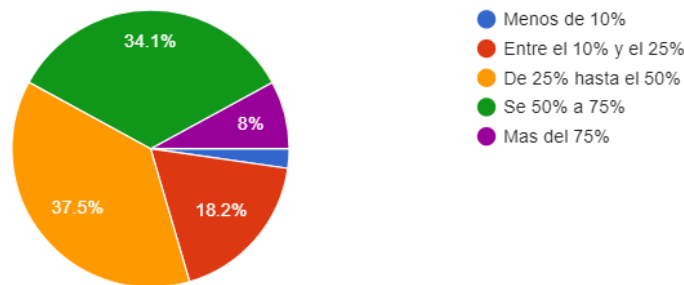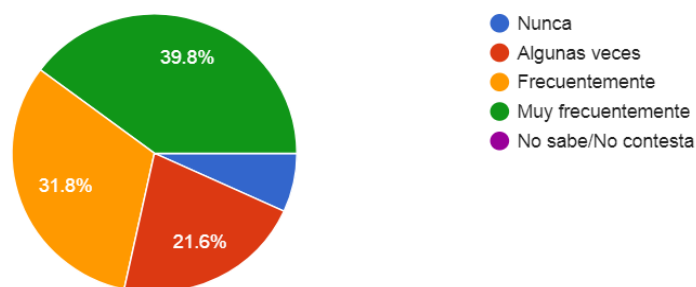

Fuente: Elaboración propia

In terms of online communication with classmates to carry out academic activities, 39.8% of students carry it out very frequently, 31.8% frequently, 21.6% sometimes and 6.8% never (see figure 8).

**Figura 8.** Tiempo de conexión a diversos servicios de la red

Fuente: Elaboración propia

In figure 9, on the other hand, we observe the frequency with which the respondents established communication with their teachers. On the other hand, it is observed in the graph, that to establish communication with their professors of the previous level via email: 72% never He did it, 14% sometimes and only 9% frequently.

Figura 9. Comunicación con profesores

¿Cuántas veces te dirigiste durante tu bachillerato a un profesor, vía e-mail, para expresarle ideas que no te atreverías a decirle cara a cara en clase?

88 respuestas

- Nunca
- Algunas veces
- Frecuentemente
- Muy frecuentemente
- No sabe/No contesta
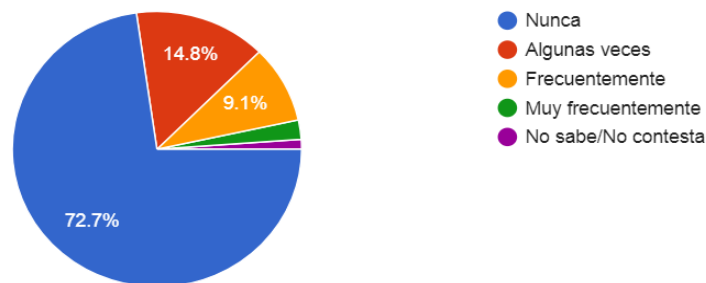
Fuente: Elaboración propia

Regarding the consultation of online catalog, databases and the act of obtaining materials for academic activities from the library's website, 43.2% reported never having done it, 33% sometimes, 12.5% frequently and 9.1% very frequently . (see figure 10).

Figura 10. Usos de la página web de la biblioteca

¿Con qué frecuencia utilizabas la página web de la biblioteca de tu última escuela, para consultar el catálogo en línea, las bases de datos disponibles o bajar materiales que empleas en tus actividades académicas?

88 respuestas

- Nunca
- Algunas veces
- Frecuentemente
- Muy frecuentemente
- No sabe/No contesta
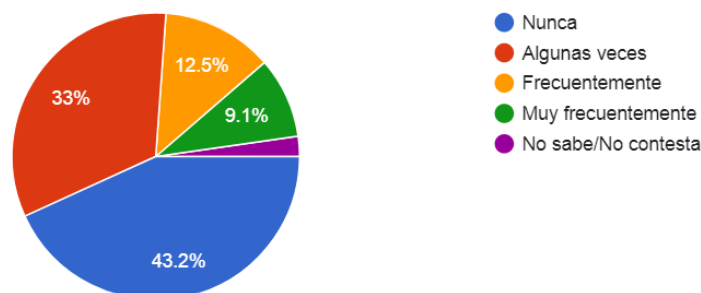
Fuente: Elaboración propia

Likewise, the students reported the following regarding the frequency of the use of ICT requested by teachers: 35% who frequently do so, 31% very frequently and 28% sometimes (see figure 11).

Figura 11. Solicitud de uso de las TIC por profesores

¿Con qué frecuencia tus profesores solicitaban que utilizaras las TIC (WWW, Internet, e-mail, debates en línea, multimedia, etc.) , además del procesador de textos, para realizar los trabajos asignados en clase?

88 respuestas
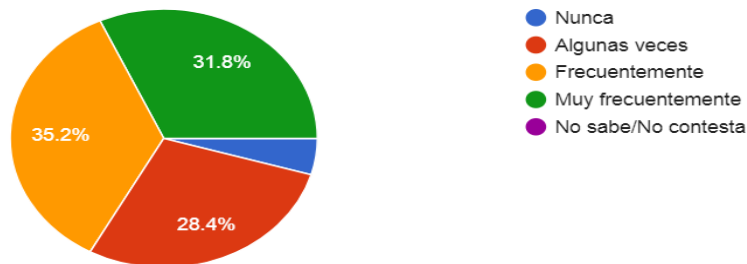
Fuente: Elaboración propia

On the other hand, the field on the frequency of use of ICT to perform the development of a class as a team yielded the following information: 40% indicate that sometimes, 33% frequently and 24% very frequently (see figure 12).

Figura 12. Trabajo en equipo con el uso de las TIC

¿Cuántas veces has tenido la oportunidad de trabajar en equipo - durante el desarrollo de una clase – con el apoyo del uso de las TIC?

88 respuestas
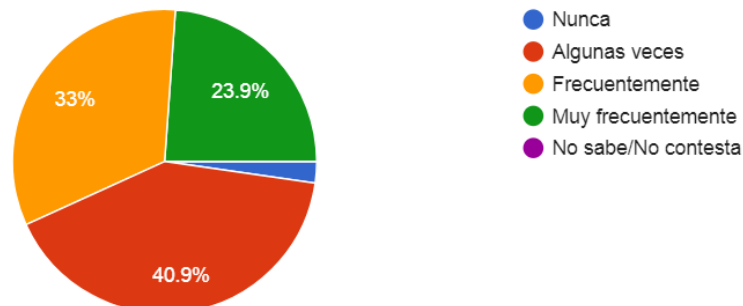
Fuente: Elaboración propia

In general, respondents reported some of the following uses and actions related to ICT: 46.6% consulted websites in libraries or universities, 48.9% had the opportunity to consult with a teacher to clarify doubts, 44.8% required support of library staff to obtain materials for some academic activity, 43.2% have been able to reflect on the quality of information obtained by Internet (59.1% acknowledge having copied information for their work without citing the source), 70.5% have not taken an online course and 48.9% reported that teachers frequently use some technological resource in class.

In terms of personal skills in the use of ICT, we sought to identify the level of competence to manage some software, as well as its application to various activities, and to know if they could perform some activities alone, with some help or if they had never carried out this type of tasks (see figure 13). For greater readability, the most relevant results were grouped in Table 1.

Tabla 1. Habilidades personales para el uso de las TIC

PREGUNTA	Puedo hacerlo solo	Puedo hacerlo con un poco de ayuda	Nunca he realizado este tipo de tareas
Procesador de texto (Ejemplo: En Word crear un índice automático o elaborar tu CV dándole formato)	55.7%	37.5%	6.8%
Hoja de Cálculo (Ejemplo: Excel para realizar bases de datos simples)	35.7%	54%	10.3%
Base de datos (Ejemplo: En Access, crear tu propia base de datos).	20.5%	36.3%	43.2%
Programa de gráficos (Ejemplo: En Paint, crear un mapa conceptual con texto e imágenes).	63.6%	28.4%	8%
Creación de páginas en internet (Ejemplo: con FrontPage o HTML, crear tu propia página web).	39%	44.3%	17%
Elaborar presentaciones (Ejemplo: con PowerPoint, crear una presentación con sonido, imágenes, links, etc.)	80.7%	18.2%	1.1%
Elaborar presentaciones online (Ejemplo: con Prezi crear una presentación con sonido, imágenes, links, etc.)	34.1%	28.4%	37.5%
Almacenamiento en la nube (Ejemplo: guardar documentos, videos imágenes en Dropbox, Skype).	54.5%	27.3%	18.2%
Edición de audio (Ejemplo: editar audio en formato Sound editor, Sony Sound, Audacity).	9.1%	36.4%	54.5%
Programa para edición de video (Ejemplo: Movie Maker, Photoshop).	40.9%	35.2%	23.9%
Realizar trabajo colaborativo (Ejemplo: compartir documentos en Googledocs o Dropbox).	36.6%	35.2%	26.1%

Fuente: Elaboración propia

Figura 13. Promedio de las habilidades con el uso de las TIC
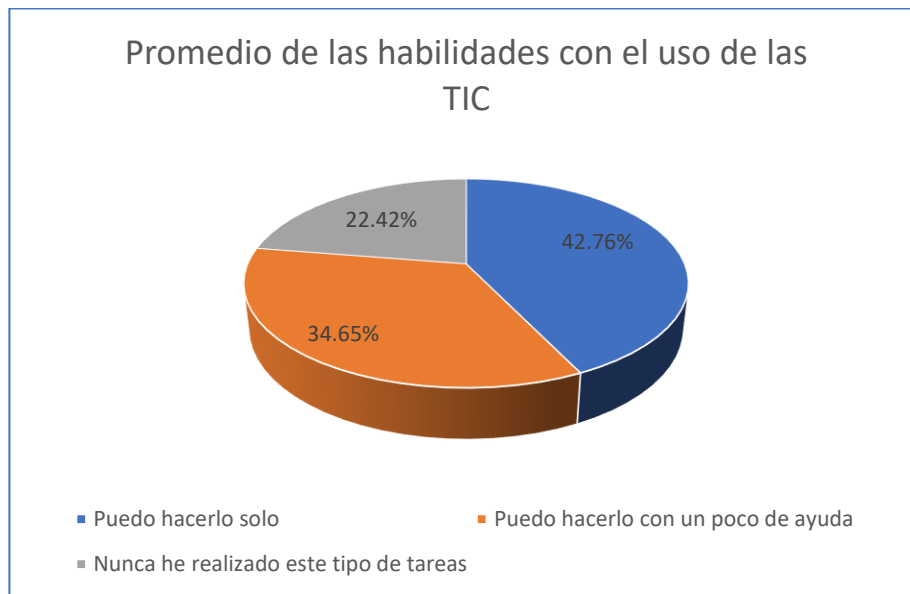
Fuente: Elaboración propia

When reviewing the results, it can be identified that 42.76% of students can use different software alone, 36.65% can use them with a little help and 22.42% have never done this kind of tasks; information that will allow you to plan your learning at an intermediate or expert level, based on Microsoft certification guidelines regarding office automation tools and programs that have not had an opportunity to learn, as well as, planning theoretical activities. practice for their learning and seek the development of competencies with their use.

Academic performance

In addition to all the above, information was sought to identify the pertinence of channeling them to the respective area, as already mentioned, for the request of financial support and thus support the continuity of their studies.

The majority of the respondents, 40.9%, entered the higher level with an average between 8.5 and 9, 36.4% with one of between 7.5 and 8, 14.8% between 9.5 to 10 and 8% with 6 and 7 of average (see figure 14).

Figura 14. Promedio

¿Cuál es tu promedio del nivel medio superior?
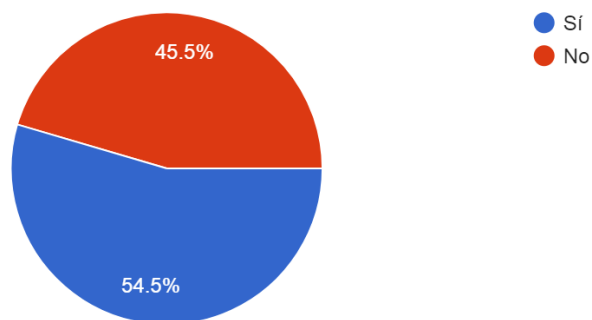
88 respuestas
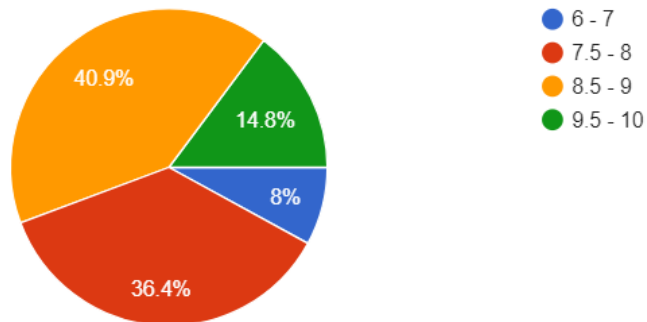
Fuente: Elaboración propia

Regarding the process of the title of the previous level, 54.5% indicate that they did obtain their degree at a technical level and 45.5% did not complete this procedure (see figure 15).

Figura 16. Trámite de título

¿Obtuviste o tramitaste título a nivel técnico?

88 respuestas

Fuente: Elaboración propia

In the subject of scholarships, 94.3% indicate that they do not have any and only 5.7% mention that they do have some financial support to continue their studies (see figure 16). It should be noted that the average is one of the requirements to participate in the process of any scholarship.

Figura 16. Beca

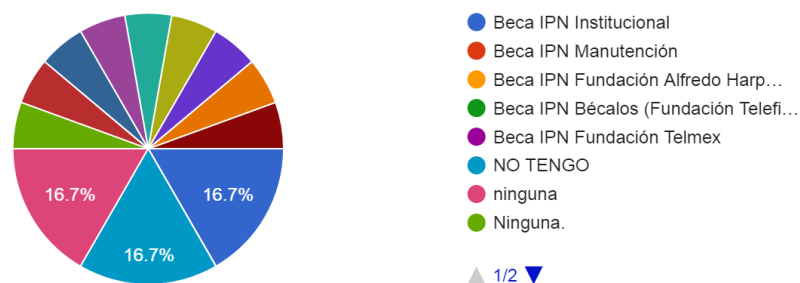## ¿Tienes beca?

88 respuestas
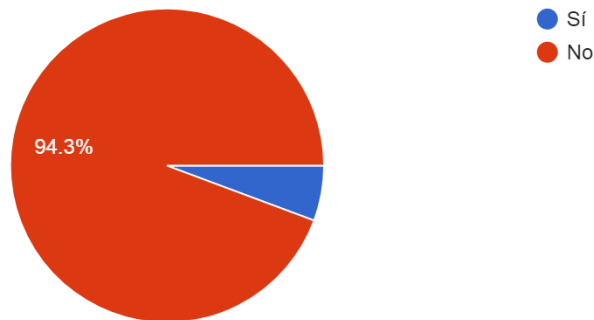
Fuente: Elaboración propia

And of that 5.7% of the students that indicate if they have any scholarships, 16.7% have the institutional, 16.7% the maintenance and 16.7% the Alfredo Harp Helú scholarship (see figure 17).

Figura 17. Tipo de beca

¿Cúal?

18 respuestas

Fuente: Elaboración propia

Discussion

In this qualitative research confirms the need to see ICT as allies in the development of skills, abilities and skills for teachers and students. In that case, the use of Google Forms served as a tool for the creation and obtaining of information of the students that entered the Degree in Tourism. This tool can also be contextualized from different scenarios to obtain information that supports the teaching-learning process.

Authors such as Cabero (1996) report the benefits of using ICT in the teaching-learning process, such as immateriality, which allows access to a lot of information in short periods and its transmission to faraway places, interactivity, when referring to the subject-machine relationship; the instantaneity, which breaks the temporal and spatial barriers; his innovation going from text to image and sound; their automation and interconnection, and the diversity of functions with which they can perform.

Many of these benefits, can be used and applied with the use of Google Forms and the best is that it is within the reach of any teacher who wishes to venture into its use and application. The appropriation of this type of resources is necessary for the implementation of new educational strategies as set out in the OECD (2016).

In addition, Google Forms is not limited to teachers, as students with their learning and progressive use, may apply online questionnaires and innovate during the acquisition of knowledge.

The tool allows access through cell phone, tablet, laptop or personal computer, as stated above, which diversifies its use and application.

The information of the previous knowledge obtained with the application of the questionnaire facilitates the adaptation of the didactic planning and the evaluation model focused on the competences to be developed in the students, which contributes to the improvement of the quality of the education pursued by the new model IPN education (2004b).

Conclusion

ICTs are here to stay and to evolve, so a constant updating of the teachers is required, so that they have the technological means for their academic activities and that they are assisted by them in the teaching-learning process.

The creation and application of instruments to evaluate or obtain information as in the present investigation, develops competences with the use of ICT for teachers and students and allows to make use of new tools available online, which can be adapted to the needs educators, in such a way that they serve as support in the teaching-learning process to carry out their academic work.

Among the applications, results and benefits of this resource, some of them already alluded to above, the following stand out:

Google Forms as a tool, facilitates the creation of questionnaires to obtain different information.

With its application it was possible to obtain a general panorama of the situation and context with which the students of the Tourism Degree enter, and for the elaboration of the didactic planning and the evaluation model of the August-December 2017 semester.

Google Forms as an ICT tool is versatile and can be adapted to obtain information in any of the subjects of the Degree in Tourism.

It favors the creation of spaces to obtain information that supports the teaching-learning process.

It is an accessible tool, does not require much computer knowledge, or programming.

You can diversify its use for self-learning activities of different themes for students.

Allows versatility of use, could be applied as a means of evaluation, which would be dynamic and reliable.

The obtaining of results is immediate, it allows to see the partial results and once finished its application to obtain the graphs with these and to download them in an Excel spreadsheet, in case that it is required of an extra analysis to the provided ones

Saving time and resources for your application, you can answer from your cell phone, tablet or personal computer; it only requires to have the link for its entrance and application.

However, like any computer tool, it can present problems at the moment of its application, although, in fact, many of them are alien to this:

Lack of internet for its application in the classroom.

Low energy at the time of application: saves the application, but does not allow it to continue; it has to be done again from the beginning. If this situation occurs, count your application, even if it is not finished, which will require subtracting those applications in the results.

If there is not enough internet broadband, when it is applied to many students the network could become saturated.

Proposals

Based on the results obtained and discussed above, the following proposals were obtained in relation to the application of ICT in an educational environment:

Constant training of teachers to incorporate new technologies that arise in the teaching-learning process.

Publicize the benefits of using Google Forms as one of the ICT tools for obtaining information.

Promote its use as a technological tool that is emerging in the knowledge society.

Socialize it with the academy for its use and creation of new contexts.

To investigate the use of tools for obtaining information through online questionnaires used by other teachers and to socialize the present experience with the use of Google Forms, as well as to reflect on educational practices using ICT.

Incursion with other Google applications focused on education and its didactic usefulness for teachers and students.

Constant training of teachers in the use of ICT, so that they are able to incorporate them into their teaching-learning process and contribute to the proposals of Unesco and the OECD, on the need to appropriate them, with so that they serve to evaluate their practices and implement educational strategies with their use.

Diversify and include the use of cell phones, tablets and computers for the application of this type of questionnaire from different places and develop skills and abilities in its use.

References

Alonso, M. E. (2009). La planeación didáctica. Cuadernos de formación de profesores, (3). Recuperdo de http://uiap.dgenp.unam.mx/apoyo_pedagogico/proforni/antologias/LA%20PLANEACION%20DIDACTICA.pdf.

Ausubel D. P. Novak, J. D. y Hanesian, H. (2009). *Psicología educativa. México,* (2a ed.). Ciudad de |México: Trillas.

Burbules, N. y Callister, T. (2001). *Educación: Riesgos y promesas de las nuevas tecnologías.* Buenos Aires, Argentina: Granica.

Cabero, J. (2006). Nuevas tecnologías, comunicación y educación. *Edutec-e. Revista Electrónica de Tecnología Educativa,* (1). doi:http://dx.doi.org/10.21556/edutec.1996.1.576. Recuperado de http://www.edutec.es/revista/index.php/edutec-e/article/view/576.

Catalano A. M, Avolio, S.y Sladogna, M. G. (2004). *Diseño curricular basado en normas de competencia laboral. Conceptos y orientaciones metodológicas.* Buenos Aires, Argentina: Banco Interamericano de Desarrollo.

Coll, C. (2004). Psicología de la educación y prácticas educativas mediadas por las tecnologías de la información y la comunicación. Una mirada constructivista. *Sinéctica. Revista Electrónica de Educación*, 25, 1-24.

Coll, C. (2008). Aprender y Enseñar con las TIC: expectativas, realidad y potencialidades. *Boletín de la Institución Libre de Enseñanza*, *72*, 17-40.

Díaz, F. (2006). *Enseñanza Situada: Vínculo entre la escuela y la vida*. Ciudad de México, México: McGraw-Hill Interamericana.

Hernández, S. R., Fernández C. C. y Baptista, L.P. (2010). *Metodología de la Investigación* (5ª. ed.). Ciudad de México, México: McGraw-Hill Interamericana.

Instituto Politécnico Nacional [IPN]. (2004a). *Manual para el rediseño de planes y programas en el marco del Nuevo Modelo Educativo y Académico Materiales.* Ciudad de México, México: IPN.

Instituto Politécnico Nacional [IPN]. (2004B). *Un Nuevo Modelo Educativo para el IPN. Materiales para la Reforma.* Ciudad de México, México: Instituto Politécnico Nacional.

Martín, J. (2006). La razón técnica desafía a la razón escolar. En Narodowski, M., Ospina, H. y Martínez, Q. A. (eds.). *La razón técnica desafía a la razón escolar.* Buenos Aires, Argentina: Novedu.

Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura [Unesco]. (1998). *Declaración mundial sobre la educación superior en el S.XXI: Visión y acción*. Unesco. Recuperado de http://www.Unesco.org/education/educprog/wche/declaration_spa.htm

Organización de las Naciones Unidas para la Educación la Ciencia y la Cultura [Unesco]. (2016). *Competencias y estándares TIC desde la dimensión pedagógica: Una perspectiva desde los niveles de apropiación de las TIC en la práctica educativa docente*. Chile: Multimedios. Recuperado de http://www.Unesco.org/new/fileadmin/MULTIMEDIA/FIELD/Santiago/pdf/Competencias-estandares-TIC.pdf.

Organización de las Naciones Unidas para la Educación la Ciencia y la Cultura [Unesco]. (2017). *Diagnóstico de la OCDE sobre la Estrategia de Competencias, Destrezas y Habilidades de México. Resumen Ejecutivo*. México: Unesco. Recuperado de https://www.oecd.org/mexico/Diagnostico-de-la-OCDE-sobre-la-Estrategia-de-Competencias-Destrezas-y-Habilidades-de-Mexico-Resumen-Ejecutivo.pdf

Secretaría de Educación Pública [SEP]. (2001-2006*). Por una educación de buena calidad para todos. Un enfoque educativo para el siglo XXI*. México: SEP. Recuperado de www.oei.es/historico/quipu/mexico/Plan_educ_2001_2006.pdf

Secretaría de Educación Pública [SEP]. (2001). *Programa Nacional de Educación* (2001-2006) (1ª ed.). Ciudad de México, México: SEP.

Valijas de herramientas TIC. (2016). *Formularios de Google – Guía de uso*. Recuperado de http://valijas.ceibal.edu.uy/storage/app/media/Guias%20de%20uso/Google%20formularios.pdf

Rol de Contribución	Autor(es)
Conceptualización	Hermelinda Patricia Leyva López Principal, Monserrat Gabriela Pérez Vera Apoya
Metodología	Hermelinda Patricia Leyva López Principal, Monserrat Gabriela Pérez Vera Apoya, Sandra Mercedes Pérez Vera Apoya
Software	NO APLICA
Validación	Hermelinda Patricia Leyva López Principal, Monserrat Gabriela Pérez Vera Apoya, Sandra Mercedes Pérez Vera Apoya
Análisis Formal	Hermelinda Patricia Leyva López Principal, Monserrat Gabriela Pérez Vera Apoya
Investigación	Hermelinda Patricia Leyva López Principal, Monserrat Gabriela Pérez Vera Apoya
Recursos	Hermelinda Patricia Leyva López
Curación de datos	NO APLICA
Escritura - Preparación del borrador original	Hermelinda Patricia Leyva López Principal, Monserrat Gabriela Pérez Vera Igual, Sandra Mercedes Pérez Vera Apoya
Escritura - Revisión y edición	Hermelinda Patricia Leyva López Principal, Monserrat Gabriela Pérez Vera Apoya Sandra Mercedes Pérez Vera Apoya
Visualización	Hermelinda Patricia Leyva López Principal, Monserrat Gabriela Pérez Vera Apoya
Supervisión	Hermelinda Patricia Leyva López
Administración de Proyectos	Hermelinda Patricia Leyva López
Adquisición de fondos	NO APLICA