

## Mejora de las competencias tecnológicas del docente en la educación media superior

*Improved technological skills of teachers in upper secondary education*

**Princesa de la Cruz Escalante Reyes.**

Universidad Autónoma de Campeche.

[prins\\_cruz@hotmail.com](mailto:prins_cruz@hotmail.com)

**Roger Manuel Patrón Cortés.**

Universidad Autónoma de Campeche.

[roger\\_patron\\_cortes@hotmail.com](mailto:roger_patron_cortes@hotmail.com)

**Luis Alfredo Argüelles Ma.**

Universidad Autónoma de Campeche

[luisarguellesmaa@hotmail.com](mailto:luisarguellesmaa@hotmail.com)

### Resumen

Este trabajo tiene como objetivo investigar el nivel de desempeño en Competencias Genéricas y Específicas de los Profesores de la Escuela Preparatoria Fernando Enrique Angli Lara, en el uso de los programas de Word, Excel y PowerPoint

Este estudio fue exploratorio de tipo descriptivo y utilizó métodos mixtos de recolección de datos. La investigación se realizó en la ciudad de San Francisco de Campeche, Campeche, México; a un total de 23 docentes e involucró: análisis documental, visitas de campo, cuestionarios, entrevistas cualitativas y observaciones.

Se encontró que las competencias específicas que presentaron un desempeño medio alto son: Word y Power Point. En la competencia específica de Excel manifestaron un desempeño medio. Aunque no todos los profesores utilizan estas tecnologías en sus clases, sus actitudes se han venido flexibilizando con el fin de hacer frente a los tiempos actuales y en beneficio de la mejora de los procesos de enseñanza-aprendizaje. La mayoría de las competencias que los docentes tienen en estas tecnologías son el producto de una voluntaria autoformación. Es recomendable que la institución promueva la capacitación de este tipo de cursos, aunado al apoyo técnico y

formativo que los docentes requieren en beneficio de la mejora de la calidad educativa.

**Palabras clave:** Competencia tecnológica, docentes, escuela preparatoria.

### Abstract

This work aims to investigate the level of performance and Specific Competencies of High School Teachers Angli Fernando Enrique Lara, in the use of programs such as Word, Excel and PowerPoint. This study was exploratory and descriptive and used mixed methods of data collection. The research was conducted in the city of San Francisco de Campeche, Campeche, Mexico, to a total of 23 teachers and involved: documentary analysis, field visits, questionnaires, qualitative interviews and observations. It was found that the specific skills had a high average performance are: Word and Power Point. Specific competition in Excel showed an average performance. Although not all teachers use these technologies in their classes, their attitudes have been very flexible in order to cope with the present times and the benefit of improving the teaching-learning processes. Most of the skills that teachers have enestas technologies are the product of a voluntary self-training. We recommend that the institution enhance the training of these courses, coupled with technical support and training that teachers require in favor of improving the quality of education.

**Key words:** Technological competence, teachers, school.

**Fecha recepción:** Agosto 2010

**Fecha aceptación:** Noviembre 2010

---

### Introduction

Generic and specific competencies arise in the international arena as a response to the need to improve the quality and relevance of human resource training in the face of technological evolution and new work systems, in order to improve the competitiveness of companies. organizations, living conditions and work of the population in general.

The concept of competence as it is understood in education, results from the new theories of cognition and basically means knowledge of execution. Since every process of “knowing” translates into “knowing”, then it is possible to say that competence and knowing are reciprocal: knowing how to think, knowing how to perform, and knowing how to act in different scenarios, from oneself and for others.

Allende and Morones (2006) define competencies as:

Set of knowledge, abilities and skills, both specific and transversal, that a graduate must have in order to fully satisfy social demands. Fostering competencies is the objective of educational programs. Competences are capacities that the person develops gradually and throughout the educational process and are evaluated at different stages. They can be divided into competencies related to professional training in general (generic competencies) or to an area of knowledge (specific to a field of study) (p. 4).

In Agreement number 442, of the Ministry of Public Education, which establishes the National Baccalaureate System within a framework of diversity, published in the Official Gazette on September 26, 2008, it is mentioned that for the competencies approach, as for constructivism, the quality of the learning process is more important than the amount of memorized data, in any case, contemporary society is characterized, among other things, by the accumulation of growing information available in various media. Effective learners should be able not so much to store knowledge as to know where and how to search for and process it.

Likewise, Agreement number 444 of the Ministry of Public Education, which establishes the competencies that constitute the common curricular framework of the National High School System, published in the Official Gazette on October 21, 2008, and modified by it, indicates that among the competencies referred to in this Agreement, it was concluded that generic competencies are those that all high school graduates must be able to perform, those that allow them to understand the world and influence it; they enable them to continue learning autonomously throughout their lives, and to develop harmonious relationships with those around them, as well as to participate effectively in the social, professional and political spheres. Given their

importance, these competencies are also identified as key competencies and constitute the profile of the graduate of the National Baccalaureate System.

Camorlinga, Mendoza and Maldonado, (2007) mention that currently, the instances that govern global and national education, such as UNESCO and ANUIES, as well as the certifiers, are betting that education is more based on the use of new information technologies and that should develop the skills in teachers, which allow them that heuristic culture. Given this, it is important to know the frequency of use and the type of technologies used to take guidelines and strategies at the Upper Secondary Level.

Gómez (2008) divides the Generic and Specific competencies according to tables 1 and 2.

Table 1.

*Generic Information and Communication Theory (ICT) Competencies*

**HARDWARE: CPU Y PERIFÉRICOS**

**Nombrar y usar elementos básicos**

**E. físicos.** Nombrar y explicar sus funciones

**Interruptores.** Apagar y encender bien

**Ratón.** Usar con soltura y fineza. Botones

**Teclado.** Usar todos los dedos

**Teclas especiales** y atajos de teclado

**Escáner.** Escanear una imagen y guardarla

**ACTITUDES**

Reconocer y evitar la tecnofobia

Reconocer y evitar la tecnofascinación

Reconocer y evitar la adicción a: los juegos, correo electrónico, chat, foros, navegación, acumular información.

Controlar el tiempo dedicado al ordenador.

**SISTEMAS OPERATIVOS**

**Nombrar y usar elementos básicos**

**Iconos.** Crear, usar y eliminar iconos  
**Inicio** y barra de tareas. Usar y personalizar

**Programas.** Buscar, abrir y cerrar  
Usar la **ayuda** de los distintos programas.

**Ventanas.** Minimizar, restaurar, cerrar  
**Unidades** y **soportes.** Reconocer y acceder

**Red.** Acceder a la red y trabajar en red

**Procesar información**

**Carpetas.** Crear, eliminar, copiar, cortar y mover.

**Archivos** o **doc.** Guardar, eliminar, copiar.

**Propiedades.** General, compartir, personalizar

---

<p>Conocer y aplicar las normas de etiqueta.</p>	<p><b>Explorador.</b> Buscar y recuperar carpetas y archivos.</p> <p><b>Impresora.</b> Imprimir un documento</p> <p>Acceder a la red y trabajar en red</p> <p><b>Mantenimiento del sistema</b></p> <p><b>Virus, antivirus, espías.</b> Precauciones básicas</p> <p><b>Papelera</b> de reciclaje. Tirar y recuperar</p> <p><b>Internet.</b> Navegadores, direcciones, favoritos, comandos, imprimir, guardar</p> <p><b>Búsqueda,</b> buscadores, buscadores, webquest.</p> <p><b>Correo electrónico.</b> Mensaje, uso, bandejas, direcciones, reglas de mensaje, webmail.</p> <p>Herramientas de conversión y foros.</p> <p>Precauciones básicas, mensajeros, chat, foros.</p>
--	---

---

Note: Adapted from Gómez, C. (2008). ICT skills monitoring sheet.

Tabla 2.

*Competences of the theories of information and communication (ICT) Specific*

---

**PROCESADOR DE TEXTOS**

**Archivo:** Abrir o Nuevo. Escribir y guardar  
 Configurar página y vista preliminar.  
 Imprimir

**Escribir:** Cursor y cambio de renglón.  
 Tabular

Herramientas-opciones-todas (formato, marcas)

**HOJA DE CÁLCULO**

**Archivo:** Abrir o Nuevo. Guardar  
 Configurar página y vista preliminar.  
 Imprimir

**Escribir:** Celdas, filas y columnas.  
 Introducir

**Edición:** Cortar, copiar, pegar, peg. Especial

---

---

<b>Edición:</b> Cortar, copiar, pegar, seleccionar, buscar, reemplazar	Seleccionar, buscar, reemplazar
<b>Ver:</b> Zoom	Zoom
<b>Ver:</b> B. de herramientas (estándar, formato, dibujo)	B. de herramientas (estándar, formato, gráficos)
<b>Insertar:</b> Saltos, imágenes símbolos	<b>Insertar:</b> Filas y columnas. Funciones (sumas y medias), gráficos.
<b>Formato:</b> Párrafo, numeración y viñetas	<b>Formato:</b> Celdas (nº, alineación, bordes)
Bordes y sombreado, columnas	Ancho de fila y alto de columna
<b>Herramientas:</b> Ortografía y gramática	Bordes y sombreado
Idioma (sinónimos)	
<b>Tabla:</b> Dibujar, insertar y eliminar	
Bordes y sombreado (Formato)	

**BASE DE DATOS**

**Archivo:** Abrir o Nuevo. Guardar. Cerrar. Configurar página y vista preliminar. Imprimir

**Escribir:** Celdas, filas y columnas. Introducir

**Edición:** Cortar, copiar, pegar. Cambiar nombre. Eliminar.

**Ver:** Objetos de la base (tabla, consulta, etc.)

Barras de herramientas (Base de datos)

Crear objetos. Diseño. Asistente.

Introducir datos (tabla)

**Insertar:** Tabla, consulta, formulario, informe

**EDITOR GRÁFICO**

**Archivo:** Abrir o Nuevo. Guardar. Configurar página y vista preliminar. Imprimir

**Edición:** Cortar, copiar, pegar. Seleccionar todo

**Imagen:** Formatos de imagen (BMP, JPEG, etc.)

Tamaño de imagen

Voltear o girar

Cambiar otros atributos.

**Ver o Vista** (depende del editor):

Zoom. Aumentar y reducir. Encajar en pantalla

**Herramientas:** Seleccionar y borrar, lápiz y Pincel, seleccionar color y rellenar con color

Dibujar líneas y formas

---

Note: Adapted from Gómez, C. (2008). ICT skills monitoring sheet.

## ***Developing***

### ***Research Problem***

In recent years, many high schools have changed their educational models and a large number of institutions have migrated to competency-based education models. To work under this model, it is necessary and should take advantage of the development of technological means, based on computer communication, which give the user greater power over their sources of information, knowledge and learning possibilities (Silvio, 1999).

This forces the teachers of the Fernando Enrique Angli-Lara Preparatory School for Cooperation, located in the city of San Francisco de Campeche, Campeche, Mexico, to understand the pedagogical potential of this tool, to be able to integrate it efficiently into the teaching process. learning, as an individual competition to turn it into a group or cooperative process within the school environment. Under this conception, teachers should enrich their knowledge and pedagogical management with the experiences of others, base their decisions on the characteristics of the environment where they work and take a more prominent role in the management of the school system. Technology has been created and used by human beings to expand their capacities, satisfy their needs and change their environment, likewise the technological means to support educational processes is not new and has been used permanently throughout the history of education. .

As an Educational Institution, the Fernando Enrique Angli-Lara Preparatory School for Cooperation has the essential task of providing quality education, seeking the improvement of aspects of the personality that make the integral development of its members feasible, giving them a human sense of service and social responsibility. that leads to the transformation of the educational community, conducive to professional training of excellence, of great human and constructivist quality for the society in which we live.

In this order of ideas, due to the fact that the level of preparation and performance of the technological competences of the teacher is unknown, of the

Preparatory School for Cooperation Fernando Enrique Angli-Lara in the Application of Teaching-Learning, which requires education of the Level Upper Middle in Word, Excel and Power Point Programs. It was decided to carry out this investigation to face the demands of the new educational environment.

### ***Goal***

Determine the level of performance in Generic and Specific Competences of the Teachers of the Preparatory School for Cooperation Fernando Enrique Angli-Lara, in the use of Word, Excel and Power Point programs.

### ***Research Question***

¿What level of performance in Generic and Specific Competencies do the Teachers of the Preparatory School for Cooperation Fernando Enrique Angli-Lara have, in the use of Word, Excel and PowerPoint programs?

### ***Method***

This study was exploratory of a descriptive type and used mixed data collection methods. Data collection was carried out in the city of San Francisco de Campeche, Campeche; to a total of 23 teachers who work at the Fernando Enrique Angli Lara Preparatory School for Cooperation and involved: documentary analysis, field visits, questionnaires, qualitative interviews and observations.

### ***Process***

1. The analysis of the data was carried out through the following process:
2. It was agreed with the campus authorities to carry out the intervention.
3. Four questionnaires were designed: one of generic competencies and three of specific competencies in Word, Excel and Power Point, using a Likert-type scale, where: 1 is totally disagree, 2 disagrees, 3 partially agrees, 4 agrees. agree and 5 totally agree (see Annex 1).



4. The four questionnaires were subjected to the Crombach Alpha test. The reliability coefficients obtained were high: a) generic: 0.94, b) specific to Word 0.97, c) specific to Excel 0.98, and d) specific to Power Point 0.99.
5. An interview guide was developed to validate the results.
6. The Directorate was asked for a concentrate of data from the teachers' files related to the courses taken from Word, Excel and PowerPoint.
7. The questionnaires and the interview guide were administered, previously explaining the objective of the study to the teachers.
8. With the information obtained, a database was created, tables were prepared and five performance ranges were determined in generic and specific competencies: a) low, b) medium low, c) medium, d) medium high, and e) high .
9. The data obtained were analyzed using descriptive statistics

**Results**

The results of the level of performance in Generic and Specific Competences that the Teachers have are disclosed in table 3.

Table 3

*Teacher competency performance scores*

Competencia	Media	Desviación Estándar
Genérica	81.39	14.91
Específica Word	66.69	10.03
Específica Excel	48.83	18.99
Específica Power Point	54.17	21.29

Note. Own elaboration.

According to the scale elaborated to establish the level of competences, the results were located in table 4.

Table 4

*Average performance in competencies of teachers*

Competencia	Nivel de desempeño				
	Bajo	Medio Bajo	Medio	Medio Alto	Alto
Rango	42-54	55-67	68-80	81-93	94-106
Genérica	81.39				
Rango	40-47	48-55	56-63	64-71	72-79
Específica Word	66.69				
Rango	15-27	28-40	41-53	54-66	67-79
Específica Excel	48.83				
Rango	15-27	28-40	41-53	54-66	67-79
Específica Power Point	54.17				

Note: Own elaboration.

In table 4, it is observed that the average of the teachers was located in the upper middle level in terms of generic competences (81.39%) and specific ones in Word (66.69%), and Power Point (54.17%). Likewise, it was located at a medium level in terms of the specific competence of Excel (48.83).

The classification of the number of teachers by level of performance is presented in table 5.

Table 5

*Level of performance in teachers' competencies*

Competencia	Nivel de desempeño				
-------------	--------------------	--	--	--	--

	Bajo	Medio Bajo	Medio	Medio Alto	Alto
Rango	42-54	55-67	68-80	81-93	94-106
Genérica	1 (4 %)	4 (18 %)	5 (22 %)	7 (30 %)	6 (26 %)
Rango	40-47	48-55	56-63	64-71	72-79
Específica Word	2 (9 %)	1 (4 %)	5 (22 %)	5 (22 %)	10 (43 %)
Rango	15-27	28-40	41-53	54-66	67-79
Específica Excel	3 (13 %)	6 (26 %)	6 (26 %)	2 (9 %)	6 (26 %)
Rango	15-27	28-40	41-53	54-66	67-79
Específica Power Point	4 (17 %)	2 (9 %)	2 (9 %)	7 (30 %)	8 (35 %)

Note: Own elaboration.

In table 5, it is observed that in terms of generic competencies, 56% of the teachers were found in the high and medium-high levels and 44% were located in the medium, medium-low and low levels. 65% of the teachers were located at the high and medium-high levels in the specific competence of Word, while 35% were found at the medium, medium-low and low levels. 35% were perceived to be at the high and medium-high levels in the specific competence of Excel, while 65% were found to be at the medium, medium-low and low levels. 65% were located in the high and medium-high levels in the specific Power Point competence, while 35% were found in the medium, medium-low and low levels.

In relation to the results of the interview guide and the documentary review, it can be observed that 15 (65%) of the teaching staff are women and 8 (35%) are men, where 3 (20%) of the women have updated their records in courses taken from Word, Excel and PowerPoint, certifying that they have a high level of competence and 12 (80%) do not. As for the men, 1 (12.5%) verified that they have a high level in the same and 7 (87.5%) have not updated their file regarding these courses. It was found that 4 (17%) of the teachers have the profile of knowledge in technological media, while 19 (83%) have

varied profiles of knowledge. Likewise, 3 (13%) of the teachers did not take courses on these tools because they considered that they did not need to transmit their knowledge in these media according to the subjects they teach. On the other hand, 23 (100%) of the teachers agreed that they have to be at the forefront of new technologies since the specific skills of Word, Excel and Power Point are essential to face the demands of the teaching-learning process of the times. current.

### ***Discussion of results***

The specific competencies that presented a medium-high level of performance are: Word and Power Point. In the specific competence of Excel, they showed a medium level of performance. On the other hand, not all teachers use these technologies in their classes, only those who have more knowledge about it use it, which coincides with the results presented by González (1999) who, when evaluating technological competences, found that the majority of teachers they underuse the technologies or worse yet they do not use them.

The institution does not have a control in technological competences, since it was observed that 18% of the teaching staff have updated their files in courses taken from Word, Excel and PowerPoint, certifying that they have an Advanced Competence level and 82% you do not have updated your file regarding these courses

Regarding the use of technology, training in these tools has not been provided by the institution, in addition to the above, many teachers mentioned that the incorporation of information and communication technologies into their teaching practice would imply much more work. Coinciding with what was mentioned by Bates and Epper (2004) who recognize that teachers need adequate technical and training support, substantial rewards for their efforts and greater reallocation of resources.

Teachers are aware of the relevant role that information technology plays in all areas, including education. As Blasco, Mengual and Roig (2007) very well mention when stating that the attitudes of teachers and future teachers are becoming more flexible day by day in order to improve teaching-learning processes; some processes

whose changes are given by the need to deal with the problems that society has been encountering over the last few years.

From the applied interviews, most of the professors handle technology at least at a basic level, in the same way the results obtained support what Martínez, García and Quintal (2006) affirmed when referring that the psychopedagogical training of university professors especially of Public Institutions has traditionally been the product of voluntary self-training, since most of the teachers interviewed claimed to be self-taught in terms of the use of technology and its incorporation into the classroom.

### conclusion

For all teachers to be competent, it is essential that they increase their level of performance and go from low, medium-low and medium levels to medium-high and high levels in the following percentages: a) generic 44%, b) Word 35 %, c) Excel 65%, and d) Power Point 35%. However, the important thing is that teachers use these technologies in their classes and not underuse them. Most of the skills that teachers have in these technologies have been the product of voluntary self-training, since teachers claimed to be self-taught. It is not a matter of thinking about modernizing teaching by introducing more and more sophisticated and innovative means, but rather assessing the didactic possibilities of these means in relation to the objectives and ends that are intended to be achieved. On the other hand, the Higher Secondary Education Teacher Training Program (Profordems) is helping teachers acquire this type of technological skills, since these tools are used in the Teaching Skills Diploma that is currently being taught.

It is recommended that the institution, if it is interested in teachers increasing their level of skills in information technology, promote the training of this type of courses, together with the technical and training support that teachers require. Likewise, to keep updated the files of the professors regarding the training courses and, as far as possible, keep track of the use of these tools. Future research could study the level of use that teachers give to these skills in support of their class, as well as include the study of other programs that help teachers in their teaching practice for the benefit of improving educational quality.

## Bibliography

Allende, C. & Morones, G. (2006). Glosario de Términos vinculados con la cooperación académica. México: ANUIES.

Blasco, J; Mengual, S; y Roig, R. (2007). Competencias Tecnológicas en el espacio europeo de educación superior. Propuesta de formación del maestro especialista en educación Física *Revista de currículum y formación de profesorado*, 11 (2). Recuperado de <http://redalyc.uaemex.mx/pdf/567/56711211.pdf>

Camorlinga, M., Mendoza, N.E. y Maldonado, G. (2007). Principales tecnologías de información utilizadas en procesos de enseñanza-aprendizaje en educación superior. *Revista de la Universidad Cristóbal Colón*. Recuperado de [www.eumed.net/rev/rucc/17-18/](http://www.eumed.net/rev/rucc/17-18/)

Epper; R. M y Bates A. W. (2004). Enseñar al Profesorado como utilizar la tecnología. Buenas Prácticas de Instituciones líderes. Barcelona, España: Editorial UOC.

González, J. (1999), Tecnología y Percepción Social Evaluar la Competencia Tecnológica. *Estudio sobre las Culturas Contemporáneas*, 5 (9), 155-165. Recuperado de <http://redalyc.uaemex.mx/src/inicio/ArtPdfRed.jsp?iCve=31600908>.

Silvio, J. (1999). Las comunidades virtuales como conductoras del Aprendizaje permanente. Venezuela: IESALC. UNESCO.

## Anexo 1

### **Cuestionario para el nivel de desempeño en competencias genéricas.**

Por favor, conteste de acuerdo a la siguiente escala: 1 es totalmente en desacuerdo, 2 en desacuerdo, 3 parcialmente de acuerdo, 4 de acuerdo y 5 totalmente de acuerdo.

		1	2	3	4	5
1	Sé que es una computadora y sé como acceder a ella.					
2	Sé la definición de Hardware y conozco algunos.					
3	Se la definición de Software y conozco algunos.					
4	Sé que es el mouse y cómo se utiliza.					
5	Sé que es el teclado y cómo se utiliza.					
6	Sé que es el monitor y para qué sirve.					
7	Sé utilizar una impresora.					
8	Sé que es la unidad de CD-ROM O DVD-ROM.					
9	Sé que es la memoria RAM y qué es el disco duro.					
10	Sé que es un administrador de archivos y que Windows es uno de ellos.					
11	Sé que es un ícono.					
12	Sé que es el escritorio de Windows.					
13	Sé que es la papelera de reciclaje de Windows.					
14	Sé cómo utilizar la herramienta Paint.					
15	Sé que es un procesador de texto y se para que se utiliza.					
16	Sé que es una hoja de Excel y sé para que se utiliza.					
17	Sé que es un presentador de diapositiva y se para que se utiliza.					
18	Sé que es un diseñador de base de datos y sé para que se utiliza.					
19	Sé con qué extensiones se nombran los Archivos de Microsoft Office.					
20	Sé manejar otras herramientas de Windows además de Microsoft Office.					

**Cuestionario para el nivel de desempeño en competencias específicas Word.**

		1	2	3	4	5
1	Sé cuál es la barra de herramientas estándar.					

2	Sé cuál es la barra de menús.					
3	Sé cómo crear un nuevo documento.					
4	Sé cómo guardar un documento.					
5	Sé la diferencia entre guardar y guardar como.					
6	Sé cómo abrir un documento.					
7	Sé cómo darle vista preliminar a un documento.					
8	Sé cómo darle imprimir a un documento.					
9	Sé cómo seleccionar textos u objetos.					
10	Sé cómo copiar textos u objetos.					
11	Sé como cortar textos u objetos.					
12	Sé cómo pegar textos u objetos.					
13	Sé como insertar encabezado y pie de página.					
14	Sé cómo darle formato a los textos u objetos.					
15	Sé cómo utilizar la herramienta ortografía.					

**Anexo 1 (continuación).**

**Cuestionario para el nivel de desempeño en competencias específicas Excel.**

		1	2	3	4	5
1	Sé cómo crear un archivo.					
2	Sé cómo guardar un archivo.					
3	Sé cómo abrir un archivo.					
4	Sé cómo utilizar la barra de fórmulas.					
5	Sé cómo utilizar la barra de herramientas estándar.					
6	Sé que es una celda.					
7	Sé que es una fila.					
8	Sé que es una columna.					
9	Sé que es una función.					
10	Sé que es una hoja de cálculo.					



11	Sé que es un libro.						
12	Sé cómo agregar más hojas de cálculo a mi libro.						
13	Sé cómo crear una gráfica.						
14	Sé cómo crear una fórmula.						
15	Sé cómo darle formato a una celda.						

**Cuestionario para el nivel de desempeño en competencias específicas Power Point.**

		1	2	3	4	5
1	Sé cómo crear un nuevo documento.					
2	Sé cómo guardar un documento.					
3	Sé como abrir un documento.					
4	Sé cómo crear una nueva diapositiva.					
5	Sé cómo darle estilo a una diapositiva.					
6	Sé cómo darle diseño a una diapositiva.					
7	Sé cómo darle efecto de animación a una diapositiva.					
8	Sé cómo personalizar la animación a una diapositiva.					
9	Sé cómo darle transición a una diapositiva.					
10	Sé cómo insertar títulos a una diapositiva.					
11	Sé cómo insertar subtítulos a una diapositiva.					
12	Sé como insertar imágenes a una diapositiva.					
13	Sé cómo agregar un fondo a una diapositiva.					
14	Sé cómo ensayar intervalos a una diapositiva.					
15	Sé cómo darle presentación a mis diapositivas.					

**Guía de entrevista para corroborar la información de los docentes.**

1. Sexo.

2. ¿Tiene actualizado su expediente en cuanto a cursos de Word, Excel y/o Power Point?
3. ¿Qué estudios profesionales tiene?
4. ¿Qué cursos ha tomado en tecnologías de la información?
5. ¿Considera que en los tiempos actuales es necesario estar actualizado en tecnologías de la información?
6. ¿En qué grado prepara o utiliza los programas de Word, Excel y Power Point en sus clases?