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FACULTAD CIENCIAS DE LA INGENIERÍA**

**TRABAJO DE TITULACIÓN DE GRADO PREVIO A LA OBTENCIÓN
DEL TÍTULO DE INGENIERO EN SISTEMAS COMPUTACIONALES**

PROPUESTA PRÁCTICA DEL EXAMEN COMPLEXIVO

**TEMA: “EL SOPORTE TÉCNICO Y LOS SISTEMAS E- LEARNING EN
LAS UNIVERSIDADES: ESTUDIO BIBLIOMETRICO DE
PUBLICACIONES EN SCOPUS”**

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Con el título:

EL SOPORTE TÉCNICO Y LOS SISTEMAS E- LEARNING EN LAS UNIVERSIDADES: ESTUDIO BIBLIOMETRICO DE PUBLICACIONES EN SCOPUS

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Ciro Raúl Villafuerte Mejía

A:

Dios, por darme la oportunidad de vivir y por estar conmigo en cada paso que doy, por fortalecer mi corazón e iluminar mi mente y por haber puesto en mi camino a aquellas personas que han sido mi soporte y compañía durante todo el periodo de estudio.

A mis padres, hermano por ser el pilar fundamental en todo lo que soy, en toda mi educación, tanto académica, como de la vida, por su incondicional apoyo perfectamente mantenido a través del tiempo.

Abel Fernando Bajaña Contreras

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A mis padres, tíos y primos por brindarme su apoyo incondicional y ser el pilar fundamental en todo lo que soy, en toda mi educación, tanto académica, como de la vida, debido a ellos que me inculcaron a no rendirme ante los obstáculos he podido llegar a mi objetivo llegar a ser un profesional que ayude a la sociedad y al país.

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TEMA:

“EL SOPORTE TÉCNICO Y LOS SISTEMAS E- LEARNING EN LAS UNIVERSIDADES:
ESTUDIO BIBLIOMÉTRICO DE PUBLICACIONES EN SCOPUS”

RESUMEN

El propósito de este estudio bibliométrico es examinar el crecimiento y desarrollo de la literatura sobre el soporte técnico y los sistemas e-learning en las Universidades, para conocer la importancia en que influye el soporte técnico en dichos sistemas, a través de las contribuciones más importantes, se busca identificar la información científica de importancia que se ha publicado sobre el tema y para hacer el respectivo análisis de toda esta información.

La bibliografía publicada en 18 de las principales revistas de la base de datos bibliográfica Scopus fue conseguida de manera directa, mediante las siguientes palabras claves: “technical support”, “e-learning system” y “university”, con sus correspondientes sinónimos. Los datos obtenidos como: autor, título, revistas, subtítulo, citas, número de artículos publicados por las revistas, se registraron en MS-Excel para su análisis e interpretación.

En este presente estudio se encontró 335 artículos sobre la temática planteada, publicados en el periodo 2013 - 2017. También se revela que el 2016 fue el año más productivo en la generación de artículos científicos con un número de 92 publicaciones. La fuente con más producción sobre la temática es Proceedings of the European Conference on e-Learning ECEL, con 7 artículos; se la puede considerar una fuente básica de consulta. La información que se tomó fue limitada básicamente a un período de 5 años, tiempo que de manera general es aceptable para hacer este tipo estudios, además en el análisis se pudo conocer que el artículo científico más citado es Virtual instrument systems in reality (VISIR) for remote wiring and measurement of electronic circuits on breadboard, con 60 citas. El documento provee

información verdadera y confiable sobre el tema planteado que puede ser utilizado por investigaciones futuras sobre el tema abordado.

Palabras clave:

soporte técnico, sistemas e-learning, universidades.

TITTLE:

**"THE TECHNICAL SUPPORT AND E-LEARNING SYSTEMS IN UNIVERSITIES:
BIBLIOMETRIC STUDY OF SCOPUS PUBLICATIONS"**

ABSTRACT

The purpose of this bibliometric study is to examine the growth and development of the literature on technical support and e-learning systems in universities, to know the importance of technical support in these systems, through the most important contributions, seeks to identify the important scientific information that has been published on the subject and to make the respective analysis of all this information.

The bibliography published in 56 of the main journals of the Scopus bibliographic database was obtained directly by the following keywords: "technical support", "e-learning system" and "university", with their corresponding synonyms. Data obtained as: author, title, journals, subtitle, citations, number of articles published by journals, were recorded in MS-Excel for analysis and interpretation.

In this study 335 articles were found on the subject, published in the period 2013 - 2017. It is also revealed that 2016 was the most productive year in the generation of scientific articles with a number of 92 publications. The source with more production on the subject is Proceedings of the European Conference on e-Learning ECEL, with 7 articles; it can be considered a basic source of consultation. The information that was taken was basically limited to a period of 5 years, a time that is generally acceptable to do this type of studies, also in the analysis I can know that the most cited scientific article is Virtual instrument systems in reality (VISIR) for

remote wiring and measurement of electronic circuits on breadboard, with 60 citations. The document provides true and reliable information on the topic raised that can be used by future research on the topic addressed.

Keywords:

technical support, e-learning systems , universities.

INTRODUCCIÓN

Las Tecnologías de la Información y la Comunicación (TIC) a nivel mundial revolucionan todos los procesos de la humanidad, principalmente la operación de empresas e instituciones educativas. Si a lo mencionado se le suma que el uso a nivel mundial del internet está en constante evolución como se lo puede evidenciar en el reporte 30 de Junio 2017 del Internet. World Stats (Ver Tabla 1).

Tabla 1. *Uso mundial de internet y estadísticas de población*

Uso mundial de internet y estadísticas de población						
al 30 de junio 2017						
Regiones del mundo	Población (2012 est.)	Usuarios de Internet Dic/31/2000	Usuarios de Internet últimos datos	Penetración (% población)	Crecimiento 2000-2012	Los usuarios% de la Tabla
África	1,246,504,865	16.6 %	388,104,452	31.1 %	8,497.0%	10.1 %
Asia	4,148,177,672	55.2 %	1,909,408,707	46.0 %	1,570.5%	49.8 %
Europa	822,710,362	10.9 %	650,558,113	79.1 %	519.0%	17.0 %
América Latina / Caribe	647,604,645	8.6 %	392,215,155	60.6 %	2,070.7%	10.2 %
Medio Oriente	250,327,574	3.3 %	146,972,123	58.7 %	4,374.3%	3.8 %
América del Norte	363,224,006	4.8 %	320,059,368	88.1 %	196.1%	8.3 %
Oceanía / Australia	40,479,846	0.5 %	28,180,356	69.6 %	269.8%	0.7 %
Total mundial	7,519,028,970	100.0 %	3,835,498,274	51.0 %	962.5%	100.0 %

Nota: Tomado de www.internetworldstats.com, Miniwatts Marketing Group

Se ha demostrado que los sistemas de gestión del aprendizaje (LMS) fomentan un enfoque constructivo de la adquisición de conocimientos y apoyan el aprendizaje activo de los estudiantes. Una de las claves para el uso exitoso y eficaz, es cómo las partes interesadas adoptan y perciben esta herramienta de aprendizaje (Emelyanova & Voronina, 2014). En la presente época nos damos cuenta que el Internet se vuelve más centrado en el usuario permitiendo el intercambio de información bidireccional. Las personas se convierten en creadores de conocimiento y materiales en lugar de lectores pasivos o consumidores. Este avance de las tecnologías web y sus aplicaciones conocidas en la actualidad como web 2.0. En educación, el manejo correcto de estas herramientas y la integración con las tecnologías que tienen mantienen

un lugar la práctica educativa e institucional se denominan e-learning (Edrees, 2013). También se menciona que la adopción de sistemas de gestión del aprendizaje y tecnologías de redes sociales (SNT) en la educación superior ha comenzado a cambiar la forma de la enseñanza y aprendizaje (Hustad & Arntzen, 2013).

La difusión del e-learning y de competencia en esta área tiene mucha influencia en el constante crecimiento por la calidad de este servicio. Por lo tanto, es vital desarrollar sistemas, modelos y escalas que permitan a las instituciones obtener mediciones válidas, confiables y resistente de la importancia de los servicios de educación (Martínez-Argüelles, Callejo, & Farrero, 2013). A medida que las instituciones académicas progresan hacia la incorporación de varios métodos de e-learning en su currículo, uno de los sistemas primarios que se están implementando en las universidades es un LMS. Existen varios LMS disponibles hoy en día, tanto gratuitos como de código abierto y comerciales.

Cada organización puede tener un conjunto diferente de requisitos basados en el número de personas, los fondos y el soporte técnico disponible. En la educación se utilizan comúnmente muchas herramientas de apoyo para el aprendizaje y para el soporte a estos sistemas, fuera del aula donde principalmente interviene los sistemas e-learning (Gomes, Guerra, Mendes, & Rego, 2015).

Este estudio tiene como objetivo indagar la producción científica sobre el soporte técnico y los sistemas e-learning en las universidades publicadas en Scopus.

MARCO TEÓRICO

REVISIÓN DE LA LITERATURA

SISTEMAS E- LEARNING

“Los sistemas e-learning o LMS, son un tipo de aplicación de software para dar soporte a los cursos presenciales, en línea o mixtos. Proporcionan herramientas y características tales como: administración, comunicación síncrona y asíncrona”(Sapp & Vaughan, 2017), “compartición multimedia, evaluación y seguimiento, y de compatibilidad estándar” (Ramirez-Anormaliza, Sabaté, Llinàs-Audet, & Lordan, 2017).

“Los sistemas e-learning permiten proseguir las clases sin impedimentos asociadas al tiempo y espacio(Beyatli, 2017). “Ayudan a mejorar la colaboración e interactividad entre las personas que aprenden y las personas que enseñan” (Adam & Vallés, 2013). Y pueden ser interpretados de varias maneras, tales como, “sistemas de suministro de la educación basado en ordenador que se proporciona a través de Internet”, o “un método educativo que es capaz de ofrecer oportunidades a las personas necesarias, en el lugar correcto, con los contenidos adecuados, y el momento adecuado” (Ramirez-Anormaliza et al., 2017).

Diversos establecimientos están incorporando sistemas e-learning en sus procesos formativos para de esta manera mejorar sus actividades. Esta forma de aprendizaje depende actualmente de las redes y ordenadores pero es probable que vayan evolucionando hacia sistemas que comprendan una variedad de canales, por ejemplo: TV por cable, satélites, teléfonos móviles y otras tecnología (Caporarello & Sarchioni, 2014).

La revolución del e- learning está básicamente orientadas a las mentes y a los corazones de los estudiantes, es de gran ayuda al conocimiento de los estudiantes (Strang & Vajjhala, 2017),

para poder saber su nivel de aceptación hacia la tecnología básicamente en la educación, para poder sacar las conclusiones si estos sistemas cumplen todas las expectativas de aprendizaje y que cumplan sus objetivos con eficiencia(Khan, Hameed, Yu, & Khan, 2017).

El sistema de gestión del aprendizaje es una tecnología de la información y la comunicación (TIC) es una herramienta que ayuda a mejorar la eficiencia de las actividades de aprendizaje, especialmente en la educación superior(Phongphaew & Jiamsanguanwong, 2018), ofrecen una puerta de entrada a tecnologías de innovación, donde investigaciones anteriores han podido desarrollar modelo de adopción de tecnología y de pedagogía gracias estos sistemas(Sinclair & Aho, 2017).

Es importante considerar que cada estudio en el área de e-learning tiene un enfoque específico priorizando temas tan diferentes como técnicos, sociales, psicológicos y pedagógicos. Estos factores influyen en la percepción, la adopción y el éxito (Emelyanova & Voronina, 2014). Varias investigaciones sugirieron que un sistema de e-learning puede ayudar a los estudiantes en su forma de aprendizaje a través de tres formas; un compromiso mejorado, oportunidades de aprendizaje auto dirigido y una mayor difusión de la información(Lara, Lizcano, Martinez, Pazos, & Riera, 2014).

El LMS tiene como objetivo mejorar la metodología a la vez que añade interactividad e interesantes elementos a los cursos, para mejorar el alcance y la calidad del e-learning en las universidades(Pišútová, 2016).

Pero en si dichos sistemas no solo son de apoyo para los estudiantes el docente juega un rol muy importante, por son ellos los encargados de darles un uso correcto, el apoyo de los sistemas al docente es al menos muy beneficioso en la toma de evoluciones(Dlalisa, 2017), hacia los estudiantes.

SOPORTE TÉCNICO

Se define como soporte técnico a las personas que concurren a los usuarios de hardware y productos de software que puede incluir líneas telefónicas de emergencia, servicios de apoyo en línea, sistemas de respuesta de voz telefónica automatizada y otros servicios de tecnología.

Varios autores describe el soporte técnico como de dos dimensiones, “la primera se fundamenta en la ayuda a los usuarios mediante las herramientas de desarrollo del sistema, manuales de usuario y documentos pertinentes”, entretanto que “el segundo se correlaciona a través del apoyo top management en donde el líderes ofrecen la máxima ayuda y recursos”(Sanchez, Hueros, & Ordaz, 2013).

El soporte técnico está verdaderamente relacionado con la disminución de la ansiedad vinculada con la computación y ayuda a fomentar una actitud más favorable hacia nuevos sistemas informáticos. La falta de apoyo técnico adecuado puede ser un obstáculo considerable para el uso eficaz de la tecnología de la información y así no lograr a satisfacer el uso correcto (Bowman & Akcaoglu, 2014).

La eficacia y el éxito del e-learning están establecidos por las habilidades y el compromiso del que brinda el apoyo de soporte técnico a los usuarios(Robinson, 2017). Se afirma que la eficacia de los sistemas e-learning no depende demasiado de la tecnología de la información sino de cómo el instructor ejerce el uso de las TIC (El-Rady, Shehab, & El Fakharany, 2017). Las características importantes del instructor que afectan el éxito del e-learning son la competencia de TIC, el estilo de enseñanza, la actitud y la mentalidad. Estos deben expresarse mediante la gestión eficaz de un curso basado en la enseñanza e aprendizaje, mediante el uso y fomentar la retroalimentación y la comunicación (Betts, Kramer, & Gaines, 2013).

En base a la revisión bibliográfica de varios autores menciona para que un sistema e-learning, funcione correctamente y brinde una eficaz e eficiente ejecución, es necesario incrementar la flexibilidad del soporte técnico mediante módulo de preparación y capacitación o a través de un sistema tecnológico que ayuda a los usuarios aumentar los conocimientos de uso de los sistemas e-learning que existen actualmente (Prieto et al., 2014).

UNIVERSIDADES

Las universidades son instituciones de educación que producen conocimiento (Tjong, Warnars, & Adi, 2017), siempre deben estar a la vanguardia de la tecnología, estas instituciones implementan sistemas de gestión de aprendizaje que ayudan a la enseñanza y a la pedagogía hacia los estudiantes, estos sistemas proporcionan soporte y es de vital importancia contar con personal de apoyo informático (Valero & Cárdenas, 2017), para poder dar solución a los problemas que se presenten como por ejemplo: Preguntas y respuestas sobre su uso, responder correos (Verdú et al., 2017), etc. Dichos sistemas dentro de las universidades brindan el apoyo y motivación para los estudiantes a una mejor forma de aprender y prepáralos para su profesión (Jakab, Ševčík, & Grežo, 2017).

Los desafíos que la educación moderna debe responder ahora, incluyendo el grado de su virtualización, la idoneidad para las partes interesadas y el valor de las innovaciones, ahora se están discutiendo en todo el mundo (Cherry & Flora, 2017). El conjunto de trabajos sobre adopción y aceptación de los sistemas e-learning en las universidades está en constante crecimiento.

Se establece que el uso de los sistemas e-learning en las universidades obtiene beneficios de los recursos de aprendizaje en línea debido a su conveniencia y usabilidad, Esto representa una

transición que emplean actualmente las universidades de los estilos de aprendizaje tradicionales hacia el apoyo tecnológico(Maloney et al., 2013).

Se considera que los sistemas e-learning en las universidades están emergiendo de manera paulatina, las instituciones deben ser proactivas y desarrollar estrategias para contratar y capacitar a profesores y auxiliares para cumplir con este cambio en el suministro educativo(Nwokeji, Boulder, Ohu, & Okolie, 2016).

Es necesario considerar que cada estudio en el área de e-learning tiene un enfoque específico priorizando temas tan diferentes como técnicos, sociales, psicológicos y pedagógicos. Estos factores influyen en la percepción, la adopción y el éxito de los sistemas e-learning en cada caso determinado(Humanante, Conde, & Peñalvo, 2014).

El apoyo administrativo, como el sistema está en ejecución en la universidad y varios problemas organizativos, estructurales y de infraestructura inevitablemente se produce. Muchos estudiosos añaden el aspecto tecnológico, por la misma razón, como el sistema está en construcción. Sin embargo, los resultados de los estudios revelan que el factor más influyente parecía ser el factor humano, a saber, las percepciones y actitudes de dos grupos de interesados: estudiantes y profesores(Fernández-Pascual, Ferrer-Cascales, Reig-Ferrer, Albaladejo-Bláquez, & Walker, 2015).

Las ideas expuestas hasta este punto son consistentes con los estudios internacionales en términos de identificación de las principales áreas de insatisfacción y percepciones de la calidad de la enseñanza y el aprendizaje en línea y la importancia del papel de los profesores para la implementación exitosa que debe tener los sistemas e-learning en las universidades(Wihlborg & Friberg, 2016).

Las instituciones académicas han adoptado el uso de sistemas e- learning por que dichos sistemas les permiten a los estudiantes aprender a su propio ritmo, tiempo y sin ningún impedimento(Daramola, Oladipupo, Afolabi, & Olopade, 2017).

Con el pasar de los años las universidades se han visto en apuros por la presión de adoptar sistemas e- learning para la enseñanza y aprendizaje(Zanjani, Edwards, Nykvist, & Geva, 2017).

Hay muchas formas de aprender como el aprendizaje a distancia, este se ha convertido en un segmento de más rápido crecimiento en la educación superior(Zaborova, Glazkova, & Markova, 2017), es aquí donde intervienen los sistemas e- learning para el aprendizaje no solo en el aula de clases, también en forma on-line.

Estos sistemas son de mucho apoyo para las universidades, docentes, en el caso de los alumnos permiten evaluar su desempeño de aprendizaje mediante la tecnología(Nguyen, 2017).

DESARROLLO

Metodología

El tema que plantea este estudio es el soporte técnico y los sistemas e-learning, El principal análisis no es solo cubrir los artículos científicos publicados en scopus, también nos presenta capítulos de libros, editoriales, revisión de literatura. La **Tabla 2** muestra el número y tipos de artículos identificados en este estudio.

Tabla 2. *Tipos de Publicaciones*

Tipo Publicación	Cantidad
Article	167
Conference Paper	112
Book Chapter	35
Conference Review	10
Article In Press	8
Review	4
Editorial	1

Los datos bibliográficos de los artículos publicados se obtuvieron directamente de la base de datos Scopus, <https://www.scopus.com>

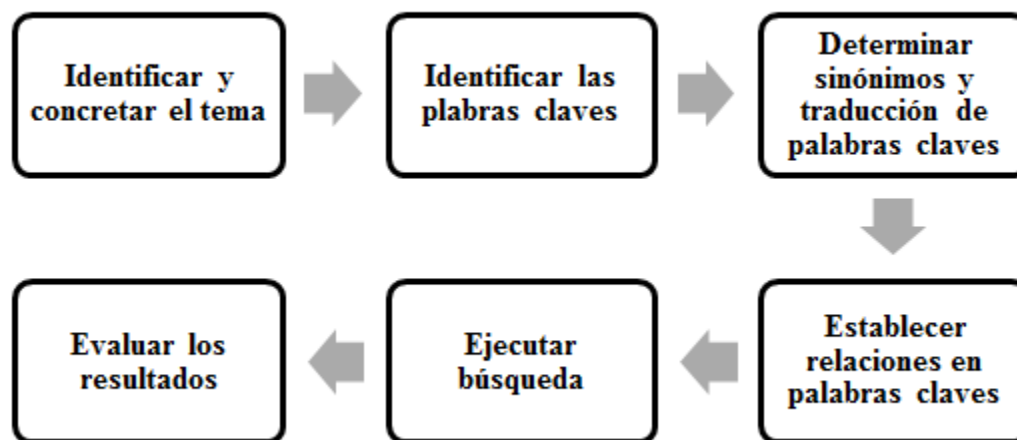


Figura 1. Estrategia de búsqueda de información.

Tomado de Ramirez-Anormaliza, Llinàs-Audet, & Sabaté

Con el tema determinado a investigar, las palabras claves, su traducción y la relación entre estas (por medio de operadores lógicos, AND entre palabras y OR entre sinónimos), se ejecutó la búsqueda y queda mostrada en la **Tabla 3**. Siguiendo la estrategia sugerida en la *Figura 1*.

Tabla 3. *Estrategia de búsqueda*

Castellano	Inglés
Soporte Técnico	"help desk" OR "software support" OR "Technical Support" OR "helpdesk" OR "support"
Sistemas e-learning	"learning management system" OR "e-learning plataform" OR "virtual learning environment" OR "online education" OR "Sistemas e-learning" OR "management system for learning"
Universidad	University*

Los datos bibliográficos tales como autor, título, subtítulos, fuente, número, volumen, páginas, etc., se registraron en hojas de cálculos de Ms-Excel, para poder manejar correctamente el análisis e interpretar correctamente los datos. La bibliografía de los artículos seleccionados se cargaron en el gestor de referencias Mendeley.

Resultados

La ejecución de la metodología descrita en la tabla anterior, nos permitió identificar un total de 335 publicaciones en varios artículos científicos de la base de datos bibliográfica Scopus.

En el *Figura 2*, se puede evidenciar el incremento anual que ha motivado el interés de los autores al desarrollo e investigación sobre lo existente de la literatura abordada en nuestro tema de estudio, se tomó como referencia el aporte generado hasta la actualidad. El año con mayor productividad científica es el año 2016, con un total de 92 publicaciones en ese año, seguido del año 2015 con un aporte en su producción de 74 publicaciones.

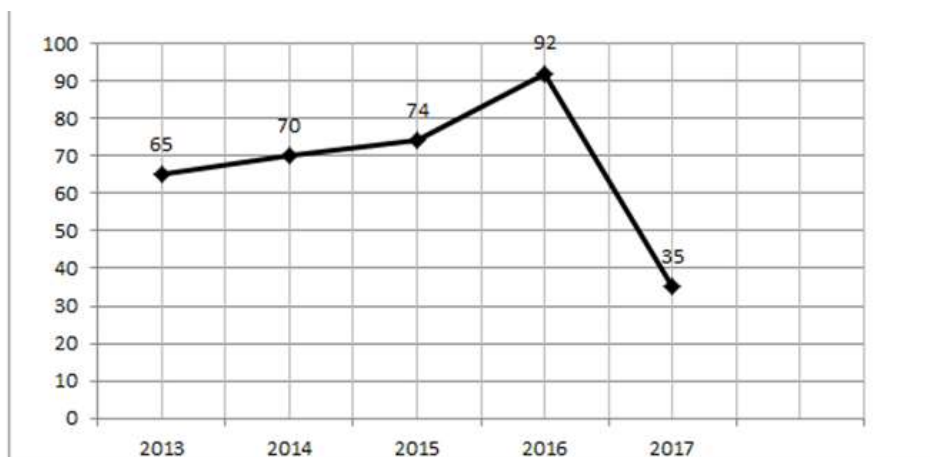


Figura 2. Distribución de literatura por año

Tabla 4. Ranking de revistas con 3 o más publicaciones

No.	Nombre de revista	Artículos
1	Proceedings of the European Conference on e-Learning, ECEL	7
2	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)	6
3	ASEE Annual Conference and Exposition, Conference Proceedings	5
4	International Review of Research in Open and Distance Learning	5
5	Advances in Intelligent Systems and Computing	5
6	Proceedings - Frontiers in Education Conference, FIE	5
7	International Journal of Emerging Technologies in Learning	4
8	Proceedings of the International Conference on e-Learning, ICEL	4
9	ACM International Conference Proceeding Series	4
10	CEUR Workshop Proceedings	4
11	Computer Applications in Engineering Education	4
12	International Journal of Engineering Education	4
13	Knowledge Management and E-Learning	3
14	Australasian Journal of Educational Technology	3
15	Mediterranean Journal of Social Sciences	3
16	ICEIS 2016 - Proceedings of the 18th International Conference on Enterprise Information Systems	3
17	Turkish Online Journal of Educational Technology	3
18	American Journal of Distance Education	3

Identificando las revistas de mayor acogida de publicaciones o preferidas por los autores, y tomando como base las 335 publicaciones identificadas que se puede ver en el **Anexo 1**, se pudieron escoger 18 principales que abarca la literatura sobre la temática, obtenida dentro de la base de datos bibliográfica Scopus. Este análisis refleja la fuente para publicaciones elegida por los autores es: Proceedings of the European Conference on e-Learning, ECEL con 7 artículos científicos (Véase **Tabla 4** Ranking de revistas con 3 o más publicaciones).

Analizando el patrón de autoría en las publicaciones encontradas, a lo que se refiere al Soporte Técnico y los Sistemas e-learning en las universidades se logró identificar que 100 publicaciones lo cual representan el (29.76%) fueron publicados por más de tres autores, seguido por 68 artículos científicos lo cual representa el (20.24%) por tres autores, seguido por 99 artículos lo cual representa el (29.46%) con dos autores y por ultimo 69 artículos han sido realizados por un solo autor.

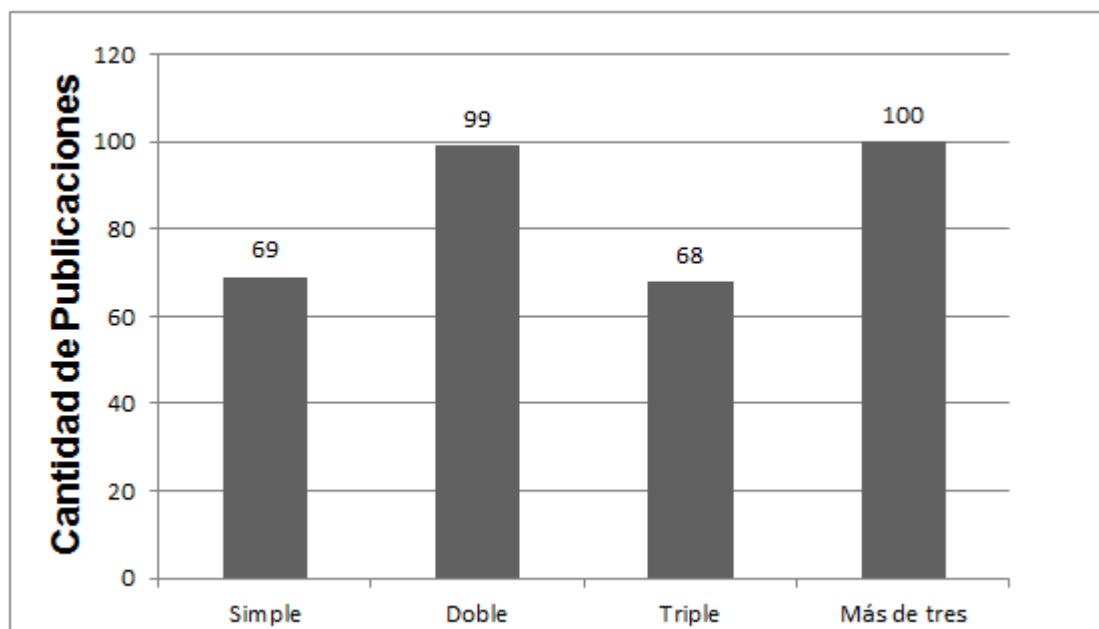


Figura 3. Patrón de autoría

La Tabla 5 se puede observar que Jeschke S, y T. Geva S. son los autores más productivos, con una contribución de 6 artículos el primero y 5 el segundo, seguido por 12 autores que tienen 3 artículos, donde la mayor participación científica es como coautor.

Los investigadores y sus grandes esfuerzos para poder desarrollar y presentar contenidos de la materia, en forma de artículos científicos, se los pueden evidenciar en los trabajos de investigación realizados.

Tabla 5. *Lista de autores con tres o más publicaciones*

Autor	Nº de Artículos	Como Autor	Como coautor
Jeschke S.	6		6
Geva S.	5		5
Dorrington P.	3		3
Dos Passos T.N.	3		3
Jr.	3		3
Díaz-Pernas F.J.	3		3
Sancristobal E.	3		3
Nykvist S.	3		3
Martínez-Zarzuela M.	3		3
Zanjani N.	3	3	
Boehringer D.	3	3	
Woodley C.	3	3	

La importancia que se toma una publicación científica se mide en cuantas veces ha sido referenciada o citada por otros investigadores, por ese gran motivo fue de importancia analizar el número de veces que las publicaciones identificadas han sumado considerablemente al desarrollo de nuevos productos científicos. En la **Tabla 6**, podemos visualizar los 10 artículos científicos con un número mayor de citas que están dentro de las revistas analizadas.

Tabla 6. *Ranking de los artículos más citados*

No.	Título	Citas
1	Virtual instrument systems in reality (VISIR) for remote wiring and measurement of electronic circuits on breadboard	60
2	The effects of technology on the community of inquiry and satisfaction with online courses	23
3	Students' experiences and expectations of technologies: An Australian study designed to inform planning and development decisions	22
4	E-learning and the University of Huelva: A study of WebCT and the technological acceptance model	22
5	Fertility awareness online: The efficacy of a fertility education website in increasing knowledge and changing fertility beliefs	22
6	"I see smart people!": Using Facebook to supplement cognitive and affective learning in the university mass lecture	17
7	Online instruction, e-learning, and student satisfaction: A three year study	16

8	Generic integration of remote laboratories in learning and content management systems through federation protocols	16
9	Supporting orchestration of CSCL scenarios in web-based Distributed Learning Environments	13
10	Teacher Educators' Readiness, Preparation, and Perceptions of Preparing Preservice Teachers in a Fully Online Environment: An Exploratory Study	12

En la **Tabla 7**, lo que se pretende identificar cuáles han sido las revistas que han logrado obtener el mayor número de citas contribuyendo al desarrollo de una nueva investigación.

Entre las revistas referenciadas está en primer lugar IEEE Transactions on Learning Technologies con 60 citas, en el segundo lugar tenemos a Internet and Higher Education con 40 citas y International Review of Research in Open and Distance Learning con 30 citas respectivamente.

Tabla 7. *Ranking de las revistas con mayor número de citas*

No.	Título	Citas
1	IEEE Transactions on Learning Technologies	60
2	Internet and Higher Education	40
3	International Review of Research in Open and Distance Learning	30
4	Australasian Journal of Educational Technology	24
5	Proceedings - Frontiers in Education Conference, FIE	22
6	Campus-Wide Information Systems	22
7	Human Reproduction	22
8	Computer Applications in Engineering Education	18
9	Anatomical Sciences Education	14
10	Computers and Education	13

El presente trabajo se lo realizo con la disposición muy fundamental de llegar a conocer sobre la literatura publicada sobre el tema soporte técnico y los sistemas e - learning en las universidades, es información se la pudo obtener de la base de datos bibliográfica Scopus. En este estudio se utilizó información en un periodo aceptable de cinco años (2013 – 2017) y se pudo verificar que hay un gran número de artículos científicos, sobre el tema que se está analizando, dichos artículos han sido publicados durante este trayecto

CONCLUSIONES

Luego de haber realizado un correcto análisis de los datos obtenidos de la temática propuesta, el estudio refleja los siguientes resultados:

Al momento de revisar el patrón de la autoría se pudo evidenciar que 100 artículos han sido publicados por más de tres autores y representa un 29.76% y 99 artículos han sido publicados por dos autores que representan un 29.46%. El análisis también refleja que en el año 2016 fue el más productivo, en publicaciones sobre el tema soporte técnico y sistemas e – learning en las universidades, con una contribución significativa de 92 artículos que representa el 27.30%, con respecto al periodo de 5 años que se escogió y en segundo lugar lo ocupa el año 2015 con 74 publicaciones de artículos sobre la temática y representa el 21.96%.

El estudio se realizó utilizando publicaciones desde el 2013 hasta el 2017. Los resultados de esta investigación pueden ser de vital importancia para investigaciones futuras en base a la temática, la bibliografía utilizada para este estudio se la puede observar en el **Anexo 1**.

Por otro lado se pudo observar que hay dos fuentes que se pueden valorar importantes sobre el soporte técnico de los sistemas e – learning, en la base de datos utilizada Scopus, en primer lugar tenemos a la fuente Proceeding of the European Conference on e – learning, ECEL con 7 artículos y solo con la diferencia de un artículo la fuente Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) con 6 artículos.

Podemos determinar que el uso de los sistemas e-learning en las universidades está creciendo paulatinamente, siendo estos una innovación para esta área. Debido a la argumentación que se analiza acerca de los sistemas de gestión de aprendizaje en base a el soporte técnico y los

sistemas e-learning en las universidades, los descubrimientos de este estudio son considerables, porque nos mencionan que los soportes técnicos de e-learning no son correctamente satisfactorio ya que los usuarios estos docentes y estudiantes, que utilizan los sistemas de gestión de aprendizaje no son correctamente ejecutados por parte del instructor que brinda el apoyo técnico para que logren manejar correctamente las herramientas de los sistemas e-learning.

Por eso este estudio encontró evidencias acerca que le hace falta mejorar el servicio técnico que brindan a los sistemas de gestión de aprendizaje en las universidades mediante capacitación de los instructores o usando software tecnológico de esta manera, podemos determinar que llegando a mejorar el proceso de soporte técnico en los sistemas e-learning, obtendremos a tener una innovación en el sector educativo mediante una eficiente y eficaz manejo de los sistemas de gestión de aprendizaje.

BIBLIOGRAFÍA

- Adam, M. R., & Vallés, R. S. (2013). E-learning: características y evaluación, *46022*(43), 143–160.
- Betts, K., Kramer, R., & Gaines, L. L. (2013). *Online faculty and adjuncts: Strategies for meeting current and future demands of online education through online human touch training and support. Curriculum, Learning, and Teaching Advancements in Online Education*. IGI Global. <https://doi.org/10.4018/978-1-4666-2949-3.ch007>
- Beyatli, Ö. (2017). Evaluation of edmodo learning management system users in higher education. *Ponte*, *73*(7), 148–157. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85025433842&partnerID=40&md5=957c31576ee07cd1b38678726d9fdc70>
- Bowman, N. D., & Akcaoglu, M. (2014). “I see smart people!”: Using Facebook to supplement cognitive and affective learning in the university mass lecture. *Internet and Higher Education*, *23*, 1–8. <https://doi.org/10.1016/j.iheduc.2014.05.003>
- Caporarello, L., & Sarchioni, G. (2014). E-learning: The recipe for success. *Journal of E-Learning and Knowledge Society*, *10*(1), 117–128.
- Cherry, S. J., & Flora, B. H. (2017). Radiography faculty engaged in online education: Perceptions of effectiveness, satisfaction, and technological self-efficacy. *American Society of Radiologic Technologists*.
- Daramola, O., Oladipupo, O., Afolabi, I., & Olopade, A. (2017). Heuristic evaluation of an institutional E-learning system: A Nigerian case, *12*(3), 26–42. <https://doi.org/10.3991/ijet.v12i03.6083>
- Dlalisa, S. (2017). Acceptance and usage of learning management system amongst academics. Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICTAS.2017.7920525>
- Edrees, M. E. (2013). ELearning 2.0: Learning management systems readiness. In *Proceedings - 2013 4th International Conference on e-Learning Best Practices in Management, Design and Development of e-Courses: Standards of Excellence and Creativity, ECONF 2013* (pp. 90–96). Manama. <https://doi.org/10.1109/ECONF.2013.57>
- El-Rady, A. A., Shehab, M., & El Fakharany, E. (2017). Predicting learner performance using data-mining techniques and ontology (Vol. 533, pp. 660–669). Springer Verlag. https://doi.org/10.1007/978-3-319-48308-5_63
- Emelyanova, N., & Voronina, E. (2014). Introducing a learning management system at a russian university: Students’ and teachers’ perceptions. *International Review of Research in Open and Distance Learning*, *15*(1), 272–289. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84894516213&partnerID=40&md5=a5ec90c3e4af9b988a3df8bcc69d02b1>
- Fernández-Pascual, M. D., Ferrer-Cascales, R., Reig-Ferrer, A., Albaladejo-Blaizquez, N., & Walker, S. L. (2015). Validation of a Spanish version of the Distance Education Learning Environments Survey (DELES) in Spain. *Learning Environments Research*, *18*(2), 179–196. <https://doi.org/10.1007/s10984-015-9179-0>
- Gomes, L. M., Guerra, H., Mendes, A., & Rego, I. E. (2015). Facebook vs moodle: Surveying university students on the use of learning management systems to support learning activities outside the classroom. In *2015 10th Iberian Conference on Information Systems and Technologies, CISTI 2015*.

- Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/CISTI.2015.7170464>
- Humanante, P. R., Conde, M. A., & Peñalvo, F. J. G. (2014). Differences and similarities in use and acceptance of PLEs between universities in Ecuador and Spain. In F. H.M. (Ed.), *ACM International Conference Proceeding Series* (Vol. 9-NaN-20, pp. 70–76). Association for Computing Machinery. <https://doi.org/10.1145/2643604.2643609>
- Hustad, E., & Arntzen, A. A. B. (2013). Facilitating Teaching and Learning Capabilities in Social Learning Management Systems: Challenges, Issues, and Implications for Design. *Journal of Integrated Design and Process Science*, 17(1), 17–35. <https://doi.org/10.3233/jid-2013-0003>
- Jakab, I., Ševčík, M., & Grežo, H. (2017). Model of higher GIS education, 15(3), 220–234.
- Khan, I. U., Hameed, Z., Yu, Y., & Khan, S. U. (2017, August 10). Assessing the determinants of flow experience in the adoption of learning management systems: the moderating role of perceived institutional support, pp. 1–15. <https://doi.org/10.1080/0144929X.2017.1362475>
- Lara, J. A., Lizcano, D., Martínez, M. A., Pazos, J., & Riera, T. (2014). A system for knowledge discovery in e-learning environments within the European Higher Education Area - Application to student data from Open University of Madrid, UDIMA. *Computers and Education*, 72, 23–26. <https://doi.org/10.1016/j.compedu.2013.10.009>
- Maloney, S., Chamberlain, M., Morrison, S., Kotsanas, G., Keating, J. L., & Ilic, D. (2013). Health professional learner attitudes and use of digital learning resources. *Journal of Medical Internet Research*, 15(1). <https://doi.org/10.2196/jmir.2094>
- Martínez-Argüelles, M. J., Callejo, M. B., & Farrero, J. M. C. (2013). Las dimensiones de la calidad del servicio percibida en entornos virtuales de formación superior, 10(1), 89–106. <https://doi.org/10.7238/rusc.v10i1.1411>
- Nguyen, V. A. (2017). Towards the implementation of an assessment-centred blended learning framework at the course level: A case study in a Vietnamese national university, 34(1), 20–30. <https://doi.org/10.1108/IJILT-08-2016-0031>
- Nwokeji, J. C., Boulder, T., Ohu, I., & Okolie, N. C. (2016). Language as an instructional barrier: Towards support for international faculty (Vol. 2016–November). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/FIE.2016.7757748>
- Phongphaew, N., & Jiamsanguanwong, A. (2018). Usability evaluation on learning management system (Vol. 607, pp. 39–48). Springer Verlag. https://doi.org/10.1007/978-3-319-60492-3_4
- Pišútová, K. (2016). Elearning in practice - Case of Comenius University. Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICETA.2015.7558506>
- Prieto, L. P., Asensio-Pérez, J. I., Muñoz-Cristóbal, J. A., Jorrín-Abellán, I. M., Dimitriadis, Y., & Gómez-Sánchez, E. (2014). Supporting orchestration of CSCL scenarios in web-based Distributed Learning Environments. *Computers and Education*, 73, 9–25. <https://doi.org/10.1016/j.compedu.2013.12.008>
- Ramírez-Anormaliza, R., Sabaté, F., Llinàs-Audet, X., & Lordan, O. (2017). Aceptación y uso de los sistemas e-learning por estudiantes de grado de Ecuador: El caso de una universidad estatal, 13(x), 2017–13. <https://doi.org/10.3926/ic.820>

- Robinson, L. (2017). Embracing online education: exploring options for success, *27*(1), 99–111. <https://doi.org/10.1080/08841241.2016.1261978>
- Sanchez, A., Hueros, D., & Ordaz, G. (2013). E-learning and the University of Huelva: a study of WebCT and the technological acceptance model. *Campus-Wide Information Systems, 30*(2), 135–160. <https://doi.org/10.1108/10650741311306318>
- Sapp, L., & Vaughan, K. T. L. (2017). Connecting the Libraries and Athletics through Instruction and Outreach, *36*(2), 187–195. <https://doi.org/10.1080/02763869.2017.1293999>
- Sinclair, J., & Aho, A. M. (2017, July 13). Experts on super innovators: understanding staff adoption of learning management systems, pp. 1–15. <https://doi.org/10.1080/07294360.2017.1342609>
- Strang, K. D., & Vajjhala, N. R. (2017). Student resistance to a mandatory learning management system in online supply chain courses, *29*(3), 49–67. <https://doi.org/10.4018/JOEUC.2017070103>
- Tjong, Y., Warnars, H. L. H. S., & Adi, S. (2017). Designing Knowledge Management model for curriculum development process: A case study in Bina Nusantara University (pp. 17–22). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICIMTech.2016.7930295>
- Valero, G., & Cárdenas, P. (2017). Formative and summative assessment in veterinary pathology and other courses at a mexican veterinary college, *44*(2), 331–337. <https://doi.org/10.3138/jvme.1015-169R>
- Verdú, E., Regueras, L. M., Gal, E., de Castro, J. P., Verdú, M. J., & Kohen-Vacs, D. (2017). Integration of an intelligent tutoring system in a course of computer network design, *65*(3), 653–677. <https://doi.org/10.1007/s11423-016-9503-0>
- Wihlborg, M., & Friberg, E. (2016). Framework for a virtual nursing faculty and student learning collaboration between universities in Sweden and the United States: A theoretical paper. *Nurse Education Today, 41*, 50–53. <https://doi.org/10.1016/j.nedt.2016.03.012>
- Zaborova, E. N., Glazkova, I. G., & Markova, T. L. (2017). Distance learning: Students' perspective, *2017–January*(2), 131–139.
- Zanjani, N., Edwards, S. L., Nykvist, S., & Geva, S. (2017). The important elements of LMS design that affect user engagement with e-learning tools within LMSs in the higher education sector, *33*(1), 19–31. <https://doi.org/10.14742/ajet.2938>

Anexos

Anexo 1. Bibliografía Identificada

1. Huber, E., Arthur, L., & An, S. (2013). Design and development of examples to support authentic professional learning: A participative process. In C. H. Gosper M. Hedberg J. (Ed.), *30th Annual conference on Australian Society for Computers in Learning in Tertiary Education, ASCILITE 2013* (pp. 397–406). ASCILITE. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84913539099&partnerID=40&md5=617bbfc5cc8fe034f49ba94d8e759b72>
2. Deperlioglu, O., & Kose, U. (2013). The effectiveness and experiences of blended learning approaches to computer programming education. *Computer Applications in Engineering Education*, 21(2), 328–342. <https://doi.org/10.1002/cae.20476>
3. Esteban, F., & Fuentes, J. L. (2015). Virtual university education: A reflection on cultivation of the virtues [La educación universitaria virtual: Una reflexión en torno al cultivo de las virtudes]. *Teoria de La Educacion*, 27(1), 103–118. <https://doi.org/10.14201/teoredu2015271103118>
4. Morrato, E. H., Rabin, B., Proctor, J., Cicutto, L. C., Battaglia, C. T., Lambert-Kerzner, A., ... Kempe, A. (2015). Bringing it home: Expanding the local reach of dissemination and implementation training via a university-based workshop. *Implementation Science*. <https://doi.org/10.1186/s13012-015-0281-6>
5. Wihlborg, M., & Friberg, E. (2016). Framework for a virtual nursing faculty and student learning collaboration between universities in Sweden and the United States: A theoretical paper. *Nurse Education Today*, 41, 50–53. <https://doi.org/10.1016/j.nedt.2016.03.012>
6. Moore, S., May, D., & Wold, K. (2014). *Developing cultural competency in engineering through transnational distance learning. Cross-Cultural Interaction: Concepts, Methodologies, Tools and Applications* (Vol. 3). IGI Global. <https://doi.org/10.4018/978-1-4666-4979-8.ch089>
7. Waldmann, U. M., & Weckbecker, K. (2013). Smartphone application of primary care guidelines used in education of medical students. *GMS Zeitschrift Für Medizinische Ausbildung*, 30(1), Doc6. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84891767990&partnerID=40&md5=0fe675196f342bce90251542d2bbe0a3>
8. Mouakket, S., & Bettayeb, A. M. (2015). Investigating the factors influencing continuance usage intention of Learning management systems by university instructors: The Blackboard system case. *International Journal of Web Information Systems*, 11(4), 491–509. <https://doi.org/10.1108/IJWIS-03-2015-0008>
9. Vasileiou, M., Rowley, J., & Hartley, R. (2013). Metadata and providing access to e-books. *British Journal of Educational Technology*, 44(3), 518–528. <https://doi.org/10.1111/j.1467-8535.2012.01315.x>
10. Rahimi, M., & Miri, S. S. (2013). *Technology use and acceptance among pre-service teachers of english as a foreign language: The case of a learning management system and an educational blog. Cases on Communication Technology for Second Language Acquisition and Cultural Learning*. IGI Global. <https://doi.org/10.4018/978-1-4666-4482-3.ch009>
11. Shawar, B. A. (2015). Evaluating the quality of e-Learning trend used at AOU based on participants' satisfaction. In M. M. Younas M. Awan I. (Ed.), *Proceedings - 2015 International Conference on Future Internet of Things and Cloud, FiCloud 2015 and 2015 International Conference on Open and Big Data, OBD 2015* (pp. 545–552). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/FiCloud.2015.124>
12. Yukawa, H., Breugelmans, R., Izumi, T., & Izumi, M. (2013). Can e-Learning identify poor performers in medical school? In *Proceedings of the European Conference on e-Learning, ECEL* (pp. 538–545). Sophia Antipolis: Academic Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84899507769&partnerID=40&md5=1b9a186138439679c73470b245db567f>
13. Gosper, M., Malfroy, J., & McKenzie, J. (2013). Students' experiences and expectations of technologies: An Australian study designed to inform planning and development decisions. *Australasian Journal of Educational Technology*, 29(2), 268–282. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84886294504&partnerID=40&md5=c336dc496e5c46533f03899730b488f7>
14. Bollen, L., van der Meij, H., Leemkuil, H., & McKenney, S. (2015). In search of design principles for developing digital learning and performance support for a student design task. *Australasian Journal of Educational Technology*, 31(5), 500–520. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84947929439&partnerID=40&md5=188b707c585d389a9cc6b4b11af75454>
15. De Lima, T. F. M., & Dos Passos, T. N. (2014). *Evaluating a learning management system to support classroom teaching. Multicultural Awareness and Technology in Higher Education: Global Perspectives*. IGI Global. <https://doi.org/10.4018/978-1-4666-5876-9.ch009>
16. Vincenti G. Bucciero A., de C. C. V (Ed.). (2016). 2nd International Conference on E-Learning, E-Education, and Online Training, eLEOT 2015. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST, 160*, 1–217. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84956666430&partnerID=40&md5=58c2bd51c314f63cdf3e73cd54f4c9cd>
17. Woodley, C., & Dorrington, P. (2015). *Facebook and the societal aspects of formal learning: Optional, peripheral, or essential. Social Media and Networking: Concepts, Methodologies, Tools, and Applications* (Vol. 3–4). IGI Global. <https://doi.org/10.4018/978-1-4666-8614-4.ch061>
18. 8th International Conference on e-Learning, ICEL 2013. (2013). In *Proceedings of the International Conference on e-Learning, ICEL*. Cape Town: Academic Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84904757718&partnerID=40&md5=f2bff15ae4f53b987c44a1995e24f491>
19. Ng, S. C., Lee, T. S., Wong, C. K., & Lee, F. Y. (2014). C1: An automated online education management system based on an object-oriented approach. *Journal of Web Engineering*, 13(1–2), 87–96. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84899706666&partnerID=40&md5=bb4fd2aa30ef5581b2269e736aaa5390>

20. Dik, V. V., Urintsov, A. I., Dneprovskaya, N. V., & Pavlekovskaya, I. V. (2014). Prospective of e-learning toolkit enhanced by ICT development. *Naukovyi Visnyk Natsionalnoho Hirnychoho Universytetu*, (4), 152–156. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84910656195&partnerID=40&md5=c912d2f573f4a35425585b125d1029d9>
21. Edrees, M. E. (2013). ELearning 2.0: Learning management systems readiness. In *Proceedings - 2013 4th International Conference on e-Learning Best Practices in Management, Design and Development of e-Courses: Standards of Excellence and Creativity, ECONF 2013* (pp. 90–96). Manama. <https://doi.org/10.1109/ECONF.2013.57>
22. Chauhan, J., Batbayar, K., Sharma, R., Sharma, D., Popli, D., Kumar, N., & Goel, A. (2015). Towards adapting sakai for e-Learning provider. In R. M. T. Z. S. Uhomoihi J. Helfert M. (Ed.), *CSEDU 2015 - 7th International Conference on Computer Supported Education, Proceedings* (Vol. 1, pp. 306–314). SciTePress. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84943424998&partnerID=40&md5=c126f5a131e33af84b111347c4ea6645>
23. Badurdeen, F., Baker, J. R., Rouch, K. E., Goble, C. F., Swan G.M., I. I., Brown, A., & Jawahir, I. S. (2015). Development of an online master's degree program in manufacturing systems engineering. In *ASEE Annual Conference and Exposition, Conference Proceedings* (Vol. 122nd ASEE). American Society for Engineering Education. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84941995444&partnerID=40&md5=3402f169b34296a3f0fbf18db12ece5>
24. Plavsic, S. K. (2014). Is ian donald inter-university school of medical ultrasound ready for distance learning? *Donald School Journal of Ultrasound and Gynecology*, 8(1), 6–10. <https://doi.org/10.5005/jp-journals-10009-1327>
25. Pullen, J. M., & McAndrews, P. M. (2014). Evolving synchronous online graduate CS education. In *ITICSE 2014 - Proceedings of the 2014 Innovation and Technology in Computer Science Education Conference* (p. 335). Uppsala: Association for Computing Machinery. <https://doi.org/10.1145/2591708.2602656>
26. Griffin, B., Udall, M., Ross, M., & Georgiadou, E. (2013). Adopting agile methods for graduate employability. *International Journal of Human Capital and Information Technology Professionals*, 4(3), 1–10. <https://doi.org/10.4018/jhctip.2013070101>
27. Zanjani, N., Nykvist, S., & Geva, S. (2013). What makes an LMS effective: A synthesis of current literature. In *CSEDU 2013 - Proceedings of the 5th International Conference on Computer Supported Education* (pp. 574–579). Aachen. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84887165021&partnerID=40&md5=99ebaa8fba132eb96b8ad99fbb81ddad>
28. Orduña, P., Caminero, A., Lequerica, I., Zutin, D. G., Bailey, P., Sancristobal, E., ... Garcia-Zubia, J. (2015). Generic integration of remote laboratories in public learning tools: Organizational and technical challenges. In *Proceedings - Frontiers in Education Conference, FIE* (Vol. 2015–Febru). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/FIE.2014.7044025>
29. Hervás, A., García, F. B., & Peñalvo, F. J. G. (2014). A method of assessing academic learning experiences in virtual learning environments. *IEEE Latin America Transactions*, 12(2), 219–226. <https://doi.org/10.1109/TLA.2014.6749541>
30. Pickens-French, K., & McDonald, K. (2013). Changing trenches, changing tactics: A library's frontline redesign in a new CMS. *Journal of Library and Information Services in Distance Learning*, 7(1–2), 53–72. <https://doi.org/10.1080/1533290X.2012.705613>
31. Soleymani, M. R., Akbari, Z., & Mojiri, S. (2016). The essential skills required by librarians to support medical virtual learning programs. *Medical Journal of the Islamic Republic of Iran*, 30(1). Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85019042175&partnerID=40&md5=0bf2df3dd3f8c76c23a2e7aca50e0cc0>
32. De Santo, M., & De Meo, A. (2016). E-training for the clil teacher: E-tutoring and cooperation in a moodle-based community of learning. *Journal of E-Learning and Knowledge Society*, 12(3), 41–49. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84981320850&partnerID=40&md5=d7f00d65bd3955bc4963af72d065e8ab>
33. Nespor, J., & Voithofer, R. (2016). “Failure” irrelevant: Virtual schools and accountability-immunity. *Teachers College Record*, 118(7). Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84982266834&partnerID=40&md5=cb6f1d8402d489b9e3e0ed7952ed5618>
34. Al-Khanjari, Z., Al-Kindi, K., Al-Zidi, A., & Baghdadi, Y. (2014). M-learning: The new horizon of learning at SQU. *Journal of Engineering Research*, 11(2), 15–26. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84923109009&partnerID=40&md5=c15f59389b91252a311dc7583018ac71>
35. Maloney, S., Chamberlain, M., Morrison, S., Kotsanas, G., Keating, J. L., & Ilic, D. (2013). Health professional learner attitudes and use of digital learning resources. *Journal of Medical Internet Research*, 15(1). <https://doi.org/10.2196/jmir.2094>
36. Heo, H. J., & Chun, B. A. (2016). A study on the effects of mobile-based LMS on flipped learning: Focused on the affective pathway in pre-service teacher education. *International Journal of Software Engineering and Its Applications*, 10(12), 473–484. <https://doi.org/10.14257/ijseia.2016.10.12.39>
37. Krumm, A. E., Waddington, R. J., Teasley, S. D., & Lonn, S. (2014). *A learning management system-based early warning system for academic advising in undergraduate engineering. Learning Analytics: From Research to Practice*. Springer New York. https://doi.org/10.1007/978-1-4614-3305-7_6
38. Soldatova, E., Bach, U., Vossen, R., & Jeschke, S. (2013). Creating an E-Learning recommender system supporting teachers of engineering disciplines. In *2013 International Conference on Interactive Collaborative Learning, ICL 2013* (pp. 811–815). Kazan: IEEE Computer Society. <https://doi.org/10.1109/ICL.2013.6644713>
39. Hlosta, M., Herrmannova, D., Vachova, L., Kuzilek, J., Zdrahal, Z., & Wolff, A. (2014). Modelling student online behaviour in a virtual learning environment. In D. H. Yacef K. (Ed.), *CEUR Workshop Proceedings* (Vol. 1137). CEUR-WS. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84924943995&partnerID=40&md5=7ecc2b929e7421e9419179b1d9e667c1>
40. Chabi, M., & Ibrahim, S. (2014). The impact of proper use of learning system on students' performance: Case study of using MyMathsLab. In *CSEDU 2014 - Proceedings of the 6th International Conference on Computer Supported Education* (Vol. 1, pp. 551–554). Barcelona: SciTePress. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84902303942&partnerID=40&md5=5640fce0f6413d3366d8e15de767c874>
41. Salmi, L. (2013). Student experiences on interaction in an online learning environment as part of a blended learning implementation: What is essential? In *Proceedings of the International Conference e-Learning 2013* (pp. 356–360). Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84886931212&partnerID=40&md5=c0d78c3c5aa318dbe4a5ba8dddf2bd8>
42. Paliwoda-Pekosz, G., Stal, J., & Wojtowicz, L. (2015). Application of ICT tools in enhancing education in information society. In *Proceedings of the European Conference on IS Management and Evaluation, ECIME* (Vol. 2015–Janua, pp. 160–169). Academic Conferences and Publishing International Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84994175585&partnerID=40&md5=a709e74714539982d3da16b060de8d02>
43. Taylor, M. (2014). From web-based learning to eText learning: Teaching Sanskrit with an electronic textbook. *International Journal of Mobile Learning and Organisation*, 8(1), 16–27. <https://doi.org/10.1504/IJMLO.2014.059995>

44. Stoddart, P. (2015). Using educational technology as an institutional teaching and learning improvement strategy? *Journal of Higher Education Policy and Management*, 37(5), 586–596. <https://doi.org/10.1080/1360080X.2015.1079401>
45. Boehringer, D. (2015). ELearning infrastructures for co-operative degree programmes in Europe. In *IEEE Global Engineering Education Conference, EDUCON* (Vol. 2015–April, pp. 73–76). IEEE Computer Society. <https://doi.org/10.1109/EDUCON.2015.7095954>
46. De Wet, C. (2014). Trends in digital pedagogies: Implications for South African universities expanding through hybrid online education. *Mediterranean Journal of Social Sciences*, 5(23), 859–867. <https://doi.org/10.5901/mjss.2014.v5n23p859>
47. De Lima, T. F. M., & Dos Passos, T. N. (2015). *Evaluating a learning management system to support classroom teaching. Curriculum Design and Classroom Management: Concepts, Methodologies, Tools, and Applications* (Vol. 1). IGI Global. <https://doi.org/10.4018/978-1-4666-8246-7.ch019>
48. A., M. (Ed.). (2016). 5th International Conference on Design, User Experience, and Usability, DUXU 2016 Held as Part of 18th International Conference on Human-Computer Interaction, HCI International 2016. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 9747, 1–702. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84977596560&partnerID=40&md5=08ff663beb790f301780c20e919e7c5c>
49. Mohamad, A. M., Yusof, F. M., & Aris, B. (2014). Online cooperative learning for communication and team working skills enhancement. *Jurnal Teknologi (Sciences and Engineering)*, 69(1), 137–143. <https://doi.org/10.11113/jt.v69.3122>
50. Nikulova, G. A., & Bobrova, L. N. (2016). Online education resources and student needs: Stylistic aspects. *Indian Journal of Science and Technology*, 9(42). <https://doi.org/10.17485/ijst/2016/v9i42/104279>
51. Paliwoda-Pękosz, G., & Stal, J. (2015). ICT in Supporting Content and Language Integrated Learning: Experience from Poland. *Information Technology for Development*, 21(3), 403–425. <https://doi.org/10.1080/02681102.2014.1003521>
52. Mokoena, S. (2013). Engagement with and participation in online discussion forums. *Turkish Online Journal of Educational Technology*, 12(2), 97–105. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84880060765&partnerID=40&md5=7dad881903ed2e964a058880191d905a>
53. Wang, Y., & Sumiya, K. (2013). Dynamic word clouds: Context-based word clouds of presentation slides for quick browsing. *Frontiers in Artificial Intelligence and Applications*, 254, 108–117. <https://doi.org/10.3233/978-1-61499-262-2-108>
54. Ortiz Benavides, F. L., & Izquierdo, P. F. (2016). Instructional design for scientific argumentation on line [Diseño instruccional para argumentación científica en línea]. *Interdisciplinaria*, 33(2), 231–249. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85019190467&partnerID=40&md5=22c416d3119014ae450eb826c3e7905e>
55. Naas I. Vendrametto O., R. J. M. G. R. F. S. M. T. K. D. von C. G. (Ed.). (2016). IFIP WG 5.7 International Conference on Advances in Production Management Systems, APMS 2016. *IFIP Advances in Information and Communication Technology*, 488, 1–961. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85016062977&partnerID=40&md5=7c3bb0dda9b3d95d724023ad577f2de1>
56. Huun, K., & Hughes, L. (2014). Autonomy among thieves: Template course design for student and faculty success. *Journal of Educators Online*, 11(2 SPEC. ISSUE). Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-8489968750&partnerID=40&md5=02b075631ef228c0957a01fba7bb5b4f>
57. Moreillon, J. (2015). Increasing Interactivity in the Online Learning Environment: Using Digital Tools to Support Students in Socially Constructed Meaning-Making. *TechTrends*, 59(3), 41–47. <https://doi.org/10.1007/s11528-015-0851-0>
58. Brown, A., Rich, M., & Holtham, C. (2014). Student engagement and learning: Case study of a new module for business undergraduates at Cass business school. *Journal of Management Development*, 33(6), 603–619. <https://doi.org/10.1108/JMD-04-2014-0038>
59. Boehringer, D., & Bernalhöhr, H. (2014). CampusConnect: An open-source initiative to connect Learning Management Systems. In *IEEE Global Engineering Education Conference, EDUCON* (pp. 134–141). Istanbul: IEEE Computer Society. <https://doi.org/10.1109/EDUCON.2014.6826080>
60. Cervone, A., Melkert, J. A., Mebus, L. F. M., & Saunders-Smits, G. N. (2016). Push or pull students into blended education: A case study at Delft University of Technology. *International Journal of Engineering Education*, 32(5), 1911–1921. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84992397384&partnerID=40&md5=77a7e2d5dfff2a898fe929ad5cfa8c86>
61. Almada, M. I. M., McAnally Salas, L., & Lavigne, G. (2014). Application and validation of a techno-pedagogical lecturer training model using a virtual learning environment [Aplicación y validación de un modelo tecnopedagógico de formación docente mediante una plataforma educativa virtual]. *RUSC Universities and Knowledge Society Journal*, 11(1), 91–107. <https://doi.org/10.7238/rusc.v11i1.1743>
62. Menšík, M., Duží, M., & Stavinoha, M. (2014). Education support for mathematical logic; the eLogika system. In *International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM* (Vol. 1, pp. 151–160). International Multidisciplinary Scientific Geoconference. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84946741214&partnerID=40&md5=44231182344d220a8b489625aa2b245b>
63. Vasic, D., Kundid, M., Pinjuh, A., & Seric, L. (2015). Predicting student’s learning outcome from Learning management system logs. In S. P. S. M. Rozic N. Begusic D. (Ed.), *2015 23rd International Conference on Software, Telecommunications and Computer Networks, SoftCOM 2015* (pp. 210–214). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/SOFTCOM.2015.7314114>
64. Molka-Danielsen, J., Fominykh, M., Swapp, D., & Steed, A. (2015). Designing a demonstrator virtual learning environment to teach the threshold concept of space syntax: Seeing from the user’s perspective. *IFIP Advances in Information and Communication Technology*, 468, 180–191. https://doi.org/10.1007/978-3-319-27048-7_13
65. Brown, C. A. (2014). *Economic impact of information and communication technology in higher education. Open Source Technology: Concepts, Methodologies, Tools, and Applications* (Vol. 2–4). IGI Global. <https://doi.org/10.4018/978-1-4666-7230-7.ch036>
66. Cechova, I., Rozsypalkova, J., & Kalvoda, V. (2015). Learning english language through LMS: Designing a new course. In J. A. Cubric M. (Ed.), *Proceedings of the European Conference on e-Learning, ECCEL* (pp. 114–119). Academic Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84977159983&partnerID=40&md5=a4db002ff741416241c3231dacf792ec>
67. Salama, T., Lee, N., Fitzgerald, G., Lee, L. W., & McCarthy, M. M. (2015). Advancing online teaching at an on-ground institution by assessing technical and humanity online courses. In *ASEE Annual Conference and Exposition, Conference Proceedings* (Vol. 122nd ASEE). American Society for Engineering Education. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84941992754&partnerID=40&md5=7c8d55d63e503113ed8c7bcfa0e5a56e>

68. Covell, N. H., Margolies, P. J., Myers, R. W., Ruderman, D., Fazio, M. L., McNabb, L. M., ... Dixon, L. B. (2014). Scaling up evidence-based behavioral health care practices in New York State. *Psychiatric Services*, 65(6), 713–715. <https://doi.org/10.1176/appi.ps.201400071>
69. Giemza, A., Manske, S., & Hoppe, H. U. (2013). Supporting the formation of informal learning groups in a heterogeneous information environment. In *Proceedings of the 21st International Conference on Computers in Education, ICCE 2013* (pp. 367–374). Bali: UHAMKA PRESS. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84896443637&partnerID=40&md5=ba26203d94be7bf810624bd12ea18557>
70. Mikki, M. A. (2013). Synchronizing Moodle and university enrolment databases, a case study: Islamic University of Gaza. In *Proceedings of the 2013 Palestinian International Conference on Information and Communication Technology, PICICT 2013* (pp. 8–13). Gaza, Gaza Strip. <https://doi.org/10.1109/PICICT.2013.12>
71. Pickens-French, K., & McDonald, K. (2013). Changing trenches, changing tactics: A library's frontline redesign in a new cms. *Journal of Library & Information Services in Distance Learning*. <https://doi.org/10.1080/1533290X.2012.705613>
72. Goomas, D. T. (2014). The Impact of Supplemental Instruction: Results From an Urban Community College. *Community College Journal of Research and Practice*. <https://doi.org/10.1080/10668926.2013.854182>
73. Margalina, V. M., De-Pablos-Heredero, C., & Botella, J. L. M. (2015). Achieving job satisfaction for instructors in e-learning: The relational coordination role. *International Journal of Human Capital and Information Technology Professionals*, 6(4), 64–79. <https://doi.org/10.4018/IJHCITP.2015100104>
74. Mwinyi, A. K., AL-Haddad, S. A. R., Hashim, S. J., Abdullah, R., & Aldibayeva, L. (2015). A model of online assessment and teaching monitoring for learning management system to improve learning cognitive skills. *Advanced Science Letters*, 21(7), 2215–2220. <https://doi.org/10.1166/asl.2015.6286>
75. Zhao, S. (2014). E-learning strategy of education pedagogy in Chinese private university. In L. P. (Ed.), *WIT Transactions on Information and Communication Technologies* (Vol. 60, pp. 745–752). WITPress. <https://doi.org/10.2495/CTA140921>
76. Kalenda, D. (2014). The achievements-system in education. In B. C. (Ed.), *Proceedings of the European Conference on Games-based Learning* (Vol. 2, pp. 809–811). Dechema e.V. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84923562225&partnerID=40&md5=a71f285af8169e574c76fa61bc32bfbd>
77. Kowalczyk, N. K. (2014). Perceived barriers to online education by radiologic science educators. *Radiologic Technology*, 85(5), 486–493. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84901651126&partnerID=40&md5=25d19279ff5b9fde151ffafb48ca28d1>
78. Cevallos-Villacrés, Y., Meza-Herrera, M., Molina-Valdiviezo, L., Torres-Flores, G., & Machado-Sotomayor, G. (2015). PACIE methodology applied in virtual learning environments to support learner academic performance. In R. M. T. Z. S. Uhomoihi J. Helfert M. (Ed.), *CSEdu 2015 - 7th International Conference on Computer Supported Education, Proceedings* (Vol. 1, pp. 246–252). SciTePress. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84943428957&partnerID=40&md5=ff57985ca5dd3943b17a9aea1ec45f1d>
79. Renee Staines, Z., & Lauchs, M. (2013). The use of Facebook in tertiary education: Case study of a unit-related Facebook page in a university justice class. *Interactive Technology and Smart Education*, 10(4), 285–296. <https://doi.org/10.1108/ITSE-05-2013-0008>
80. Waldmann, U.-M., & Weckbecker, K. (2013). Smartphone application of Primary Care guidelines used in education of medical students [DEGAM-leitlinien als app für Mobiltelefone - Einsatz, Anregungen und nutzen für den Lernprozess von Studierenden im fach allgemeinmedizin]. *GMS Zeitschrift Fur Medizinische Ausbildung*, 30(1). <https://doi.org/10.3205/zma000849>
81. Downing, J. J., & Dymont, J. E. (2013). Teacher Educators' Readiness, Preparation, and Perceptions of Preparing Preservice Teachers in a Fully Online Environment: An Exploratory Study. *Teacher Educator*, 48(2), 96–109. <https://doi.org/10.1080/08878730.2012.760023>
82. Dima, I. C., Grabara, J., & Vlădu Ț Escu, S. (2014). Comparative study on online education in romania and poland in terms of current globalization [Badanie porównawcze edukacji online w rumunii i w polsce w odniesieniu do obecnej globalizacji]. *Polish Journal of Management Studies*, 10(1), 7–18. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84922061923&partnerID=40&md5=a857531adcb55533b21e2b4b45ff6f10>
83. Duke, P., Grosseman, S., Novack, D. H., & Rosenzweig, S. (2015). Preserving third year medical students' empathy and enhancing self-reflection using small group "virtual hangout" technology. *Medical Teacher*, 37(6), 566–571. <https://doi.org/10.3109/0142159X.2014.956057>
84. Bastos, H. P. P., Bercht, M., Wives, L. K., Kambara-Silva, J., & Martins, Y. (2013). Text mining indicators of affect and interaction: A case study of students' postings in a blended-learning course of English for specific purposes. *Advances in Intelligent Systems and Computing*, 206 AISC, 861–872. https://doi.org/10.1007/978-3-642-36981-0_80
85. Humanante, P. R., Conde, M. A., & Peñalvo, F. J. G. (2014). Differences and similarities in use and acceptance of PLEs between universities in Ecuador and Spain. In F. H.M. (Ed.), *ACM International Conference Proceeding Series* (Vol. 9-NaN-20, pp. 70–76). Association for Computing Machinery. <https://doi.org/10.1145/2643604.2643609>
86. Šperka, R. (2016). E-learning as a backbone for e-government in Czech Republic in 2015. *International Journal of Continuing Engineering Education and Life-Long Learning*, 26(1), 60–71. <https://doi.org/10.1504/IJCEELL.2016.075044>
87. Hayhoe, S., Roger, K., Eldritch-Böersen, S., & Kelland, L. (2015). Developing inclusive technical capital beyond the disabled students' allowance in England. *Social Inclusion*, 3(6), 29–41. <https://doi.org/10.17645/si.v3i6.410>
88. Guitart, I., & Conesa, J. (2015). Analytic Information Systems in the Context of Higher Education: Expectations, Reality and Trends. In B. L. Xhafa F. (Ed.), *Proceedings - 2015 International Conference on Intelligent Networking and Collaborative Systems, IEEE INCoS 2015* (pp. 294–300). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/INCoS.2015.71>
89. Da Silva, J. B., Rochadel, W., Simão, J. P. S., & Vaz Da Silva Fidalgo, A. (2014). Adaptation model of mobile remote experimentation for elementary schools. *Revista Iberoamericana de Tecnologias Del Aprendizaje*, 9(1), 28–32. <https://doi.org/10.1109/RITA.2014.2302053>
90. Lwoga, E. T., & Komba, M. (2015). Antecedents of continued usage intentions of web-based learning management system in Tanzania. *Education and Training*, 57(7), 738–756. <https://doi.org/10.1108/ET-02-2014-0014>
91. Liu, D., Richards, D., Froissard, C., & Atif, A. (2015). Validating the effectiveness of the moodle engagement analytics plugin to predict student academic performance. In *2015 Americas Conference on Information Systems, AMCIS 2015*. Americas Conference on Information Systems. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84963511098&partnerID=40&md5=ef745b592e21087c053b2d9da00ca3a0>

92. Rivera, L. F. Z., & Suescún, C. A. (2015). Game-based assessment for radiofrequency circuits courses in engineering. In *Proceedings - Frontiers in Education Conference, FIE* (Vol. 2014). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/FIE.2015.7344108>
93. Mascarenhas, M. (2013). *Wearing different listening hats: A classroom activity for demonstrating the effect of listening attitudes. Cases on Communication Technology for Second Language Acquisition and Cultural Learning*. IGI Global. <https://doi.org/10.4018/978-1-4666-4482-3.ch005>
94. Liu, W., & Northover, M. (2014). A Badge of Honour: Recognising sustainable teaching principles with open badges. In *Proceedings of ASCILITE 2014 - Annual Conference of the Australian Society for Computers in Tertiary Education* (pp. 505–508). ASCILITE. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84955295294&partnerID=40&md5=c5bc02bc81a6bfe93769398f4de79711>
95. Yalçınalp, S., & Türkoğlu, H. (2017). Prospective teacher's views using facebook as learning management system [Öğretmen adaylarının facebook'un öğrenme yönetimi sistemi olarak kullanımına ilişkin görüşleri]. *Milli Eğitim*, 1(213), 15–35. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85025826352&partnerID=40&md5=dfbc238c532eac3bb98649135060412>
96. Beyatlı, Ö. (2017). Evaluation of edmodo learning management system users in higher education. *Ponte*, 73(7), 148–157. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85025433842&partnerID=40&md5=957c31576ee07cd1b386878726d9fdc70>
97. Hustad, E., & Arntzen, A. A. B. (2013). Facilitating Teaching and Learning Capabilities in Social Learning Management Systems: Challenges, Issues, and Implications for Design. *Journal of Integrated Design and Process Science*, 17(1), 17–35. <https://doi.org/10.3233/jid-2013-0003>
98. Ohno, A., Yamasaki, T., & Tokiwa, K.-I. (2014). An online system for scoring and plagiarism detection in university programming class. In M. T. L. C.-C. O. H. K. S. C. Mohd Ayub A.F. Kashihara A. (Ed.), *Work-In-Progress Poster - Proceedings of the 22nd International Conference on Computers in Education, ICCE 2014* (pp. 37–39). Asia-Pacific Society for Computers in Education. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84923870245&partnerID=40&md5=34bd8aafdc5db2a9d8ac6679b3184bd>
99. Nagai, A., Yamasaki, H., & Miyajima, I. (2015). Working on visualization of academic behaviors with learning management system for universities - CoursePower. *Fujitsu Scientific and Technical Journal*, 51(1), 28–33. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84921731151&partnerID=40&md5=70df0b4321c026edc09efd5af3225d8d>
100. Kolski, D., Heuwieser, W., & Arlt, S. (2015). Use and future of wiki systems in veterinary education? – A survey of lecturers in German-speaking countries [Nutzung und Zukunft von Wiki-Systemen in der veterinärmedizinischen Lehre – Eine Umfrage unter Dozierenden im deutschsprachigen Raum]. *GMS Zeitschrift Fur Medizinische Ausbildung*, 32(5). <https://doi.org/10.3205/zma000996>
101. Orduña, P., Uribe, S. B., Isaza, N. H., Sancristobal, E., Emaldi, M., Martín, A. P., ... Garcia-Zubia, J. (2013). Generic integration of remote laboratories in learning and content management systems through federation protocols. In *Proceedings - Frontiers in Education Conference, FIE* (pp. 1372–1378). Oklahoma City, OK. <https://doi.org/10.1109/FIE.2013.6685057>
102. Chaabi, Y., Messoussi, R., Hilaire, V., Ruichek, Y., Lekdioui, K., & Touahni, R. (2015). Design of an intelligent system to support tutors in learning communities using multi-agent systems and fuzzy logic. *International Review on Computers and Software*, 10(8), 845–855. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84945318667&partnerID=40&md5=de6d321f910d92c4dc636fa7339f9269>
103. Phahlane, M. M., & Kekwaletse, R. M. (2013). Contextualised framework for an inclusive learning management system in an open and distance learning environment. In *2013 Pan African International Conference on Information Science, Computing and Telecommunications, PACT 2013* (pp. 34–38). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/SCAT.2013.7055086>
104. Woodley, C., & Dorrington, P. (2014). *Facebook and the societal aspects of formal learning: Optional, peripheral, or essential. Digital Arts and Entertainment: Concepts, Methodologies, Tools, and Applications* (Vol. 3). IGI Global. <https://doi.org/10.4018/978-1-4666-6114-1.ch064>
105. Watling, S. (2014). E-teaching craft and practice. In *Proceedings of ASCILITE 2014 - Annual Conference of the Australian Society for Computers in Tertiary Education* (pp. 431–435). ASCILITE. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84955281516&partnerID=40&md5=84e7c0ffa1bfdded14030afa3ac795d04>
106. Dooga, J. T. (2013). Could institutional virtual learning environments be stifling the possibilities of learning? In *Proceedings of the International Conference on e-Learning, ICEL* (pp. 125–135). Cape Town: Academic Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84904768166&partnerID=40&md5=8038f2884c070c7b70c64b396c7d0faf>
107. Svetsky, S., Moravcik, O., Stefankova, J., & Schreiber, P. (2013). Computer support for knowledge management within R&D and the teaching of bachelor students. *International Journal of Emerging Technologies in Learning*, 8(SPL.ISSUE), 22–28. <https://doi.org/10.3991/ijet.v8iS1.2328>
108. Prieto, L. P., Asensio-Pérez, J. I., Muñoz-Cristóbal, J. A., Jorrín-Abellán, I. M., Dimitriadis, Y., & Gómez-Sánchez, E. (2014). Supporting orchestration of CSCL scenarios in web-based Distributed Learning Environments. *Computers and Education*, 73, 9–25. <https://doi.org/10.1016/j.compedu.2013.12.008>
109. Moreno-Ger, P., Martínez-Ortiz, I., Gilmartín, V. F., & Ballesteros, R. H. (2013). TrivialCV: Competitive activities for the classroom integrated in a moodle virtual campus. *Revista Iberoamericana de Tecnologías Del Aprendizaje*, 8(1), 31–38. <https://doi.org/10.1109/RITA.2013.2244697>
110. Matsumoto, S., Kurisu, T., Kashima, T., & Akiyoshi, M. (2014). Evaluating an automatic adaptive delivery method of English words learning contents for university students in science and technology. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 8510 LNCS(PART 1), 510–520. https://doi.org/10.1007/978-3-319-07233-3_47
111. Auinger, A., Nedbal, D., Holzinger, A., Scerbakov, N., & Ebner, M. (2013). MashUps for e-Learning 2.0 simple Personal Learning Environments (PLE) for frequent computer users. In *WIT Transactions on Engineering Sciences* (Vol. 80, pp. 649–661). WITPress. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84879655936&partnerID=40&md5=432f0817d9c95203226c0d8b09f8f297>
112. Newberry, R., & Deluca, C. (2014). Building a foundation for success through student services for online learners. *Journal of Asynchronous Learning Network*, 17(4), 25–40. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84893968365&partnerID=40&md5=c68cc64d9cdf2935b9c310a02b89d79e>

113. Ramesh, V. M., & Ramanathan, C. (2013). A rubric to Evaluate Learning Management Systems. In *Proceedings of 2013 IEEE International Conference on Teaching, Assessment and Learning for Engineering, TALE 2013* (pp. 73–77). Kuta. <https://doi.org/10.1109/TALE.2013.6654402>
114. Strang, K. D. (2016). Testing young business students for technology acceptance and learning performance. *International Journal of Learning Technology*, 11(3), 238–265. <https://doi.org/10.1504/IJLT.2016.079036>
115. Missikoff M.M. Cordeiro J., M. L. H. S. M. L. C. O. C. J. (Ed.). (2016). ICEIS 2016 - Proceedings of the 18th International Conference on Enterprise Information Systems. In *ICEIS 2016 - Proceedings of the 18th International Conference on Enterprise Information Systems* (Vol. 1). SciTePress. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84979623317&partnerID=40&md5=5b53bac6a202fec36c3e594b21186473>
116. Joshi, A., Meza, J., Costa, S., Puricelli Perin, D. M., Trout, K., & Rayamajih, A. (2013). The role of information and communication technology in community outreach, academic and research collaboration, and education and support services (IT-CARES). *Perspectives in Health Information Management / AHIMA, American Health Information Management Association*, 10, 1g. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84896587413&partnerID=40&md5=e03a2979a7ee125a170bbaf481bac003>
117. Kurniali, S., & Mayliana. (2014). The development of a web-based attendance system with RFID for higher education institution in Binus University. In *EPJ Web of Conferences* (Vol. 68). Jakarta: EDP Sciences. <https://doi.org/10.1051/epjconf/20146800038>
118. Di Mascio T. Caporuscio M., D. la P. F. V. P. G. R. R. J. G. (Ed.). (2016). 6th International Conference on Methodologies and Intelligent Systems for Technology Enhanced Learning, mis4TEL 2016. *Advances in Intelligent Systems and Computing*, 478, 1–193. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84976465484&partnerID=40&md5=df5ccdc69ad766ed71b84bfa0c8bf07e>
119. Romero, L., Gutierrez, M., & Calusco, M. L. (2014). Stakeholders analysis in the development of software projects for e-learning in university contexts [Análisis de interesados en el desarrollo de proyectos de software para e-learning en contextos universitarios]. In *Iberian Conference on Information Systems and Technologies, CISTI*. Barcelona: IEEE Computer Society. <https://doi.org/10.1109/CISTI.2014.6876874>
120. Enriquez, A. G., Cheung, E. P., & Reardon, T. (2013). Strengthening community college engineering education through collaboration and technology. In *ASEE Annual Conference and Exposition, Conference Proceedings*. Atlanta, GA. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84884338488&partnerID=40&md5=ae92724dfb8f27566ff1382474c8c245>
121. Eljini, M. A., Muhsen, Z., Maaita, A., Alnsour, A., Azzam, M. A., & Barhoum, K. A. (2013). The utilization of the moodle E-learning system in Isra University. *Advances in Intelligent Systems and Computing*, 220, 75–81. https://doi.org/10.1007/978-3-319-00569-0_10
122. Lim, K., & Kim, M. H. (2015). A case study of the experiences of instructors and students in a virtual learning environment (VLE) with different cultural backgrounds. *Asia Pacific Education Review*, 16(4), 613–626. <https://doi.org/10.1007/s12564-015-9400-y>
123. Edrees, M. E. (2015). *eLearning X.0: Are learning management systems ready? Mobile Computing and Wireless Networks: Concepts, Methodologies, Tools, and Applications* (Vol. 4–4). IGI Global. <https://doi.org/10.4018/978-1-4666-8751-6.ch082>
124. Limniou, M., Downes, J. J., Tsvivilis, D., & Whitelock-Wainwright, A. (2016). *Design a VLE template: Students' and teachers' preferences on engagement and assessment. Student Learning: Assessment, Perceptions and Strategies*. Nova Science Publishers, Inc. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85021889330&partnerID=40&md5=c1d811b163b15a443a66701e7620dd32>
125. North-Samardzic, A., & Jiang, B. (2015). Acceptance and use of Moodle by students and academics. In *2015 Americas Conference on Information Systems, AMCIS 2015*. Americas Conference on Information Systems. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84963542644&partnerID=40&md5=2593a594123399884b73866b57191d33>
126. Ito, T., Ichikawa, T., Hanumara, N. C., & Slocum, A. H. (2014). *Teaching creativity in design through project-based learning in a collaborative distributed educational setting. Cloud-Based Design and Manufacturing (CBDM): A Service-Oriented Product Development Paradigm for the 21st Century*. Springer International Publishing. https://doi.org/10.1007/978-3-319-07398-9_9
127. Kamlaskar, C. H., & Killedar, M. (2015). Design and delivery of online courses in YCMOU. *Turkish Online Journal of Distance Education*, 16(2), 137–150. <https://doi.org/10.17718/tojde.46501>
128. Maciaszek L. Camp O., C. J. H. S. M. L. M. M. C. J. (Ed.). (2016). ICEIS 2016 - Proceedings of the 18th International Conference on Enterprise Information Systems. In *ICEIS 2016 - Proceedings of the 18th International Conference on Enterprise Information Systems* (Vol. 2). SciTePress. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84979633271&partnerID=40&md5=4eb11e3c3a1918759a0ce786b5842ca>
129. Etcheverry, P., & Maldonado, C. A. (2014). Attention as a cognitive process in a learning management system platform [La atención como proceso cognitivo en una plataforma learning management system]. In *Iberian Conference on Information Systems and Technologies, CISTI*. Barcelona: IEEE Computer Society. <https://doi.org/10.1109/CISTI.2014.6876884>
130. Stimpson, A. J., & Cummings, M. L. (2014). Assessing intervention timing in computer-based education using machine learning algorithms. *IEEE Access*, 2, 78–87. <https://doi.org/10.1109/ACCESS.2014.2303071>
131. Monaco, F., Sarli, L., Guasconi, M., & Alfieri, E. (2016). Online access and motivation of tutors of health professions higher education. *Acta Biomedica*, 87, 5–12. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85018359994&partnerID=40&md5=d50cba571f5ac8cfffbe2013f4162b5a>
132. Shaykina, O. I. (2015). Blended learning in english language teaching: Open educational resources used for academic purposes in tomsk polytechnic university. *Mediterranean Journal of Social Sciences*, 6(3), 255–260. <https://doi.org/10.5901/mjss.2015.v6n3s5p255>
133. Quimno, V., Imran, A., & Turner, T. (2015). The significance of “bayanihan” culture on technology adoption: A case of virtual learning environment adoption in a regional public University in the philippines. In *Pacific Asia Conference on Information Systems, PACIS 2015 - Proceedings*. Pacific Asia Conference on Information Systems. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85011105956&partnerID=40&md5=e4de8018e7fe67272c0534305374f182>
134. Ramos, P. H., & García-Peñalvo, F. J. (2013). Contribution of virtual classrooms to the personal learning environments (PLE) of the students of the Career of Informatics Applied to Education of National University of Chimborazo. In *ACM International Conference Proceeding Series* (pp. 507–513). Salamanca. <https://doi.org/10.1145/2536536.2536614>
135. Feldmann, B. (2015). System support for social learning in computer science at a Distance University – The University of Hagen. *Communications in Computer and Information Science*, 533, 188–196. https://doi.org/10.1007/978-3-319-22629-3_15
136. Nagata, J. J., Ramos, P. H., González, M. A. C., García-Bermejo, J. R., & García-Peñalvo, F. J. (2014). Comparison of the use of personal learning environments (PLE) between students from Chile and Ecuador: An approach. In G.-P. F.J. (Ed.), *ACM International Conference Proceeding Series* (pp. 75–80). Association for Computing Machinery. <https://doi.org/10.1145/2669711.2669882>

137. Jiménez-Ramírez, M., & Del Pozo Serrano, F. J. (2016). Memory, educational heritage and virtual learning spaces: An experience at the University of Granada [Memória, patrimônio educativo e espaços virtuais de aprendizagem. Uma experiência na Universidade de Granada]. *Tempo E Argumento*, 8(19), 34–59. <https://doi.org/10.5965/2175180308192016034>
138. Mitchell, L. D., Parlamis, J. D., & Claiborne, S. A. (2015). Overcoming Faculty Avoidance of Online Education: From Resistance to Support to Active Participation. *Journal of Management Education*, 39(3), 350–371. <https://doi.org/10.1177/1052562914547964>
139. Al-Khanjari, Z., Al-Roshdi, Y., & Kraiem, N. (2014). Virt-res: Developing extended architectural design for computer science virtual resources using SOA. *International Journal of Software Engineering and Its Applications*, 8(9), 125–136. <https://doi.org/10.14257/ijseia.2014.8.9.10>
140. Kuzminska, O., & Mazorchuk, M. (2016). Models and tools for information support of test development process in learning management systems. In N. M. G. A. Z. G. B. O. K. V. E. V. M. H. C. P. D. Spivakovsky A. Kharchenko V. (Ed.), *CEUR Workshop Proceedings* (Vol. 1614, pp. 632–639). CEUR-WS. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84977492009&partnerID=40&md5=f0e168edeef9366a9adde49444badde0>
141. Inoue-Smith, Y. (2014). Pre-service teachers' perceptions of the Internet and online courses: the case of an American Pacific Island University. *Asia-Pacific Journal of Teacher Education*, 42(2), 119–131. <https://doi.org/10.1080/1359866X.2014.892057>
142. Khaferi, G., Memeti, A., & Imeri, F. (2015). Comparison of several algorithms for searching data's in a learning management system. In J. L. Jurisic D. Stojanovic R. (Ed.), *Proceedings - 2015 4th Mediterranean Conference on Embedded Computing, MECO 2015 - Including ECyPS 2015, BioEMIS 2015, BioICT 2015, MECO-Student Challenge 2015* (pp. 272–275). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/MECO.2015.7181921>
143. Zhou, Q., Han, X., Yang, J., & Cheng, J. (2014). Design and implementation of learning analytics system for teachers and learners based on the specified LMS. In C. J. W. Y. Han X. Johnson G.C. (Ed.), *Proceedings - 2014 International Conference of Educational Innovation Through Technology, EITT 2014* (pp. 79–82). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/EITT.2014.21>
144. Hewagamage, C., & Hewagamage, K. P. (2015). A framework for enhancing ICT competency of universities in Sri Lanka. *International Journal of Emerging Technologies in Learning*, 10(5), 45–51. <https://doi.org/10.3991/ijet.v10i5.4802>
145. Chipps, J., Kerr, J., Brysiewicz, P., & Walters, F. (2015). A survey of university students' perceptions of learning management systems in a low-resource setting using a technology acceptance model. *CIN - Computers Informatics Nursing*, 33(2), 71–77. <https://doi.org/10.1097/CIN.0000000000000123>
146. Woodley, C., & Dorrington, P. (2013). *Facebook and the societal aspects of formal learning: Optional, peripheral, or essential. The Social Classroom: Integrating Social Network Use in Education*. IGI Global. <https://doi.org/10.4018/978-1-4666-4904-0.ch014>
147. Makarem, S. C. (2015). Using online video lectures to Enrich traditional face-to-face courses. *International Journal of Instruction*, 8(2), 155–164. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84932609308&partnerID=40&md5=7346329d8551054300a8a38aa0916f64>
148. Tawfik, M., Sancristobal, E., Martin, S., Gil, R., Diaz, G., Colmenar, A., ... Gustavsson, I. (2013). Virtual instrument systems in reality (VISIR) for remote wiring and measurement of electronic circuits on breadboard. *IEEE Transactions on Learning Technologies*, 6(1), 60–72. <https://doi.org/10.1109/TLT.2012.20>
149. Pettigrew, J., & Shearman, D. (2013). Piloting an online mathematics and statistics tutoring service. In C. H. Gosper M. Hedberg J. (Ed.), *30th Annual conference on Australian Society for Computers in Learning in Tertiary Education, ASCILITE 2013* (pp. 706–710). ASCILITE. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84913604107&partnerID=40&md5=5149dd55973ddc518d5db1a6e8267c32>
150. Chiang, T. H. C., Huang, C. S. J., Liou, H. H., & Yang, S. J. H. (2014). Student motivation and achievement in learning English as a second language using second life. *Knowledge Management and E-Learning*, 6(1), 1–17. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84898744572&partnerID=40&md5=90bb31eda8e195572d8630adfa96d07e>
151. Hoyt, J. E., & Oviatt, D. (2013). Governance, Faculty Incentives, and Course Ownership in Online Education at Doctorate-Granting Universities. *American Journal of Distance Education*, 27(3), 165–178. <https://doi.org/10.1080/08923647.2013.805554>
152. Vat, K. H. (2013). *Measuring student learning responsibly: A learning analytics perspective with web 2.0. Ethical Data Mining Applications for Socio-Economic Development*. IGI Global. <https://doi.org/10.4018/978-1-4666-4078-8.ch011>
153. Wang, J., Mendori, T., & Xiong, J. (2014). *A customizable language learning support system using ontology-driven engine. Computational Linguistics: Concepts, Methodologies, Tools, and Applications* (Vol. 2–3). IGI Global. <https://doi.org/10.4018/978-1-4666-6042-7.ch035>
154. Strader, T. J., Reed, D., Suh, I., & Njoroge, J. W. (2015). Instructor perceptions of Web technology feature and instructional task fit. *International Journal of Web-Based Learning and Teaching Technologies*, 10(3), 52–65. <https://doi.org/10.4018/ijwltt.2015070104>
155. Lucena, K. K. T., Da Silva, J. S., Bremgartner, V., De Oliveira, E. H. T., & Gadelha, B. F. (2015). MobiMonitor: A mobile app for monitoring distance courses in the Amazon region. In *Proceedings - Frontiers in Education Conference, FIE* (Vol. 2015–Febru). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/FIE.2014.7044341>
156. Frota, N. M., Barros, L. M., de Araújo, T. M., Caldini, L. N., do Nascimento, J. C., & Caetano, J. A. (2013). [Construction of an educational technology for teaching about nursing on peripheral venipuncture]. [Construção de uma tecnologia educacional para o ensino de enfermagem sobre punção venosa periférica.]. *Revista Gaúcha de Enfermagem / EENFUFRGS*, 34(2), 29–36. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84885727853&partnerID=40&md5=8482a4774f68892c8dc07845ecafe13a>
157. Laaser, W., Brito, J. G., & Toloza, E. A. (2013). The use of social networks by universities for communication at institutional level. In *Proceedings of the European Conference on e-Learning, ECEL* (pp. 231–239). Sophia Antipolis: Academic Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84899554424&partnerID=40&md5=f9137a041202f1ef651bae8c303f68ce>
158. Mohamad, A. M., Mohd. Yusof, F., & Aris, B. (2014). The pattern of interaction in Online Cooperative Learning. *Jurnal Teknologi (Sciences and Engineering)*, 70(1), 147–153. <https://doi.org/10.11113/jt.v70.2613>
159. Slinger-Friedman, V., Powell, T., Smith, G., & Mitchelson, M. (2015). Lessons learned and future prospects for online program creation and delivery: A case study from geography. In W. C. (Ed.), *Proceedings of the International Conference on e-Learning, ICEL* (Vol. 2015–Janua, pp. 279–286). Academic Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84940650888&partnerID=40&md5=69855df9bfe376aeca425b74b6181150>

160. Gaskell, A., & Mills, R. (2013). *The Evolving Role of Universities: Increasing Openness and Relevance. Distance and E-Learning in Transition: Learning Innovation, Technology and Social Challenges*. John Wiley & Sons, Inc. <https://doi.org/10.1002/9781118557686.ch2>
161. Daniluk, J. C., & Koert, E. (2015). Fertility awareness online: The efficacy of a fertility education website in increasing knowledge and changing fertility beliefs. *Human Reproduction*, 30(2), 353–363. <https://doi.org/10.1093/humrep/deu328>
162. Bousbahi, F., & Alrazgan, M. S. (2015). Investigating IT faculty resistance to learning management system adoption using latent variables in an acceptance technology model. *Scientific World Journal*, 2015. <https://doi.org/10.1155/2015/375651>
163. Chen, Y.-F., Watson, D., & Miles, E. (2014). Investigating the effectiveness of using immersive virtual world exercises to teach disaster management and development: A comparative study of tools developed by Coventry University. In A. W. Stal M. Sigrist D. (Ed.), *Proceedings of the 5th International Disaster and Risk Conference: Integrative Risk Management - The Role of Science, Technology and Practice, IDRC Davos 2014* (pp. 151–154). Global Risk Forum (GRF). Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84924937578&partnerID=40&md5=80e0e1e6dccb6447bd03a2a606432e92>
164. Romero, M., & Gentil, C. (2013). *Characterizing online learners' time regulation: Comparative case studies of virtual campuses in France and Spain. Assessment and Evaluation of Time Factors in Online Teaching and Learning*. IGI Global. <https://doi.org/10.4018/978-1-4666-4651-3.ch004>
165. Morze, N., Smyrnova-Trybulska, E., & Umryk, M. (2015). Designing an e-university environment based on the needs of net-generation students. *International Journal of Continuing Engineering Education and Life-Long Learning*, 25(4), 466–486. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84957019595&partnerID=40&md5=0bee2f13df59659f97dce2097fbc88a>
166. Simonics, I. (2013). New wave for learning with mentor teachers. In *SACI 2013 - 8th IEEE International Symposium on Applied Computational Intelligence and Informatics, Proceedings* (pp. 47–50). Timisoara. <https://doi.org/10.1109/SACI.2013.6609015>
167. Liyanage, L., Strachan, R., Penlington, R., & Casselden, B. (2013). Design of educational systems for work based learning (WBL): The learner experience. *Higher Education, Skills and Work-Based Learning*, 3(1), 51–61. <https://doi.org/10.1108/20423891311294984>
168. Fan, S., Garg, S., & Yeom, S. (2016). Exploring the use of big data analytics for improving support to students in higher education. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 9992 LNAI, 702–707. https://doi.org/10.1007/978-3-319-50127-7_63
169. Molinari, A. (2015). Enabling decision support services inside virtual learning environments. In *2014 International Conference on Web and Open Access to Learning, ICWOAL 2014*. Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICWOAL.2014.7009216>
170. Gercek, G., Saleem, N., & Stee, D. J. (2016). Implementing cloud based virtual computer network labs for online education: Experiences from a phased approach. *International Journal of Online Engineering*, 12(3), 70–76. <https://doi.org/10.3991/ijoe.v12i03.5564>
171. Students' data privacy: How far it is protected? (Ethical Perspective). (2015). In *Proceedings of 2014 International Conference on Interactive Collaborative Learning, ICL 2014* (pp. 619–622). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICL.2014.7017843>
172. Cambuzzi, W., Rigo, S. J., & Barbosa, J. L. V. (2015). Dropout prediction and reduction in distance education courses with the learning analytics multitrail approach. *Journal of Universal Computer Science*, 21(1), 23–47. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84933041536&partnerID=40&md5=4db95bcde38b59e6855095cccc31c969>
173. Martínez-Argüelles, M. J., Callejo, M. B., & Ferrero, J. M. C. (2013). Dimensions of perceived service quality in higher education virtual learning environments [Las dimensiones de la calidad del servicio percibida en entornos virtuales de formación superior]. *RUSC Universities and Knowledge Society Journal*, 10(1), 89–106. <https://doi.org/10.7238/rusc.v10i1.1411>
174. Dalsgaard, C., & Thestrup, K. (2015). Dimensions of openness: Beyond the course as an open format in online education. *International Review of Research in Open and Distance Learning*, 16(6), 78–97. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84950300104&partnerID=40&md5=8f8b0121982f24d8b47c422907e8a447>
175. Muñoz-Cristóbal, J. A., Martínez-Monés, A., Asensio-Pérez, J. I., Villagrà-Sobrino, S. L., Hoyos-Torío, J. E., & Dimitriadis, Y. (2014). City Ads: Embedding virtual worlds and augmented reality in everyday educational practice. *Journal of Universal Computer Science*, 20(12), 1670–1689. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84919967504&partnerID=40&md5=a2675835355b13d07b5ffe597d7b4b16>
176. Dagiene, V., Skupas, B., & Kurilovas, E. (2014). Programming assignments in virtual learning environments: Developments and opportunities for engineering education. *International Journal of Engineering Education*, 30(3), 644–653. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84901291434&partnerID=40&md5=3714fae608dfc8946c29fc8ad30f9e1d>
177. Cinkara, E., & Bagceci, B. (2013). Learners' attitudes towards online language learning; and corresponding success rates. *Turkish Online Journal of Distance Education*, 14(2), 118–130. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84881621004&partnerID=40&md5=8a1fceb17b775233a6a066bc38c3dbaa>
178. Drabble, A. (2014). An examination of literacy, knowledge, and learning in an online community of practice. *International Journal of Literacies*, 22(1), 1–8. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84937414256&partnerID=40&md5=f214bd8589fc93498d347d7df71d96c9>
179. Sayfour, N. (2016). Evaluation of the learning management system using students' perceptions. *Medical Journal of the Islamic Republic of Iran*, 30(1). Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85019093457&partnerID=40&md5=3471f84e24fab597948c52172c2551a6>
180. Lemus-Zúñiga, L. G., Montañana, J. M., Buendía-García, F., Poza-Luján, J. L., Posadas-Yagüe, J. L., & Benlloch-Dualde, J. V. (2015). Computer-assisted method based on continuous feedback to improve the academic achievements of first-year students on computer engineering. *Computer Applications in Engineering Education*, 23(4), 610–620. <https://doi.org/10.1002/cae.21633>
181. Antón-Rodríguez, M., Pérez-Juárez, M. A., Jiménez-Gómez, M. I., Díaz-Pernas, F. J., Martínez-Zarzuola, M., & González-Ortega, D. (2015). Moodle-based tool to improve teaching and learning of relational databases design and SQL DML queries. *Web Design and Development: Concepts, Methodologies, Tools, and Applications* (Vol. 2–3). IGI Global. <https://doi.org/10.4018/978-1-4666-8619-9.ch041>
182. Brown, C. A. (2014). *Economic impact of information and communication technology in higher education. Handbook of Research on Education and Technology in a Changing Society*. IGI Global. <https://doi.org/10.4018/978-1-4666-6046-5.ch020>
183. Rubin, B., Fernandes, R., & Avgerinou, M. D. (2013). The effects of technology on the community of inquiry and satisfaction with online courses. *Internet and Higher Education*, 17(1), 48–57. <https://doi.org/10.1016/j.iheduc.2012.09.006>

184. Souza, T. G., & Ferreira, R. Q. (2016). General considerations about use of virtual learning environment to teaching analytical chemical [Considerações gerais sobre o uso do ambiente virtual de aprendizagem no ensino de química analítica]. *Revista Virtual de Química*, 8(3), 992–1003. <https://doi.org/10.5935/1984-6835.20160070>
185. Fernández-Pascual, M. D., Ferrer-Cascales, R., Reig-Ferrer, A., Albaladejo-Blázquez, N., & Walker, S. L. (2015). Validation of a Spanish version of the Distance Education Learning Environments Survey (DELES) in Spain. *Learning Environments Research*, 18(2), 179–196. <https://doi.org/10.1007/s10984-015-9179-0>
186. Wolff, A., Zdrahal, Z., Herrmannova, D., & Knoth, P. (2014). Predicting student performance from combined data sources. *Studies in Computational Intelligence*, 524, 175–202. https://doi.org/10.1007/978-3-319-02738-8_7
187. Cole, M. T., Shelley, D. J., & Swartz, L. B. (2014). Online instruction, e-learning, and student satisfaction: A three year study. *International Review of Research in Open and Distance Learning*, 15(6), 111–131. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84913607654&partnerID=40&md5=a12d6de4a6291d55577fb619f7f51f5a>
188. Bozkurt, I., & Helm, J. (2013). Development and application of a systems engineering framework to support online course design and delivery. *Advances in Engineering Education*, 3(3). Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84878133932&partnerID=40&md5=0501323461e83a76947f291f61512a2>
189. Alves, S., Figueiral, M. H., Correia, A., & De Castro, A. V. (2014). Development of a thematic learning object for removable partial denture teaching. In *Biodental Engineering II - Proceedings of the 2nd International Conference on Biodental Engineering, BIODENTAL 2012* (pp. 181–186). Porto. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84896813768&partnerID=40&md5=6254da4502ecd0cbb650e137fe89eacd>
190. Prentzas, J., & Rekalidou, G. (2014). *Building collaborative virtual communities in a university department of early childhood education for wikipedia article authoring. Building Online Communities in Higher Education Institutions: Creating Collaborative Experience*. IGI Global. <https://doi.org/10.4018/978-1-4666-5178-4.ch002>
191. Cechova, I., Dvorak, J., Berankova, J., & Zerzanova, D. (2015). Professional development of academic workers: Creating new Open Course to enhance english language competence of academic workers. In J. A. Cubric M. (Ed.), *Proceedings of the European Conference on e-Learning, ECEL* (pp. 107–113). Academic Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84977109245&partnerID=40&md5=014d399cf02f9f93e2b1b96b0172da73>
192. Weil, S., De Silva, T.-A., & Ward, M. (2014). Blended learning in accounting: A New Zealand case. *Meditari Accountancy Research*, 22(2), 224–244. <https://doi.org/10.1108/MEDAR-10-2013-0044>
193. Baigaltugs, S., Munkhchimeg, B., & Alimaa, J. (2013). Challenges of mongolian e-learning and an improvement method of implementation. In *Proceedings of the International Conference e-Learning 2013* (pp. 331–335). Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84886922412&partnerID=40&md5=bec0f3c28bebfac01c35464fbf72ac0>
194. Sánchez, R. A., Hueros, A. D., & Ordaz, M. G. (2013). E-learning and the University of Huelva: A study of WebCT and the technological acceptance model. *Campus-Wide Information Systems*, 30(2), 135–160. <https://doi.org/10.1108/10650741311306318>
195. Bowman, N. D., & Akcaoglu, M. (2014). “I see smart people!”: Using Facebook to supplement cognitive and affective learning in the university mass lecture. *Internet and Higher Education*, 23, 1–8. <https://doi.org/10.1016/j.iheduc.2014.05.003>
196. Melgosa Pedrosa, C., Ramos Barbero, B., & Baños García, M. E. (2015). Interactive learning management system to develop spatial visualization abilities. *Computer Applications in Engineering Education*, 23(2), 203–216. <https://doi.org/10.1002/cae.21590>
197. Villagrasa, S., Fonseca, D., Redondo, E., & Duran, J. (2014). Teaching case of gamification and visual technologies for education. *Journal of Cases on Information Technology*, 16(4), 38–57. <https://doi.org/10.4018/jcit.2014100104>
198. Kumar, S., & Heathcock, K. (2013). *Information literacy support for online students in higher education. Handbook of Research on Transnational Higher Education* (Vol. 2–2). IGI Global. <https://doi.org/10.4018/978-1-4666-4458-8.ch031>
199. E. Major, A., Raj Chaudhury, S., M. Gilbertson, B., & T. King D., J. (2014). An integrated science course moves online: four concurrent perspectives. *Journal of Applied Research in Higher Education*, 6(2), 248–268. <https://doi.org/10.1108/JARHE-02-2013-0006>
200. Pickering, J. D. (2015). Anatomy drawing screencasts: Enabling flexible learning for medical students. *Anatomical Sciences Education*, 8(3), 249–257. <https://doi.org/10.1002/ase.1480>
201. Maloshonok, N. (2016). How the use of internet and multimedia technology in education correlates with student engagement. *Voprosy Obrazovaniya*, 2016(4), 59–83. <https://doi.org/10.17323/1814-9545-2016-4-59-833>
202. Juhary, J. (2013). The learning management system at the defence university: Awareness and application. *International Education Studies*, 6(8), 16–20. <https://doi.org/10.5539/ies.v6n8p16>
203. Gomes, L. M., Guerra, H., Mendes, A., & Rego, I. E. (2015). Facebook vs moodle: Surveying university students on the use of learning management systems to support learning activities outside the classroom. In *2015 10th Iberian Conference on Information Systems and Technologies, CISTI 2015*. Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/CISTI.2015.7170464>
204. Kusmawan, U. (2015). *Educating diverse teachers in a diverse country: An issue of connectivity. Contesting and Constructing International Perspectives in Global Education*. Sense Publishers. https://doi.org/10.1007/978-94-6209-989-0_6
205. Antón-Rodríguez, M., Díaz-Pernas, F. J., Pérez-Juárez, M. A., Martínez-Zarzuela, M., Jiménez-Gómez, M. I., & González-Ortega, D. (2014). *Moodle-based tool to improve teaching and learning of relational databases design and SQL DML queries. Innovative Teaching Strategies and New Learning Paradigms in Computer Programming*. IGI Global. <https://doi.org/10.4018/978-1-4666-7304-5.ch010>
206. Harkness, S. J. (2015). How a Historically Black College University (HBCU) Established a Sustainable Online Learning Program in Partnership with Quality MattersTM. *American Journal of Distance Education*, 29(3), 198–209. <https://doi.org/10.1080/08923647.2015.1057440>
207. Grey, F., Li, J., Shi, Q., Doney, E., Chen, W. H., & Shen, J. (2015). Lifelong Learning Lab: Collaborative design of hands-on science for Chinese schools. In *Proceedings of IDC 2015: The 14th International Conference on Interaction Design and Children* (pp. 383–386). Association for Computing Machinery, Inc. <https://doi.org/10.1145/2771839.2771922>
208. Goosen, L., & Van Heerden, D. (2016). E-learning environment tools to address online and open distance education context challenges. In Z. N. Idrus R.M. (Ed.), *Proceedings of the International Conference on e-Learning, ICEL* (Vol. 2016–Janua, pp. 275–284). Academic Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84979270624&partnerID=40&md5=d26ca39ff0a3da572d69f8e9f01df3ab>
209. Duffy, T., McCaig, M., McGrandles, A., Rimmer, R., & Martin, C. R. (2014). Review of the integrity of a Self Administered Motivational Instrument. *Nurse Education Today*, 34(4), 625–630. <https://doi.org/10.1016/j.nedt.2013.05.015>
210. Kuikka, M., Kitola, M., & Laakso, M.-J. (2014). Challenges when introducing electronic exam. *Research in Learning Technology*, 22. <https://doi.org/10.3402/rlt.v22.22817>

211. Gromova, T. V., & Glukhov, G. V. (2016). Functional components and roles of the university teacher in distance education. *International Review of Management and Marketing*, 6(5), 235–242. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84982921321&partnerID=40&md5=0370bd525b8faf31d698eb1d5b79417d>
212. Virkus, S. (2013). *Blended learning in a digital library learning programme*. *Advancing Library Education: Technological Innovation and Instructional Design*. IGI Global. <https://doi.org/10.4018/978-1-4666-3688-0.ch017>
213. Murphy, S. A. (2013). Data Visualization and Rapid Analytics: Applying Tableau Desktop to Support Library Decision-Making. *Journal of Web Librarianship*, 7(4), 465–476. <https://doi.org/10.1080/19322909.2013.825148>
214. Rojko, A., Bauer, P., Prochazka, P., Pazdera, I., & Vitek, O. (2015). Development and experience with ICT based education in sustainably energy. In *Proceedings of the IEEE International Conference on Industrial Technology* (Vol. 2015–June, pp. 3264–3269). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICIT.2015.7125581>
215. Rothera, H. (2015). Picking up the cool tools: Working with strategic students to get bite-sized information literacy tutorials created, promoted, embedded, remembered and used. *Journal of Information Literacy*, 9(2), 37–61. <https://doi.org/10.11645/9.2.2033>
216. Mozelius, P., & Olsson, M. (2015). Putting the programming hut online; self learning for the net-generation. In J. A. Cubric M. (Ed.), *Proceedings of the European Conference on e-Learning, ECEL* (pp. 417–421). Academic Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84977083869&partnerID=40&md5=a636a5fc9c4f442d61be1fae8ee93401>
217. Nlabathi, S. (2014). Exploring student experiences on the use of Blackboard in a Blended Learning class: A case study at a South African University. *Mediterranean Journal of Social Sciences*, 5(11 SPEC. ISSUE), 89–94. <https://doi.org/10.5901/mjss.2014.v5n11p89>
218. Tarricone, G. L., & Gómez, M. S. R. M. (2013). Distance education in the Faculty of Medicine [Educación a distancia en la Facultad de Medicina]. *Gaceta Médica de Caracas*, 121(2), 117–121. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84882300875&partnerID=40&md5=6b12b4552a9ffdd88e2b2825c95e73f7>
219. Hettiarachchi, E., Huertas, M. A., & Mor, E. (2015). E-assessment system for skill and knowledge assessment in computer engineering education. *International Journal of Engineering Education*, 31(2), 529–540. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84925011817&partnerID=40&md5=86f6a37ad2757a3da45377a8283fea6f>
220. Govenner, I., & Rootman-le Grange, I. (2015). Evaluating the early adoption of moodle at a higher education institution. In J. A. Cubric M. (Ed.), *Proceedings of the European Conference on e-Learning, ECEL* (pp. 230–237). Academic Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84977123752&partnerID=40&md5=212fa7c12e85c1b8944a72a2f309a49e>
221. Bhardwaj, A., Nagandla, K., Swe, K. M. M., & Abas, A. B. L. (2015). Academic staff perspectives towards adoption of E-learning at Melaka manipal medical college: Has e-learning redefined our teaching model? *Kathmandu University Medical Journal*, 13(49), 12–18. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84944585151&partnerID=40&md5=1eb2455bbf9cc09cd9d9d558a76b8f3f>
222. Tibaut, A., Rebolj, D., Menzel, K., & Jardim-Goncalves, R. (2014). Inter-university virtual learning environment. *Studies in Computational Intelligence*, 528, 97–119. https://doi.org/10.1007/978-3-642-41965-2_4
223. Valjataga T. Tang J.K.T., C. Y. L. M. L. J. K. T. (Ed.). (2014). International Workshops on SPeL, PRASAE, IWMPML, OBIE, and KMEL, FET, ICWL 2014. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 8699, 1–294. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84920448888&partnerID=40&md5=b55a228bc7be152d8d50adc46df1762d>
224. Chen, K.-Z., Lowenthal, P. R., & Bauer, C. (2015). Effectiveness and student perceptions of high-enrolment health studies online courses. *Health Education Journal*, 75(3), 343–357. <https://doi.org/10.1177/0017896915581060>
225. Andergassen, M., Ernst, G., Guerra, V., Modritscher, F., Moser, M., Neumann, G., & Renner, T. (2015). The evolution of e-learning platforms from content to activity based learning: The case of Learn@WU. In *Proceedings of 2015 International Conference on Interactive Collaborative Learning, ICL 2015* (pp. 779–784). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICL.2015.7318127>
226. Betts, K., Kramer, R., & Gaines, L. L. (2013). *Online faculty and adjuncts: Strategies for meeting current and future demands of online education through online human touch training and support*. *Curriculum, Learning, and Teaching Advancements in Online Education*. IGI Global. <https://doi.org/10.4018/978-1-4666-2949-3.ch007>
227. Wang, J., Mendori, T., & Xiong, J. (2013). A customizable language learning support system using ontology-driven engine. *International Journal of Distance Education Technologies*, 11(4), 81–96. <https://doi.org/10.4018/ijdet.2013100106>
228. Hreinsson, E. B. (2015). Distance education experience with electric power courses at the university of Iceland. In *2015 4th International Conference on Electric Power and Energy Conversion Systems, EPECS 2015*. Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/EPECS.2015.7368549>
229. Usoro, A., Echeng, R., & Majewski, G. (2014). A model of acceptance of web 2.0 in learning in higher education: A case study of two cultures. *E-Learning and Digital Media*, 11(6), 644–653. <https://doi.org/10.2304/elea.2014.11.6.644>
230. Maleko, M., Nandi, D., Hamilton, M., D'Souza, D., & Harland, J. (2013). Facebook versus blackboard for supporting the learning of programming in a fully online course: the changing face of computing education. In *Proceedings - 2013 Learning and Teaching in Computing and Engineering, LaTiCE 2013* (pp. 83–89). Macau. <https://doi.org/10.1109/LaTiCE.2013.31>
231. Dahl, M. R., & Simonsen, E. O. (2013). *Nothing happens until it happens*. *Data Security, Data Mining and Data Management: Technologies and Challenges*. Nova Science Publishers, Inc. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84896165810&partnerID=40&md5=a9647463386ce3c16fd1a437e7100982>
232. De Lima, T. F. M., & Dos Passos, T. N. (2015). *Evaluating a learning management system to support classroom teaching*. *Web Design and Development: Concepts, Methodologies, Tools, and Applications* (Vol. 2–3). IGI Global. <https://doi.org/10.4018/978-1-4666-8619-9.ch042>
233. Wu, K. (2013). Academic libraries in the age of MOOCs. *Reference Services Review*, 41(3), 576–587. <https://doi.org/10.1108/RSR-03-2013-0015>
234. Pietrzak, M. (2016). *Use of information and communication technology and resources of the internet in education natural sciences*. *Current Topics in Czech and Central European Geography Education*. Springer International Publishing. https://doi.org/10.1007/978-3-319-43614-2_9
235. Geertshuis, S., & Liu, Q. (2016). E-learning ecosystem awareness and professional identity in e-learning technology adoption. In J. A. Novotna J. (Ed.), *Proceedings of the European Conference on e-Learning, ECEL* (Vol. 2016–Janua, pp. 230–238). Academic

- Conferences Limited. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85000797860&partnerID=40&md5=609b6434f08b118a18e480d87d633211>
236. Barefield, A. C., & Meyer, J. D. (2013). Leadership's role in support of online academic programs: implementing an administrative support matrix. *Perspectives in Health Information Management / AHIMA, American Health Information Management Association, 10*, 1f. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84880153112&partnerID=40&md5=f7e98f8c0090f73fe43b027c9512ea94>
237. Vlachopoulos, D. (2016). Assuring quality in e-learning course design: The roadmap. *International Review of Research in Open and Distance Learning, 17*(6), 183–205. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85008157865&partnerID=40&md5=ca024277183700d7cda90f3692c8b779>
238. Kumar, S., & Heathcock, K. (2015). *Information literacy support for online students in higher education. Professional Development and Workplace Learning: Concepts, Methodologies, Tools, and Applications* (Vol. 3). IGI Global. <https://doi.org/10.4018/978-1-4666-8632-8.ch075>
239. 20th Americas Conference on Information Systems, AMCIS 2014. (2014). In *20th Americas Conference on Information Systems, AMCIS 2014*. Savannah, GA: Association for Information Systems. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84905994643&partnerID=40&md5=77f2851f6be7920fec94c025d7ba88e4>
240. Sawyer, R. K. (2014). *Conclusion: The future of learning: Grounding educational innovation in the learning sciences. The Cambridge Handbook of the Learning Sciences, Second Edition*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139519526.043>
241. Emelyanova, N., & Voronina, E. (2014). Introducing a learning management system at a russian university: Students' and teachers' perceptions. *International Review of Research in Open and Distance Learning, 15*(1), 272–289. Retrieved from <https://www.scopus.com/inward/record.uri?eid=2-s2.0-84894516213&partnerID=40&md5=a5ec90c3e4af9b988a3df8bcc69d02b1>
242. Runceanu, A., Cercel, C., Borcosi, I., & Grofu, F. (2016). An application integrated into an learning management system for teaching and evaluation engineering disciplines (Vol. 3, pp. 733–740). International Multidisciplinary Scientific Geoconference. <https://doi.org/10.5593/SGEM2016/B53/S22.093>
243. Mouakket, S., & Bettayeb, A. M. (2016). Factors affecting university instructors' continuance intention to use learning management systems: The Blackboard System case (Vol. 2, pp. 215–222). SciTePress.
244. Kurilovas, E., & Dagiene, V. (2016). Computational thinking skills and adaptation quality of virtual learning environments for learning informatics, *32*(4), 1596–1603.
245. Sparkes, D., Schmidlin, K., & Hsu, M. (2016). Virtual learning environment for entrepreneurship: A conceptual model (pp. 301–303). International Institute of Informatics and Systemics, IIS.
246. Broisin, J., Venant, R., & Vidal, P. (2016). Learning analytics for learner awareness in remote laboratories dedicated to computer education (Vol. 1596, pp. 31–37). CEUR-WS.
247. Safford, K., & Stinton, J. (2016). Barriers to blended digital distance vocational learning for non-traditional students, *47*(1), 135–150. <https://doi.org/10.1111/bjet.12222>
248. Guitart, I., & Conesa, J. (2016). Adoption of business strategies to provide analytical systems for teachers in the context of universities, *11*(7), 34–40. <https://doi.org/10.3991/ijet.v11i07.5887>
249. Aman, A. M., Meddour, H., Majid, A. H. A., & Auf, M. A. A. (2016). Exploring the use of holographic telepresence in designing virtual learning environments: A Saudi experience, *10*(4), 610–621.
250. Nestel, D., Bearman, M., Brooks, P., Campher, D., Freeman, K., Greenhill, J., ... Watson, M. (2016). A national training program for simulation educators and technicians: Evaluation strategy and outcomes, *16*(1). <https://doi.org/10.1186/s12909-016-0548-x>
251. Lenz, L., Schuster, K., Richert, A., & Jeschke, S. (2016). Are virtual learning environments appropriate for dyscalculic students?: A theoretical approach on design optimization of virtual worlds used in mixed-reality simulators. Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/GEM.2015.7377205>
252. Jafari, S. M., Salem, S. F., Moaddab, M. S., & Salem, S. O. (2016). Learning Management System (LMS) success: An investigation among the university students (pp. 64–69). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/IC3e.2015.7403488>
253. Qazdar, A., Er-Raha, B., Cherkaoui, C., Bakki, A., & Mammass, D. (2016). A proposed framework to support adaptivity in online learning environment: Use case in LMS, *84*(3), 385–396.
254. Pinto, M., Caramelo, J., Coimbra, S., Terrasêca, M., & Agrusti, G. (2016). Defining the key competences and skills for young low achievers' in lifelong learning by the voices of students, trainers and teachers, *15*(1), 53–62. <https://doi.org/10.4119/UNIBI/jsse-v15-i1-1465>
255. De Smet, C., Valcke, M., Schellens, T., De Wever, B., & Vanderlinde, R. (2016). A qualitative study on learning and teaching with learning paths in a learning management system, *15*(1), 27–37. <https://doi.org/10.4119/UNIBI/jsse-v15-i1-1460>
256. Hewitt, B., Kidd, M., Smith, R., & Wearne, S. (2016). Developing a virtual engineering management community, *41*(2), 220–230. <https://doi.org/10.1080/03043797.2015.1056098>
257. Tena, R. R., Almenara, J. C., & Osuna, J. B. (2016). E- learning of andalusian university's lecturers. *Gender, 15*(2), 25–37.
258. Boehringer, D., & Richter, T. (2016). ViPLab - An online programming lab (pp. 269–270). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/REV.2016.7444479>
259. Azhan, M. H. B. N., Mohd Saman, M. Y. Bin, & Bin Man, M. (2016). A framework for collaborative multi-institution MOOC environment (Vol. 22-23-NaN-2016). Association for Computing Machinery. <https://doi.org/10.1145/2896387.2896421>
260. Alshammari, S. H., Ali, M. B., & Rosli, M. S. (2016, April 1). The influences of technical support, self efficacy and instructional design on the usage and acceptance of LMS: A comprehensive review. Sakarya University.
261. Buehler, E., Easley, W., Poole, A., & Hurst, A. (2016). Accessibility barriers to online education for young adults with intellectual disabilities. Association for Computing Machinery, Inc. <https://doi.org/10.1145/2899475.2899481>
262. Bae, E., Prasad, P. W. C., Alsadoon, A., & Bajaj, K. (2016). Framework to improve delivery methods in higher education through online learning (pp. 130–134). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICEED.2015.7451506>
263. Zaidi, Z., Versteegen, D., Naqvi, R., Morahan, P., & Dornan, T. (2016). Gender, religion, and sociopolitical issues in cross-cultural online education, *21*(2), 287–301. <https://doi.org/10.1007/s10459-015-9631-z>
264. Delgado Domínguez, A. L., & Aguilar, M. G. P. (2016). Integrated services management frameworks for online education based on information and communications technology (pp. 171–175). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICEDEG.2016.7461716>

265. Wu, J. Y., May, M. D., & Yang, C. C. (2016). A Moodle-based e-learning framework to conduct the manipulation skill training for an enterprise resource planning system (pp. 118–123). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICEED.2015.7451504>
266. van den Berg, G., Joffe, M., & Porto, S. C. S. (2016). The role of partnerships in academic capacity building in open and online distance education, *37*(2), 196–207. <https://doi.org/10.1080/01587919.2016.1184399>
267. Wahab, R. A., & Al-Alaiwat, S. (2016). Student's attitudes towards online assignment submission at college of health sciences, University of Bahrain (pp. 403–407). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ECONF.2015.44>
268. Singh, M. N. K., Sun, Q., & Weber, C. M. (2016). An evaluation of a digital learning management system in High School Physics Classrooms (Evaluation) (Vol. 2016–June). American Society for Engineering Education.
269. Ossebaard, H. C., & Van Gemert-Pijnen, L. (2016). EHealth and quality in health care: Implementation time, *28*(3), 415–419. <https://doi.org/10.1093/intqhc/mzw032>
270. El-Azab, S., & Aboelfadl, K. (2016). E-Learning Supporting System (ELS) in Nahda University in upper Egypt: Case study (pp. 571–593). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ECONF.2015.92>
271. Fu, Y., Clarke, P. J., & Barnes, N. (2016). Integrating software testing to CS curriculum using WRESTT-CyLE (Vol. 2016–June). American Society for Engineering Education.
272. Kintu, M. J., & Zhu, C. (2016). Student characteristics and learning outcomes in a blended learning environment intervention in a Ugandan university, *14*(3), 181–195.
273. Fleming, R., Stoiber, L. C., Pfeiffer, H. M., Kienzler, S. E., Fleming, R. R., Pedrick, L. E., ... Reddy, D. M. (2016). Using U-Pace instruction to improve the academic performance of economically disadvantaged undergraduates, *32*(4), 304–313. <https://doi.org/10.1111/jcal.12133>
274. Zanjani, N., Edwards, S. L., Nykvist, S., & Geva, S. (2016). LMS Acceptance: The Instructor Role, *25*(4), 519–526. <https://doi.org/10.1007/s40299-016-0277-2>
275. Semingson, P., Hurlbut, A., Owens, D., & Robertson, M. (2016). Scaffolding digital writing and storytelling in online-only teacher education courses (pp. 104–127). IGI Global. <https://doi.org/10.4018/978-1-5225-0892-2.ch006>
276. Nicklin, J. M., McNall, L. A., Cerasoli, C. P., Varga, C. M., & McGivney, R. J. (2016). Teaching Online: Applying Need Theory to the Work–Family Interface, *30*(3), 167–179. <https://doi.org/10.1080/08923647.2016.1187042>
277. Salani, D., Albuja, L. D., & Azaiza, K. (2016). The Keys to Success in Doctoral Studies: A Preimmersion Course, *32*(5), 358–363. <https://doi.org/10.1016/j.profnurs.2016.01.005>
278. Rodríguez, M. A., Pernas, F. J. D., Juárez, M. ángeles P., Zarzuela, M. M., & Ortega, D. G. (2016). Moodle game-based tool trivioddle to support the learning of programming languages and paradigms (pp. 238–260). IGI Global. <https://doi.org/10.4018/978-1-5225-1034-5.ch011>
279. Sousa-Vieira, M. E., López-Ardao, J. C., Fernández-Veiga, M., Rodríguez-Pérez, M., & Herrería-Alonso, S. (2016, September 1). An open-source platform for using gamification and social learning methodologies in engineering education: Design and experience. John Wiley and Sons Inc. <https://doi.org/10.1002/cae.21746>
280. Kent, M. (2016). Adding to the mix: Students use of Facebook groups and blackboard discussion forums in higher education, *8*(3), 444–463.
281. Pellas, N. (2016). Bolstering the quality and integrity of online collaborative university- level courses via an open Sim standalone server in conjunction with sloodle, *21*(5), 1007–1032. <https://doi.org/10.1007/s10639-014-9365-1>
282. Pišútová, K. (2016). Elearning in practice - Case of Comenius University. Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICETA.2015.7558506>
283. Keeney, H., Shelton, K., Mason, D., & Young, J. K. (2016). DELES analysis of E-learning environments: Satisfaction guaranteed? (pp. 128–150). IGI Global. <https://doi.org/10.4018/978-1-5225-0877-9.ch007>
284. Read, K. G., & Morasch, M. J. (2016). Research Performance Support: Connecting Online Graduate Students from the LMS to the Library, *21*(3–4), 101–113. <https://doi.org/10.1080/10875301.2016.1240736>
285. Hennessy, C. M., Kirkpatrick, E., Smith, C. F., & Border, S. (2016). Social media and anatomy education: Using twitter to enhance the student learning experience in anatomy, *9*(6), 505–515. <https://doi.org/10.1002/ase.1610>
286. Kline, E., Wallace, N., Sult, L., & Hagedon, M. (2016). Embedding the Library in the LMS: Is It a Good Investment for Your Organization's Information Literacy Program? (pp. 255–269). Elsevier Inc. <https://doi.org/10.1016/B978-0-08-100598-9.00014-3>
287. Hew, T. S., & Syed Abdul Kadir, S. L. (2016). Behavioural intention in cloud-based VLE: An extension to Channel Expansion Theory, *64*, 9–20. <https://doi.org/10.1016/j.chb.2016.05.075>
288. Venugopal-Wairagade, G. (2016). Creating a supportive learning environment for better student engagement (pp. 71–75). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/LaTiCE.2016.26>
289. Vaghjee, H., & Panchoo, S. (2016). Applying the Community of Inquiry Framework to explore sense of community on Moodle (pp. 378–383). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/EmergiTech.2016.7737370>
290. Vázquez Martínez, F. D., & Quiroz Hernández, F. J. (2016, November 15). Direct involvement of the university in the training of medical specialists in Mexico. <https://doi.org/10.1016/j.edumed.2016.12.008>
291. Chang, H., & Windeatt, S. (2016). Developing collaborative learning practices in an online language course, *29*(8), 1271–1286. <https://doi.org/10.1080/09588221.2016.1274331>
292. Proceedings - 2016 11th Latin American Conference on Learning Objects and Technology, LACLO 2016. (2016, November 21). Institute of Electrical and Electronics Engineers Inc.
293. Konert, J., Bohr, C., Bellhauser, H., & Rensing, C. (2016). PeerLA - Assistant for individual learning goals and self-regulation competency improvement in online learning scenarios (pp. 52–56). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICALT.2016.100>
294. Comendador, B. E. V., Rabago, L. W., & Tanguilig, B. T. (2016). An educational model based on Knowledge Discovery in Databases (KDD) to predict learner's behavior using classification techniques. Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICSPCC.2016.7753623>
295. Nwokeji, J. C., Boulder, T., Ohu, I., & Okolie, N. C. (2016). Language as an instructional barrier: Towards support for international faculty (Vol. 2016–November). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/FIE.2016.7757748>
296. Fomina, T. P., Vorobjev, G. A., & Kalitvin, V. A. (2016). Distance learning approaches in the mathematical training of pedagogical institutes's students, *11*(18), 12145–12154.

297. Petrosino, K. L. (2016). Developmental writing and MOOCs: Reconsidering access, remediation, and development in large-scale online writing instruction (pp. 153–168). IGI Global. <https://doi.org/10.4018/978-1-5225-1718-4.ch010>
298. James, R. (2016). Tertiary student attitudes to invigilated, online summative examinations, *13*(1). <https://doi.org/10.1186/s41239-016-0015-0>
299. Nouri, J. (2016). The flipped classroom: for active, effective and increased learning – especially for low achievers, *13*(1). <https://doi.org/10.1186/s41239-016-0032-z>
300. Cummins, M., Rajan, N. S., Hodge, C., & Gouripeddi, R. (2016). Patterns and perceptions of asynchronous video discussion in a graduate health sciences course, *55*(12), 706–710. <https://doi.org/10.3928/01484834-20161114-08>
301. Kelly, N., Montenegro, M., Gonzalez, C., Clasing, P., Sandoval, A., Jara, M., ... Alarcón, R. (2017). Combining event- and variable-centred approaches to institution-facing learning analytics at the unit of study level, *34*(1), 63–78. <https://doi.org/10.1108/IJILT-07-2016-0022>
302. Brown, C. J., & Wilson, C. B. (2016). One University Making a Difference in Graduate Education: Caring in the Online Learning Environment, *34*(4), 402–407. <https://doi.org/10.1177/0898010116633319>
303. Zaborova, E. N., Glazkova, I. G., & Markova, T. L. (2017). Distance learning: Students' perspective, *2017-January*(2), 131–139.
304. Ho, G., & Beatty, S. (2017). Podcasting to students working in the resources industry: A supplementary teaching strategy, *33*(1).
305. Liyanagunawardena, T. R., & Hussain, A. (2017). Online distance education materials and accessibility: Case study of university college of estate management (Vol. 180, pp. 79–86). Springer Verlag. https://doi.org/10.1007/978-3-319-49625-2_10
306. León-Urrutia, M., Cobos, R., & Dickens, K. (2017). Internal perspectives of MOOCs in universities (Vol. 1841, pp. 71–76). CEUR-WS.
307. Sheu, F. R., & Shih, M. (2017). Evaluating NTU's OpenCourseWare project with Google Analytics: User characteristics, course preferences, and usage patterns, *18*(4), 100–122. <https://doi.org/10.19173/irrodl.v18i4.3025>
308. Cherry, S. J., & Flora, B. H. (2017). Radiography faculty engaged in online education: Perceptions of effectiveness, satisfaction, and technological self-efficacy. American Society of Radiologic Technologists.
309. Zanjani, N., Edwards, S. L., Nykvist, S., & Geva, S. (2017). The important elements of LMS design that affect user engagement with e-learning tools within LMSs in the higher education sector, *33*(1), 19–31. <https://doi.org/10.14742/ajet.2938>
310. Daramola, O., Oladipupo, O., Afolabi, I., & Olopade, A. (2017). Heuristic evaluation of an institutional E-learning system: A Nigerian case, *12*(3), 26–42. <https://doi.org/10.3991/ijet.v12i03.6083>
311. Kometani, Y., & Nagaoka, K. (2017). Development of a seminar management system: Evaluation of support functions for improvement of presentation skills (Vol. 10274 LNCS, pp. 50–61). Springer Verlag. https://doi.org/10.1007/978-3-319-58524-6_5
312. Nguyen, V. A. (2017). Towards the implementation of an assessment-centred blended learning framework at the course level: A case study in a Vietnamese national university, *34*(1), 20–30. <https://doi.org/10.1108/IJILT-08-2016-0031>
313. El-Rady, A. A., Shehab, M., & El Fakharany, E. (2017). Predicting learner performance using data-mining techniques and ontology (Vol. 533, pp. 660–669). Springer Verlag. https://doi.org/10.1007/978-3-319-48308-5_63
314. Slade, J. D., Robb, M., Sherrod, B., & Hunker, D. (2017). Online adjunct faculty support: An innovative use of a learning management system, *42*(3), 143–146. <https://doi.org/10.1097/NNE.0000000000000337>
315. Nguyen, Q., Rienties, B., & Toetnel, L. (2017). Mixing and matching learning design and learning analytics (Vol. 10296 LNCS, pp. 302–316). Springer Verlag. https://doi.org/10.1007/978-3-319-58515-4_24
316. Parrott, J., & Lindsay, B. D. (2017). Utilizing syllabi to support access services and beyond: A case study, *14*(1), 29–38. <https://doi.org/10.1080/15367967.2017.1281138>
317. Campbell, A. G., Santiago, K., Hoo, D., & Mangina, E. (2017). Future mixed reality educational spaces (pp. 1088–1093). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/FTC.2016.7821738>
318. Robinson, L. (2017). Embracing online education: exploring options for success, *27*(1), 99–111. <https://doi.org/10.1080/08841241.2016.1261978>
319. Jayakody, J., & Perera, I. (2017). Enhancing competencies of less-able students to achieve learning outcomes: Learner aware tool support through Business intelligence (pp. 154–160). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/TALE.2016.7851787>
320. Baleghi-Zadeh, S., Ayub, A. F. M., Mahmud, R., & Daud, S. M. (2017). The influence of system interactivity and technical support on learning management system utilization, *9*(1), 50–68.
321. Reisoğlu, I., Topu, B., Yılmaz, R., Karakuş Yılmaz, T., & Göktaş, Y. (2017). 3D virtual learning environments in education: a meta-review, *18*(1), 81–100. <https://doi.org/10.1007/s12564-016-9467-0>
322. Justus, M. (2017). The role of pedagogical beliefs in emerging technology integration: An exploratory case study of faculty perspectives, *22*(2), 499–526.
323. Sato, T., & Haegele, J. A. (2017, April 4). Professional development in adapted physical education with graduate web-based professional learning, pp. 1–14. <https://doi.org/10.1080/17408989.2017.1310832>
324. Chen, Y., Quan, C. Bin, & Gao, Y. (2017). Programming online judge system (pp. 299–305). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/CSCI.2016.0064>
325. Sapp, L., & Vaughan, K. T. L. (2017). Connecting the Libraries and Athletics through Instruction and Outreach, *36*(2), 187–195. <https://doi.org/10.1080/02763869.2017.1293999>
326. Dlalisa, S. (2017). Acceptance and usage of learning management system amongst academics. Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICTAS.2017.7920525>
327. Tjong, Y., Warnars, H. L. H. S., & Adi, S. (2017). Designing Knowledge Management model for curriculum development process: A case study in Bina Nusantara University (pp. 17–22). Institute of Electrical and Electronics Engineers Inc. <https://doi.org/10.1109/ICIMTech.2016.7930295>
328. Jakab, I., Ševčík, M., & Grežo, H. (2017). Model of higher GIS education, *15*(3), 220–234.
329. Valero, G., & Cárdenas, P. (2017). Formative and summative assessment in veterinary pathology and other courses at a mexican veterinary college, *44*(2), 331–337. <https://doi.org/10.3138/jvme.1015-169R>
330. Strang, K. D., & Vajjhala, N. R. (2017). Student resistance to a mandatory learning management system in online supply chain courses, *29*(3), 49–67. <https://doi.org/10.4018/JOEUC.2017070103>
331. Verdú, E., Regueras, L. M., Gal, E., de Castro, J. P., Verdú, M. J., & Kohen-Vacs, D. (2017). Integration of an intelligent tutoring system in a course of computer network design, *65*(3), 653–677. <https://doi.org/10.1007/s11423-016-9503-0>

332. Rhode, J., Richter, S., & Miller, T. (2017, June 21). Designing Personalized Online Teaching Professional Development through Self-Assessment, pp. 1–8. <https://doi.org/10.1007/s11528-017-0211-3>
333. Sinclair, J., & Aho, A. M. (2017, July 13). Experts on super innovators: understanding staff adoption of learning management systems, pp. 1–15. <https://doi.org/10.1080/07294360.2017.1342609>
334. Khan, I. U., Hameed, Z., Yu, Y., & Khan, S. U. (2017, August 10). Assessing the determinants of flow experience in the adoption of learning management systems: the moderating role of perceived institutional support, pp. 1–15. <https://doi.org/10.1080/0144929X.2017.1362475>
335. Phongphaew, N., & Jiamsanguanwong, A. (2018). Usability evaluation on learning management system (Vol. 607, pp. 39–48). Springer Verlag. https://doi.org/10.1007/978-3-319-60492-3_4