Adaptations on training design and performing to answer the current context: The importance of C*M*A Alignment

Verónica Moreno Oliver

Universitat Pompeu Fabra, Barcelona, Spain
vmorenoliver@gmail.com

ORCID: https://orcid.org/0000-0001-5572-299X
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Abstract
This paper presents a reflection on some key elements that make teaching strategies the keystone of teaching adaptation to the current training context in higher education. The approach is based on the consideration of changes in different levels and fields; namely, normative changes (including law), educational centres' normative, etc. Social changes also impact on the educational system, strategies and goals. In this case, it is important to keep in mind how the social model has change in the last decades in terms of communication, needs, learning processes, motivation, etc. The paper also analyses the impact of market/job changes, how professional profiles have changed with respect to the demanded competences, skills and employers' expectations on junior workers, and how these requirements are considered at different levels of higher education (for instance, in internships). The focus of this paper is on how university teachers can design, perform and assess their teaching with the aim of facilitating the professional integration of our young generation into a global society, with its specific needs and its demands. Thus, teaching methodology during the teaching-learning processes is a key element to deal with all these changes and new training requirements. The teaching methodological approach can help both teachers and students to plan and develop a formative road-map including the competences for increasing as much as possible students' *occupability* skills, which will help them be more flexible and versatile. The second part of the paper (based on improvements on training performance) includes the presentation of different models to keep the coherence (alignment) between the design of training programmes, teaching methodology and assessment of learning outputs, paying special attention to the Context Contingent Aligned Model- CCAM.
Keywords: effective teaching, methodological strategies, teachers' education, alignment of training key aspects, significant learning.

Адаптация к актуальным условиям профессиональной подготовки и развитие готовности к изменчивому контексту: важность профессиональной гибкости

Вероника Морено Оливер

Университет Помпеу Фабра, Барселона, Испания
vmorenoliver@gmail.com

ORCID: https://orcid.org/0000-0001-5572-299X
DOI: 10.26907/esd12.3.04

Аннотация
В данной статье нашли отражение некоторые ключевые моменты, благодаря которым стратегии преподавания становятся краеугольным камнем адаптации учителей в современном контексте высшего образования. В основе подхода лежат идеи об изменениях, происходящих на разных уровнях и в разных областях социума (нормативные изменения, включая законодательство; изменения в нормативных актах образовательных институтов и др.). Изменения в социальной сфере также влияют на систему образования, ее цели и стратегии. Поэтому необходимо брать во внимание, какие изменения произошли в социальной сфере (коммуника-

ция, потребности, процессы обучения, мотивация и др.). В докладе также представлен анализ того, какие последствия повлекли за собой изменения на рынке труда. Например, как изменился образ специалиста той или иной области в ответ на требуемые сегодня компетенции, навыки и ожидания работодателя. Также рассматривается, как подобные новые требования учитываются на разных ступенях высшего образования (например, во время производственной практики).

Основное внимание в статье уделяется тому, как преподаватели в университетах могут проектировать, выполнять и оценивать свою деятельность с тем, чтобы способствовать профессиональной интеграции молодого поколения в глобальное общество. Таким образом, методика преподавания в процессе обучения является ответом на вызовы меняющейся реальности и вытекающие отсюда новые требования к процессу образования. Методологический подход к обучению может помочь как преподавателям, так и студентам планировать и разрабатывать базовую дорожную карту, включающую в себя компетенции по повышению навыков трудоустройства учащихся, что поможет им стать более гибкими. Во второй части статьи (построенной на улучшении эффективности обучения) представлены различные модели обеспечения согласованности между проектированием учебных программ, методологией преподавания и оценкой результатов обучения. Особое внимание уделяется контекстно-зависимой модели (Context Contingent Aligned Model – CCAM)..

Ключевые слова: эффективное преподавание, методологические стратегии, педагогическое образование, согласование ключевых аспектов обучения, значительное обучение.

Introduction

Regardless of the teaching context, the country, or the educational stage/phase in which we are working as teachers, there are many global changes that have a direct impact on the educational field, and consequently, in how our students learn. Although these changes affect all education stages and institutions, this article focusses on higher education. Many authors base their research on the understanding of the influence of these changes over the performance of higher education (Castejón & Zamora, 2004), to understand and consider this new methodological paradigm (De Miguel Díaz, 2005), and also to generate new resources to facilitate the teaching tasks according to this new scenario (Cox, Imrie & Miller, 2014). In the following paragraph, some examples of these changes are briefly presented.

The first type of change we have to consider is the one related to norms, including general laws (from the government), educational institutions norms, and others that could affect the design of training programmes.

From a social point of view, there are also general changes related to the way we are in contact with others, with the context of how we use available resources and manage them both in general life and of course, in education; namely, creation and uses of new communication systems/tools, changes in society values, etc. Although all these changes affect particularly young people (Mihailidis, 2014), they also impact generally on the educational field and are therefore considered in educational research (Frey & Brink, 1998; Fernández, 2006; Fallow & Steven, 2000; Lai, Khaddage & Knezek, 2013). Consequently, several challenges in teaching-learning processes have appeared, e.g., the introduction of technological tools and devices in teaching performance (Johnson, Adams Becker, Estrada & Freeman, 2015), and their potential effects on learning outcomes (Tess, 2013).

The third typologies of changes to be highlighted are the ones related to market/companies/jobs. Social and market requirements and expectations are changing very fast. These new needs and demands go beyond technical skills and specific competences related to a specific job. These changes include the explicit value and importance of continuous learning processes; life-long-learning (Knapper & Cropley, 2000), and also the power of soft skills management (Le Boterf, 1998), such as communication skills, problem-solving, team-working (Guerrero, 2010), time and tasks management, etc. (Mansfield & Mitchell, 1996). New market dynamics also affect the emergence of new professional profiles.

All these changes lead teachers to a really exciting situation in view of how challenging it is. It is important to take into account how important *occupability skills* are for our students; i.e., their ability to get and maintain a job even against direct context changes (Martínez-Roca, Pineda i Herrero & Martínez, 2016). As requirements (and consequences) appear, the need to re-think "learning to learn" skills and the learning process of autonomous students (Rué, 2009), become important because they allow our students to develop personal strategies to a) detect resources in the context and b) use properly their own resources (i.e., professional and personal background).

To keep these changes (and their consequences) in mind during the training design process is important to ensure an appropriate training programme in which the social reality and its evolution are contemplated. This design should include not only the competences to be acquired, but also the teaching methodology strategy and the way the learning outcomes of student are going to be assessed. Some examples of models to guarantee the alignment of these considerations are quoted in this paper, emphasizing the theoretical model called Context Contingent Aligned Model- CCAM (Moreno Oliver, 2014).

The next sections focus on teaching methodology and how it considers all the aforementioned elements, since most of the key topics enumerated throughout the introduction section affect not only education, but also social and daily life aspects. Note that topics presented in next sections are addressed with special emphasis to their impact on teaching methodology.

Different teaching-learning scenarios have been considered in this theoretical model. In all of them, three key elements are presented: design, methodology and assessment. It also includes some examples about how to manage educational scenarios according to these variables and how to describe some teaching-learning situations that could be found in these scenarios.

The importance of methodological strategy used by teachers

Both in national and international literature, different elements and orientations proposed to be integrated and/or considered in teaching strategies design can be found. For example, previous research aims to increase the impact of the proposed learning activities on the general students learning process. On the other hand, other works are focused on the consolidation of learning outcomes in terms of significance (Tobón, 2006; Spencer & De la Teja, 2001; Spencer & Spencer, 1993). The methodological strategy used by teachers in hands-on activities (planned both in and out the classroom) becomes a key aspect to achieve the adaptation of students' competencies development to the new educational and global context (Hernández-Leo, Moreno Oliver & Peig, 2013). We can differentiate several variables to be considered in the methodological strategy: group characteristics in terms of motivation, expectations, and micro-context idiosyncrasy (Wlodkowski & Ginsberg, 2017), time and space opportunities and limitations in terms of physical resources and timing for activities development (De la Torre & Violant, n.d), consideration of active methodologies (Ueckert & Gess-Newsome, 2008), and technological resources to bring closer the learning context to the social one (Venkatesh, Croteau & Rabah, 2014; Noor-Ul-Amin, 2013).

It is known that the more active is the participation of students, the more significant is their learning (avoiding over-stimulation). In many cases, the above considerations are easily applicable when they do not require a big effort (either in time or in specific pedagogical knowledge) for the teaching staff. However, their impact on students' learning process can be important, especially with respect to students' motivation and teaching-referred satisfaction level (Moreno Oliver, Carpintero & Hernández-Leo, 2013).

The next section is focused on the importance of teacher's training and learning as a continuum to guarantee their adaptation to the new educational context, giving response to the needs related to the necessary rethinking exercise of university teachers' functions and competences (Mas & Tejada, 2013).

Teachers' training

Teachers' empowerment is needed to help them assume and deal with changes in higher education performance (Tejada, 2005). This training should facilitate teachers' job, providing them with tools for confidently managing the challenge of this new educational paradigm. As teachers are a potential agent of social changes by themselves (Tejada, 1998), their training should progress and be accordingly adapted to this new situation, considering not only the content of the training, but also the context. Training of teachers in context and content implies that different resources must be provided to teachers in order to facilitate their effective use to offer students the highest quality training possible. Besides including the management of the content to be taught itself, these resources must start with the overall conception of training. Key aspects of these considerations are collected in Table 1.

Table 1. *Key aspects in terms of context and content considerations in teachers' training*

Context considerations	Content considerations

• Flexibility of training processes to promote the students' ability to adapt themselves to different contexts (learning context, professional context, social context, etc.).
• Active teaching-learning methodologies that promote (among others) students' autonomy, professional ethical attitude and social responsibility.
• Work in an explicit way the soft skills, such as problem solving, communication skills, or time and task management.
• **Facilitate teachers' resources focused on different aspects and considering different formats and teaching perspectives:**
  – Initial and continuous training
  – Online, face-to-face and/or blended learning
  – Direct and indirect support on innovation projects and actions
  – Support focused on content, conception, methodology and assessment processes
• Be sure that teachers know well the legal, academic and normative framework in which the training is going to be carried out.
	• Take into account teachers' professional profile (functions, tasks, skills required for their development) as well as their professional scenario.
	• Didactics; including design, development and assessment processes related to training-learning processes both in and out the classroom.
	• Transversal competences and learning outcomes as key elements for the assessment and certification of students' level of domain for each worked competence.
	• Real and operational connection of training, going beyond the curriculum and connecting training with life (social life, personal students' experiences, research, market/companies...it depends if we are teaching at primary/ secondary school or at University).
	• Assume explicitly the social responsibility of all educational institutions, considering aspects such as the respect to multiculturalism, gender, professional ethics, etc.

As it can be seen in Table 1, most of the aspects highlighted are directly or indirectly connected with soft skills that teachers should dominate and be able to teach. For example, to develop the curriculum with enough flexibility to adapt it to different contexts, to know and apply active teaching-learning methodologies, to promote soft skills in an explicit way, to guarantee that teachers know the legal framework and teaching laws/normative. In all cases, the responsibility should be shared by both teachers and education system in terms of how training programmes for teachers are designed and maintained over time.

Similar considerations are pointed out in terms of contents. There is one global aspect which is reflected in all considered points in the table: the need to think about teaching performance and attitude. Several studies in different educational institutions examine this topic, for example Impedovo and Malik (2016). published a paper focused on the importance of reflective practice and research attitude for the professional development of in-service teachers. In this study, nine teachers engaged in an international master's course were interviewed to obtain their own reflections on this topic. The study highlights the need for regular and more guided support on improving reflective practice, especially for junior teachers. Hence, this means the need to consider also the teaching background of our teachers and, of course, the different resources that would be used by them depending on their background and needs. Teachers' perception about their obligations as teachers also has an impact on their performance; for example Webel and Platt (2015) presents a research focused on two secondary mathematics teachers who share data regarding their expressed goals, their perceived obligations, and their instructional practice. The findings suggest that perceived obligations hindered teachers' efforts to change their practice. To help teachers with the achievement of their goals, it is needed institutional acknowledgement, and perhaps promotion possibilities, resources to make more accurate their performance, etc. (Arends, 2014).

The consideration of all these aspects; teachers' training, training adaptation to new contexts and content, social responsibility, social and market expectations, students' profiles changes, teachers' professional feelings about their performance, and other teachers' obligations (for example, administrative tasks, and so forth) reflect how difficult teaching and preparing teachers is in terms of training, development of adequate resources, etc.

The following section goes deeper into a specific challenging topic related to teachers' performance. It presents a reflection on the importance of the alignment between competences, teaching strategy (methodology) and assessment of learning outcomes that should be taken into account by teachers. Apart from presenting a general reflection in terms of needs and requirements to achieve this alignment, it includes a theoretical model focused on this process and its possibilities and benefits according to the aforementioned topics.

Importance of the alignment between Competences, Methodology and Assessment (C*M*A)

It is necessary to emphasize the importance of the training design in a way that its three key aspects are coherently connected; this raises a series of basic questions that will help us interrelate the Competences (in terms of content) to be taught, the Methodological Strategies that will be used to work those contents, and the Assessment of learning outcomes. We present a theoretical model called CCAM-Model (Moreno Oliver, 2014), inspired by other ones which are individually and comparatively summarized in the earlier reference. This model considers the three key conceptual foundations above mentioned: competences, methodology and evaluation, taking into account the importance and particularities of each one as well as the elements and variables that they respectively integrate. This theoretical model is based on two basic concepts:

• Alignment: it refers to the importance of the training programmes design, ensuring that the three key elements (competences, methodology and assessment) are well-connected in terms of coherence.

• Consideration of Learning Outcomes (LOs): it refers to students' learning verifiable declarations. It is important that students know these LOs since the beginning of the programme in order to know teachers' expectations. The fact to share with students these expectations as LOs allows them, for example, to activate self-regulation mechanisms.

Taking into account the principles considered in the CCAM-Model, Table2 presents its characteristics in terms of: training design implications, implications on teaching performance –teaching methodology- and learning assessment implications.

Table 2. CCAM-Model characteristics in terms of design, perform and assessing implications

Implications in Design	Implications in Development	Implications in Assessment
• Training plan based on students' LOs: considering social and personal needs and students' interests. • Each student is a potential change-agent. It is important to keep it in mind, and try to manage the teaching process in the most personalizing way. • Context and students' expectations.	• Teaching-learning methodology based on the context elements: idiosyncrasy of the institution, students, teachers, training programme, etc.	• It is important to include the assessment process into the training programme; i.e., to try avoiding the historical negative connotation of evaluation, and change it for a formative and emotionally positive process.

The CCAM- Model spares a thought for all these elements and their articulation to inspire teaching performance in an aligned way. In the following figure (Figure 1) is presented a graphical representation of the Model.
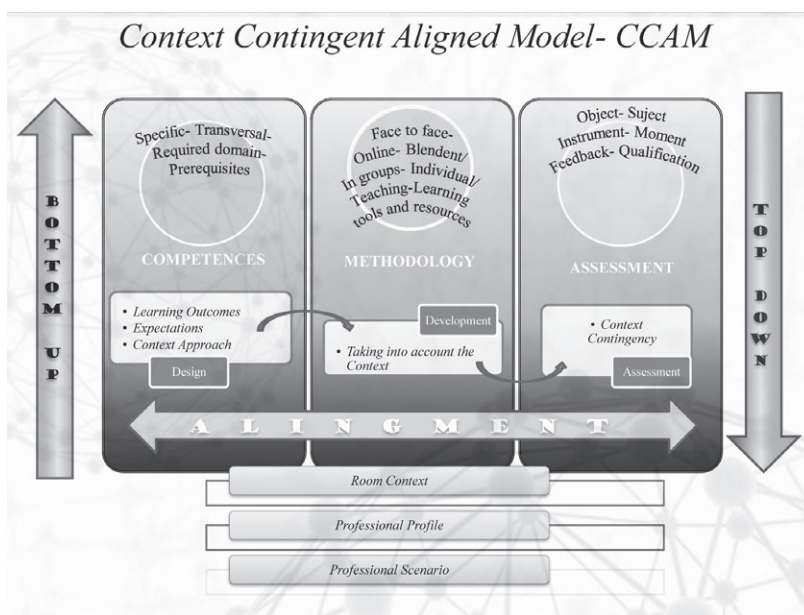

Fig. 1. CCAM- Model

As can be seen, the Model consists of three principal parts:
• Regarding the competency-based training design: the CCAM-Model makes a contextual approach in the most primary phase of the competency-based training design (context awareness). The training plan is focused on learning outcomes, derived

from social, marked and professional contextual needs (top-down considerations). It also considers the needs and concerns of the training programme recipients. Bottom-up considerations refer to the value of each person in society and their potential as an agent of change. Finally, the Model considers the expectations of both the context and the training recipients.

- Regarding the methodology: in terms of methodology, the CCAM-Model is globally context-dependent. This contextual dependency refers to the institutions in which the training is going to be carried out – idiosyncrasy, recipients' characteristics, teaching staff, etc. That is, the methodology used for the curriculum development must encompass the these variables.

- Regarding the assessment: In terms of evaluation, the CCAM-Model is contingent to the context.

From the conceptual framework of the CCAM-Model, a set of levels based on the training structure can be defined (Figure 2). These levels reflect different degrees and forms of the alignment between the three parts above described. The scheme of these three levels and their description are included in the following lines.
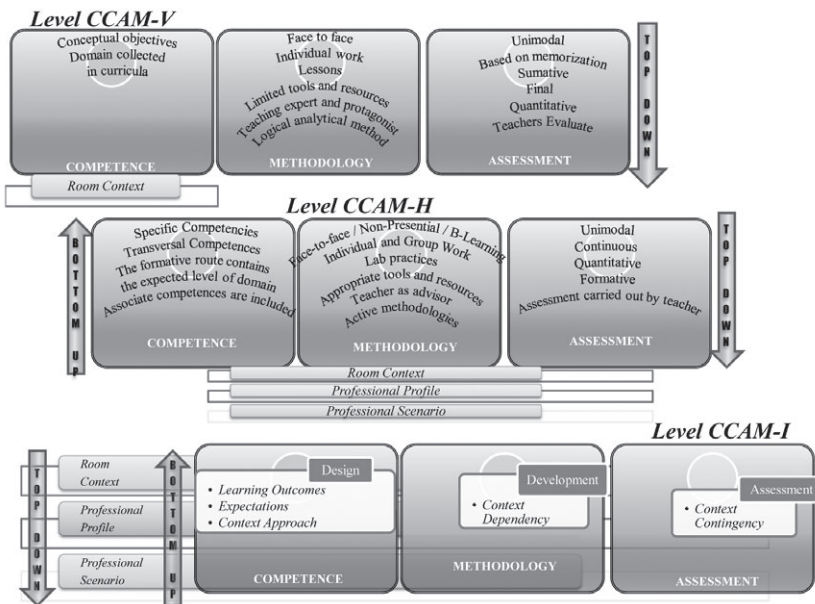

Fig. 2. Levels of alignment considered by the CCAM-Model

Level CCAM-V: This level reflects a vertical, logical and more analytical teaching-learning processes approach. A possible manifestation of this level in a real context could be a scenario in which the teacher designs the training plan by focusing on the competencies of the curriculum, basing the classes on lessons (theory) and on highly monitored activities. The assessment would be summative and the instrument designed for that: a multiple-choice test. Students would have a passive role in their own learning process. Teachers would try to reach the planned objectives by using teaching methodologies based on memorization.

Level CCAM-H: The second level, based on a horizontal approach, is characterized by considering all the key elements of the model in an inconsistent way. That is, the approach is aligned but the given practices respond to more traditional models in some of

their phases. Thus, it would consider the social, professional and classroom contexts for the design of the training programmes. However, in this case, either the methodology or the evaluation would be lacking coherence with the new training paradigm. For example, a suitable and updated training plan would be designed for the student's professional profile, relevant materials would be used and could even include the use of technologies for their development, but the classroom-dynamic methodology would be very focused on the guidance and orientation of the teaching staff, therefore assuming the principal role on the teaching-learning process.

Level CCAM-I: This third level would be reflected in an integrated practice in the training programme in which the student knows why and how this practice is performed and the competences included in each activity, so that they can prepare them in an autonomous way. The teacher ensures the provision of sufficient high-quality consulting resources and makes good use of the technologies as well. The student can execute, manipulate, reflect, debate and synthesize the work (depending on the content nature) alone and in group, resulting in a rich and meaningful learning process. The assessment is carried out by coherent instruments to assess the students' learning outcomes, and qualitative feedback is given to students to ensure its formative value.

The CCAM-Model (Figure 1) itself and the description of the different alignment levels (Figure 2) can help teachers keep in mind some key elements for each state included in the training design as well as perform and achieve a proper alignment level by individually considering each case.

After the presentation of introductory aspects, the importance of methodology strategy used by teachers, the resulting considerations on teachers' training and the global needed perspective of the orchestration of the three basic elements included in all training design programmes (competences, methodology and assessment), some conclusions are included below.

Conclusion

Social, global, and political changes have a clear and direct impact on education, not only in that provided by families, but also in that from the general system: school, university, etc. Teachers are expected to assume the responsibility of dealing with these changes, expectations and social requirements responding to social prospects. In turn, the educational system should guarantee that its teachers are prepared enough to assume and response to those expectations, facilitating continuous-training programmes in which elemental aspects related to current context are included, but without forgetting that the context is an important variable because of its influence in teaching performance. Despite all these changes and difficulties, teaching is a really challenging job, guided by passion. When teachers have not only the motivation, but also the knowledge for performing as teachers, then they can realise what teaching means, which is the best way to consider all the aspects mentioned in this article. The teachers' commitment and implication with education are indispensable. It is necessary to "cross the walls" of the classroom to achieve an integral development of students, it is necessary to go beyond the walls and traditional models, it is important to leave the comfort zone and learn about how technology can help teaching performance, how can we align our training programmes to strengthen their coherence and how can we improve the teaching performing to achieve a more significant and solid learning.

References

Arends, R. (2014). *Learning to teach*. McGraw-Hill Higher Education.

Biggs, J.B. (1995). Assessing for learning: Some dimensions underlying new approaches to educational assessment, *Alberta Journal of Educational Research* 41, 1–18.

Biggs, J.B. and Collis, K.F. (1982). *Evaluating the Quality of Learning: The SOLO Taxonomy*. New York: Academic Press.

Biggs, J.B. and Moore, P.J. (1993). *The Process of Learning*. Sydney: Prentice-Hall Australia.

Castejón, H., & Zamora, M. (2004). Educación superior: procesos de cambio y transformación. *Encuentro Educacional*, *11*(3).

Cox, K., Imrie, B. W., & Miller, A. (2014). *Student assessment in higher education: a handbook for assessing performance*. Routledge.

De la Torre, S., Violant, V. (s.f.). Estrategias creativas en la enseñanza universitaria. Universidad de Barcelona. Retrieved from: http://www.ub.edu/sentipensar/pdf/saturnino/estrategias_creativas_universitaria.pdf

De Miguel Díaz, M. (2005). Modalidades de enseñanza centradas en el desarrollo de competencias. *Orientaciones para promover el cambio metodológico en el Espacio Europeo de Educación Superior. Oviedo: Universidad de Oviedo*, 109-14.

Fallow, S., Steven, C. (2000). *Integrating Key Skills in Higher Education. Employability, transferable skills and learning for life*. Londres: Kogan.

Fernández, C. (2006). Las competencias en el marco de la convergencia europea: Un nuevo concepto para el diseño de programas educativos**.** *Encounters on Education*, volume 7, Fall 2006, (pp. 131-153).

Frey, K. y Brink, M. (1998). La competencia como base para el desarrollo humano y la eficacia. *Paideia*, 24: 17-22.

Guerrero, C. S. (2010). Aprendizaje cooperativo e interacción asíncrona textual en contextos educativos virtuales. *Pixel-Bit. Revista de medios y educación*, (36), 53-67.

Hernández-Leo, D.**,** Moreno Oliver, V., Dodero, J., Pardo, A., Romero-Ternero, M.C., Dimitriadis, Y., Asensio-Pérez, J.I. (2012) Aplicación de Recomendaciones para la Alineación de Competencias, Metodología y Evaluación en Asignaturas de Ingeniería Telemática, Informática y Electrónica, *IEEE Revista Iberoamericana de Tecnologías del Aprendizaje,* 7(1), 13-20.

Hernández-Leo, D., Moreno Oliver, V., Peig, E. Learning design twofold strategies for teacher-led inquiry and student active learning. *Teacher-led Inquiry and Learning Design: The Virtuous Circle Workshop*, Alpine Rendez-Vous, Villars-de-Lans, France, January 2013.

Impedovo, M. A., & Malik, S. K. (2016). Becoming a Reflective In-Service Teacher: Role of Research Attitude. *Australian Journal of Teacher Education*, *41*(1), 6.

Johnson, L., Adams Becker, S., Estrada, V., & Freeman, A. (2015). *The NMC Horizon Report: 2015 Higher Education Edition*. New Media Consortium. 6101 West Courtyard Drive Building One Suite 100, Austin, TX 78730.

Knapper, C., y Cropley, A. J. (2000). *Lifelong learning in higher education*. Psychology Press.

Lai, K. W., Khaddage, F., & Knezek, G. (2013). Blending student technology experiences in formal and informal learning. *Journal of Computer Assisted Learning*, *29*(5), 414-425.

Le Boterf, G. (1998). *La ingeniería de las competencias*, París: D´organisation.

Mansfield, B. y Mitchell, L. (1996): *Towards a Competent Workforce*. Hampshire: Gower.

Martínez-Roca, C., Pineda i Herrero, P., & Martínez, M. (2016). Orientación, desarrollo de competencias y reducción de factores contextuales de riesgo para el empleo.

Mas, O. y Tejada, J. (2013). *Funciones y competencias en la docencia universitaria*. Barcelona: Síntesis.

Mihailidis, P. (2014). A tethered generation: Exploring the role of mobile phones in the daily life of young people. *Mobile Media & Communication*, *2*(1), 58-72.

Moreno Oliver, V. (2014). *Análisis y propuesta de intervención sobre la alineación entre el trabajo por competencias, la estrategia metodológica y el sistema de evaluación (Alineación C*M*E)*. (Doctoral Dissertation, Universitat Autònoma de Barcelona). Retrieved from: http://www.tdx.cat/bit-stream/handle/10803/285136/vmo1de1.pdf?sequence=1

Noor-Ul-Amin, S. (2013). An effective use of ICT for education and learning by drawing on worldwide knowledge, research, and experience: ICT as a change agent for education. *Scholarly Journal of Education*, *2*(4), 38-45.

Rué, J (2009). *El aprendizaje autónomo en educación superior*. Madrid: Narcea.

Spector, M. y De la Teja, I (2001). *Competencies for online teaching.ERIC Digest*. Nueva York: Clearinghouse on Information and Technology Syracuse.

Spencer, L. M. y Spencer, S. M. (1993). *Competence at Work*. New York: John Wiley & Sons

Tejada, J. (1998). *Agentes de la innovación en los centros educativos: profesores, directivos y asesores*. 1 ed. Archidona: Ediciones Aljibe

Tejada, J. (2005). *Didáctica-curriculum diseño, desarrollo y evaluación curricular*. Mataró: Davinci Continental.

Tess, P. A. (2013). The role of social media in higher education classes (real and virtual)–A literature review. *Computers in Human Behavior*, *29*(5), A60-A68.

Tobón, S. (2006). Aspectos básicos de la formación basada en competencias. *Documento de trabajo*, 2006, 1-8.

Ueckert, C. W., & Gess-Newsome, J. (2008). Active learning strategies. *The Science Teacher*, *75*(9), 47.

Venkatesh, V., Croteau, A. M., & Rabah, J. (2014, January). Perceptions of effectiveness of instructional uses of technology in higher education in an era of Web 2.0. In *System Sciences (HICSS), 2014 47th Hawaii International Conference on* (pp. 110-119). IEEE.

Webel, C., & Platt, D. (2015). The role of professional obligations in working to change one's teaching practices. *Teaching and Teacher Education*, *47*, 204-217.

Weinert, F. E. (1999). *Concepts of competence*. OFS; US Department of education, National center for education statistics (NCES).

Wlodkowski, R. J., & Ginsberg, M. B. (2017). *Enhancing adult motivation to learn: A comprehensive guide for teaching all adults*. John Wiley & Sons.