
Faculty perspective on competency development in Higher Education: An international study

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Abstract

The purpose of this research is to establish common ground on how faculty development should be instituted and the needs it should address on an international level, with its major focus being the development of competencies. A survey was developed and distributed to a sample of 764 university teaching professionals. Results show that 90% find that it is either important or very important to develop competencies in higher education, and that 73% find they are well or very well trained in developing and assessing competencies, particularly with regard to applying theoretical knowledge in practice, teamwork, and oral and written communication skills. The least valued competencies are found to be entrepreneurship and leadership. The most valued teaching methods are: project based learning, immersion in a professional environment, visits, field trips, and anything that closes the gap between the professional and academic worlds. University teaching staff consider the best assessment scenarios to be those that involve a certain amount of immersion in real situations, problem posing, and simulation; the optimum measurement instruments use observation techniques and rubrics. The need to create academic teaching communities is found to be of great importance. A common assessment method is also seen as a useful addition.

Keywords: Competencies, faculty perspectives, assessment, teaching methods

Introduction

Rapid changes in technology, work organization, and life itself are part of an increasingly interdependent and conflicting world, and they present new challenges for everyone. Traditional problem-solving methods are unable to respond to the constant need for innovation and efficiency imposed by intense competition among organizations, now powered by globalization. The old individual work toolbox, equipped with the knowledge acquired in school and some

competencies developed during early years, must be extended with new competencies like teamwork, multitasking, communicating, taking initiative, lifelong learning, and adapting to change. These changes in the workplace naturally had an impact on each organization's human resources management, bringing the notion of *competence* and *competency* to the fore.

Although much discussed, there is no consensus on a definition of *competency* (e.g., Fletcher, 1997; Mansfeld 1996; Roe 2002; Spencer & Spencer 1993). The word is part of our daily language, but has different meanings in various academic fields—psychology, economy, education, sociology or linguistics, to name a few. It is almost impossible to find one definition that would suit such different fields of knowledge, and it is even more difficult to find adequate translations of the term into the many languages used in this globalized world. There is also critical analysis of the concept of competence as it is being used in higher education (Lozano, Boni, Peris, & Hueso, 2012).

Perrenoud has pointed out that “competence is the power to act with effectiveness in a situation, mobilizing and combining, in real time and in a pertinent way, intellectual and emotional resources” (2013, p. 45). He saw competence as a product of learning and, at the same time, a foundation of human action. Competence is a personal and unique way of dealing with a situation or solving a problem, in both work and personal life. In this sense, competence is inseparable from action and results and is, according to Ropé and Tanguy, “an attribute that can only be appreciated and assessed in a given situation”. (1997, p. 16). As Perrenoud noted, this concept recognizes the complexities of work; it appreciates the ability of an intelligent person to provide solutions in complex situations, make decisions when faced with uncertainty, act quickly, and assume risks (2013).

Boyatzis (2007) defined competency as “a capability or ability. It is a set of related but different sets of behavior organized around an underlying construct” (p. 6). Markus, Cooper-Thomas, and Allpress (1997) pointed out that the literature has approached competency in three different ways: educational, behavioral, and business (p. 117-118). Within the educational context in the United States, “‘competencies’ were based on functional role analysis and described either role outcomes, or knowledge, skills and attitudes, or both, required for role performance, and assessed by a criterion, usually a behavioural standard” (1997, p. 117).

Chan, Liu, Cao, and Fellow (2013) noted that the terms *competence*, *competency*, and *competencies* are frequently used interchangeably, which might create confusion. According to these authors, these terms tend to be distinguished in research in the following manner:

- i) competence refers to aspects of the job that an employee can perform, ii) competency is defined as behaviours an employee needs to display in order to do the job effectively, such as sensitivity; and iii) competencies refer to the attributes underpinning a behaviour. (Chan et al., 2013, p. 385 [citing Manley and Garbett, 2000; Moore, Cheng, & Dainty, 2002; Westera, 2001; Woodruffe, 1993])

In the context of this research, authors refer to competency instead of competence, as differentiated in this introduction.

Higher Education and the Development of Competencies

Changes in the workplace are putting pressure on educational systems to change their academic approaches to developing new generations. Since the 1970s, documents prepared by Unesco, OCDE, the European Union, and a wide range of regional and national governments to address these changes have guided curriculum reform and teaching methodology. A good example of this movement is the document *New Skills for New Jobs*, produced by the European Commission in 2009, that aimed to set the agenda for anticipating the skills Europe will need in the next 10 years and reforming education and training systems to prepare people for the “jobs of tomorrow” (2009, p. 3). It stated:

Labour markets - and the skills people need - are evolving ever faster and future jobs are likely to require higher levels and a different mix of skills, competencies and qualifications. It will be increasingly necessary for workers to acquire transversal key competencies, to participate in lifelong learning and to develop new skills to be able to adapt to a variety of tasks over their working lives. (2009, p. 2)

Nowadays, everyone who wants to be part of the labor market and have a good job must have a degree, but in our modern society this is far from being enough. Employers today are looking for graduates who have not only specific knowledge, but also the ability to see and respond to problems proactively. Their search is on a comprehensive scale for graduates who balance good academic achievement with skills in oral and written communication, teamwork, personal interaction, and the like (Juhdi, Abu Samah, & Yunus, 2004).

Lifelong learning and the ability to develop competencies are the new requirements. However, it is not only in the workplace that new competencies are needed. As pointed out by Rychen and Salganik:

From a broader social perspective, knowledge, skills, and competencies are important because they contribute to

- increasing individual understanding of public policy issues and participation in democratic processes and institutions;
- social cohesion and justice; and
- strengthening human rights and autonomy as counterweights to increasing global inequality of opportunities and individual marginalization. (2000, p. 3)

Higher education institutions cannot be exempt from these changes; they must prepare students to deal with the professional and personal challenges imposed by an increasingly complex society. Developing competencies is very different from learning academic topics in the traditional way. Because, as Perrenoud pointed out, “competencies can be addressed only

within the context of given circumstances, it is essential to think simultaneously using competencies in such situations” (2013, p. 43). This implies a significant move that leads to substantial changes in how teachers teach and students learn. Thus, to improve education based on the development of competencies, it is essential to rethink curricula and to work with faculties to change the way teaching and learning happens in classrooms.

It is necessary that faculty members change both the manner in which they devise and carry out their instructional practices and the way they perceive their own professional competencies. This can happen only if faculty members shift the way they comprehend their own practice; instead of being all-knowing sages, they need to move towards being facilitators, who structure situations that help students find and build knowledge. The extent of this challenge establishes the need for intense faculty development in this new view of education (Roe, 2002). Therefore, the assessment of students’ development of competencies is an important issue in higher education and needs to be taken into account. Just as students’ knowledge is evaluated, so must their achievement in terms of competencies also be subject to comprehensive assessment (Bartram & Roe, 2005).

It is imperative to be informed of teachers’ perceptions of their training in methods that develop competencies in students, and their perceived capacity to face this challenge; it is also crucial to identify their needs and difficulties. However, there are not many studies available on an international scale that investigate this from the point of view of the instructors. Most research focuses on the development of specific competencies (Lwoga, 2013) and the various aspects of evaluating them (Barrales Villalobos, Landín, Pérez, Cruz, & Rodríguez, 2012; Cambridge, 2008; Schaeper 2009; Wilson & Scalise, 2000).

Competency Development in an International Higher Education Network

Students enrolled at the universities that took part in this study are part of an international, academic community, a higher education network that spans 29 countries throughout the Americas, Europe, Africa, Asia, and the Middle East. In this context and aware of this need, this higher education network is developing a common pedagogy to support students in developing professional competencies. In order to do this, its first step was to establish which competencies were not only the most important, but also suitable for professional training in countries as different as, say, Switzerland and Malaysia. These competencies would be essential for working both locally and internationally, as required in a globalized world.

A survey of deans and professionals conducted within the universities in this higher education network established eight common professional competencies that are central to development and accessible to students around the world:

- Oral and written communication
- Teamwork
- Autonomous learning

- Ability to apply knowledge in practice
- Capacity to adapt to new situations
- Leadership
- Entrepreneurial spirit
- Global mindset

Although there are many other competencies that would be of interest for development during professional education, choices had to be made, and these were considered to be central to the success of every undergraduate student. These competencies address the needs imposed by work in local organizations; they also prepare students to: be part of worldwide organizations, do business locally and internationally, be informed and participating members of their community, and become responsible global citizens.

Research Questions and Objectives

In a worldwide higher education organization such as the one in this study, there will be significant differences among its institutions' educational approaches and philosophies. This study intends to find common ground for establishing faculty development on developing competencies, while addressing their needs at an international level. The results would be used, for example, to build a training program that could be offered to all universities within the network. This study, therefore, aims to answer the following research questions:

- Which philosophical and pedagogical principles guide daily teaching practices?
- How does the faculty perceive learning?
- How familiar is the faculty with the notion of competence?
- How does the faculty interpret the notion of competence?
- What does the faculty know about competency development?
- What experience does the faculty have of competency development?

Some of these questions have been considered in different studies. Research has been done into the development of general competencies at the university level, in an attempt to assess teaching when clinical practices are used to develop and assess student skills and competencies (Prince, van Eijs, Boshuizen, van der Vleuten, & Scherpbier, 2005). These approaches have focused on integral education and the labor market. This necessity for change in teaching is already recognized. Huanca (2010) provided evidence in his research for the success of such teaching.

Barrales et al. (2012) research questionnaire included a question asking the best way to assess competencies: portfolios, forms, headings, logs, or checklists. Mir Acebron's (2008) research attempted to assess the perception of the development of competencies in teaching and learning. In this study, a questionnaire asked respondents to select the best choice in given teaching situations; the best strategies were seen to be specific workshops for teachers and

practicums for students. Spronken-Smith's (2012) research assessed inquiry-based learning in higher education instruction as it related to developing competencies in students. These studies show that it is necessary to develop new activities for teaching when the purpose is to improve competencies in students. The research suggests that ideally there is a mix of theoretical classes, practical classroom activities, and external experiences. This study demonstrates that coordination among teaching professionals is very important.

In the above context, the research being described in this article has the following objectives:

- Obtain a better understanding of how Laureate teaching staff comprehend the notion of competency and its use in practice, so that competencies development training will be more effective.
- Acquire a clear view of pedagogical principles of the faculty.
- Understand how instructors perceive teacher and student roles in the learning experience.
- Ascertain faculty knowledge and perception of competencies development.
- Find out what experience faculty have with competencies development.

To attain these research objectives, a survey was designed and administered to faculties from three universities part of a global higher education network: Universidad Europea de Madrid (UEM), located in Madrid, Spain; Universidad de Anhembi Morumbi (UAM), located in São Paulo, Brazil; and INTI International University and Colleges (INTI), with campuses in Subang, Kuala Lumpur, Penang, and Sabah, all in Malaysia.

Method

Participants, Tools, and Data Collection

In order to gather the information needed to meet the objectives, a questionnaire was drawn up based on the study's variables. This survey was piloted by 50 teaching staff for its initial validation. A pattern was designed by conglomerates in proportion to the size of the university and its faculties. Each conglomerate was comprised of the faculties/teaching schools of the universities taking part and selected by the participating departments. The extent of the survey was determined to be at a level of 95% confidence and the questionnaire was distributed until the desired response ratio was reached. The survey was carried out online. The first step was to e-mail to the teaching staff of the chosen departments cover letters that requested the completion of the questionnaire, described the study, and provided a link to the survey. The heads of each department encouraged everyone to participate. Data collection began in April 2014 and ended in May 2014.

In total, 729 faculty members in three universities completed the surveys: Universidad Europea de Madrid (317), INTI (68), Universidad de Anhembi Morumbi (344). The demographic

profile of the sample included 51 % women and 49% men. The mean age of faculty members was 43 years (SD = 9.8 years). Approximately 26% had been members of the faculty for less than 3 years, 21% between 3 and 5 years, 18% between 6 and 10 years and 35% for more than 10 years. Apart from teaching at the university, 66% were involved in other professional activities.

Teaching professionals are not unaware of the concept of competencies or the means of developing them, and they integrate them into the various activities that form part of their educative task. More particularly, 81% of the teaching staff indicated that they had attended conventions, discussions, and seminars on the topic, and 49% of them had presented papers or studies related to the development of competence. In addition, 74% of them had received specific training within the last 3 years, and 23% had been in charge of studies that considered aspects of development and evaluation of competencies as part of graduate studies and even doctoral theses.

Measures

Demographic variables. Participants were asked to report their gender, age, years of experience as a faculty member, and the year of the program in which they have the greatest teaching load.

Importance of the development of competence. Crucial to the success of this teaching paradigm is the commitment of the instructional staff to an educational process that is based on the development of competencies and that defines learning objectives that stem from the competencies. For this reason, teaching professionals were asked whether in their opinion it is important to develop general competencies in their university students.

Level of knowledge for developing general competencies. Two questions were drawn up (on the Likert 5 point scale) to ascertain the degree of training in general competence undergone by the teachers at the university. One of these was more general and had as its objective a self-evaluation of training; the other, which addressed all eight competencies, was intended to determine whether university teachers consider themselves better prepared for developing some competencies than others.

Learning activities and teaching methods for competency development. Two questions were intended to identify the teaching methods and learning activities used by university teachers to develop general competencies; these also address the most suitable methods for developing each competence.

Assessment. When considering the development of competencies of university students, the evaluation of competency development is crucial. For information on this factor, four questions were drawn up relating to the importance of the evaluation. Respondents assessed their own training in competency development evaluation, both overall and by addressing each competence separately, in order to determine the strategies most used by teaching staff to conduct such evaluations. These questions elicited specific answers on the Likert 5 point scale.

Disadvantages and specific needs related to the development of general competencies. Once the difficulties and specific needs confronted by teaching professionals in the development and evaluation of the competencies are recognized, the areas where more work is needed to help them in their daily interactions with students can be identified. In order to facilitate the collection of this type of information, there were several open questions that led to answers which could be categorized prior to being analyzed.

Results and Discussions

The results provided by university teachers from all countries confirm the importance of the development of general competencies among university students, given that 90% of them consider this to be important or very important (mean=4.4, SD=0.7), with no significant differences among the universities studied. Teaching staff are conscious of the demands made by society and the importance of offering a training model that is more congruent with these demands. In a climate of changing paradigms in education, support for instructors is crucial to the successful implementation of these changes, and to the universities' ability to ensure that these changes are effectively carried out.

Faculty development is fundamental to the effectiveness of these strategies. Abdul-Ghafar (2004) stressed that an important factor in developing an effective curriculum is the need for academics to understand the breadth of the knowledge, skills, and abilities needed to engage in professional practice. This is corroborated by several international studies (Mir Acebrón, 2008; Ting & Ying, 2012).

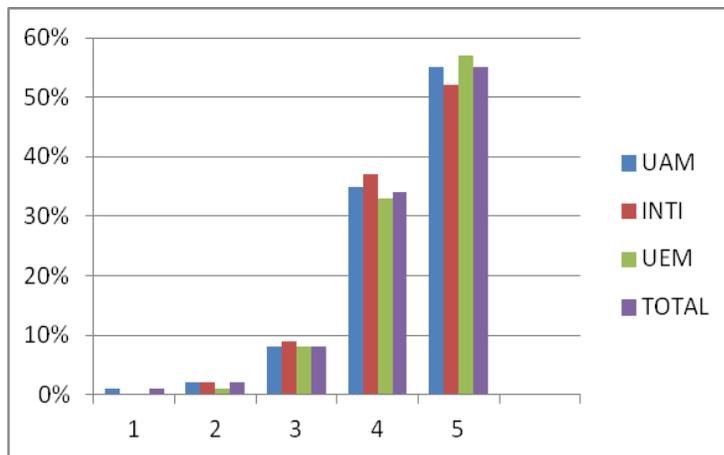


Figure 1. To what extent do you consider the development of general competencies relevant for students in higher education?

Academic teaching staff are confident of their ability to develop general competencies in their students along with the specific competencies contained in their teaching materials. This is demonstrated by the fact that 89% of teaching staff at the universities consider themselves prepared to do this (mean 4.81, SD 0.9). This shows that universities are incorporating new teaching methods, and that teaching staff have progressed from traditional approaches where competency development was not important towards more up to date instructional frameworks in which university teachers are responsible for developing competencies. This is in contrast with the viewpoint of university teaching staff of a few years ago (Corominas et al. 2006).

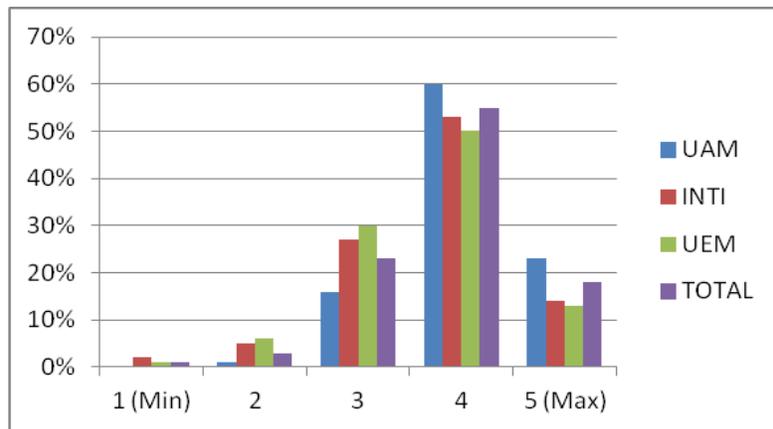


Figure 2. To what extent do you believe that you have enough knowledge or training to be able to help your students develop general competencies?

The answers to this, however, are not quite as conclusive when the question is asked for each one of the eight selected competencies individually. Table 3 for the applicability of knowledge put into practice shows that oral and written competencies, together with teamwork, are the areas where teaching staff feel most confident in their ability to nurture student development. Conversely, they feel less confident about developing entrepreneurial spirit or the global mindset. In spite of the fact that entrepreneurial spirit is a key competence, there has been little research on how to teach this competence within the education framework (Draycott & Rae, 2011; Gibb 2008; Hynes, O’Dwyer, & Birdthistle; 2009). This discrepancy in self-assessed teaching ability demonstrates the instructors’ consensus that developing each separate competence requires a different methodology and approach.

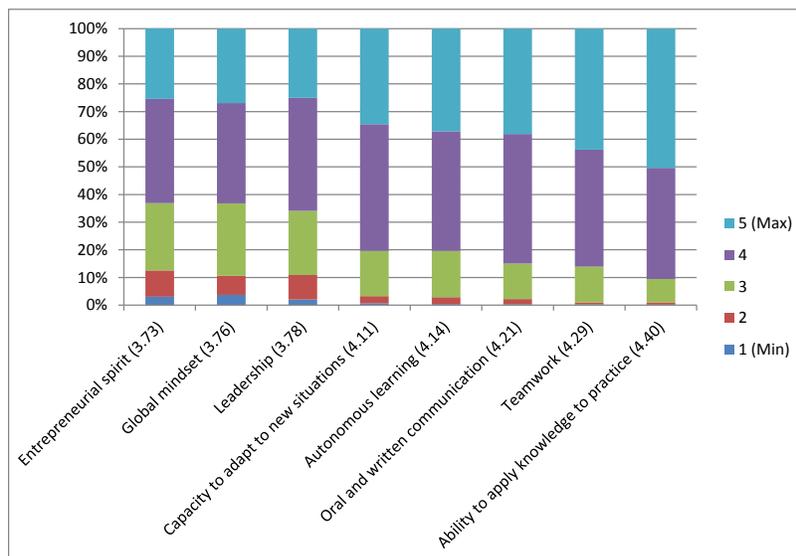


Figure 3. How well are you prepared to develop each of these general competencies?

The following tables show the data obtained regarding teaching strategies and learning activities developed by teaching staff for developing competencies in university students. By

asking how frequently faculty members use specific activities in their classrooms, we have ascertained that 84% of them always or nearly always use learning activities to promote the development of students' general competencies. However, not all these activities are suitable for developing any one particular competence. Evidence shows that each competence requires a different set of activities; it is up to the teacher to identify and manage the spectrum of possibilities. With this in mind, Table 1 demonstrates the results obtained when teaching staff are asked which of their activities or strategies they consider most appropriate for developing each of the competencies. There is already evidence available in the literature on the use of different teaching and learning methods for developing competence.

Table 1. *In your experience, which teaching methods are most appropriate for developing each of the following skills?*

Question	Oral and written communication	Capacity to adapt to new situations	Teamwork	Ability to apply knowledge to practice	Autonomous learning	Leadership	Global mindset	Entrepreneurial spirit
Problem-based learning	12%	14%	16%	22%	15%	8%	4%	8%
Role play	14%	17%	19%	15%	7%	14%	6%	7%
Case method	16%	12%	14%	22%	17%	6%	6%	6%
Cooperative/cooperative learning	13%	13%	26%	12%	8%	13%	6%	8%
Dialogic learning (debates)	26%	12%	14%	10%	8%	15%	8%	7%
Project-based learning	13%	11%	16%	16%	13%	10%	8%	13%
Simulation (in laboratories or specific spaces)	9%	18%	14%	26%	16%	6%	5%	6%
Immersion in professional environments (visiting, trips, practices...)	9%	15%	10%	16%	11%	7%	17%	14%
Small group investigations	15%	11%	25%	12%	11%	13%	5%	8%
Real life industry projects	9%	14%	13%	17%	10%	11%	11%	15%
Others	12%	11%	12%	13%	17%	12%	13%	11%

Answers to the *other methods of learning* item mentioned the use of a reflective diary, mind maps and conceptual diagrams, related texts for reading, etc. The flipped classroom was also suggested as an additional learning method suited to guiding the class towards developing competencies.

In a university environment, it is important to measure the level of competency development being attained by students. In this respect, the majority of teaching staff claimed that they always or nearly always make specific evaluations of their pupils' development of competencies (Figure 4). There are no significant differences among the universities. For the teaching staff, developing and assessing the generic competencies poses a real challenge

because of the need to access and organize relevant and innovative strategies in teaching, learning, and evaluation processes. (Halász & Michel, 2011).

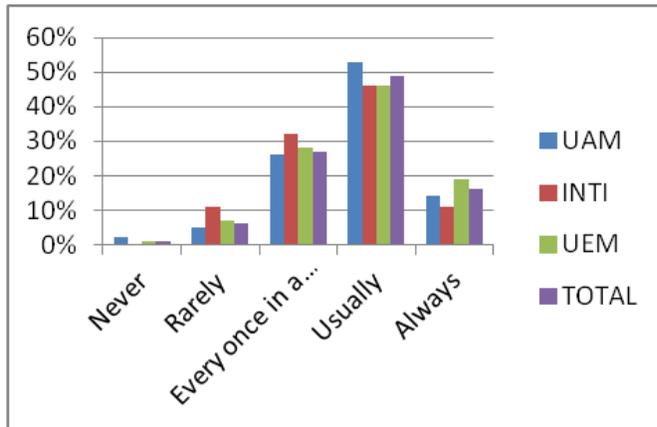


Figure 4. Do you specifically assess your students' development of competencies?

The following figures show that even the perception is that teaching staff have had sufficient training for classroom assessment, their response is less emphatic than when asked about their level of assessment training (average evaluation of 3.65, SD 0.84 as opposed to average development of 3.85, SD 0.9). In this case, the figures indicate that UAM staff perceive their training more favorably than at the other universities. ($F=19.068, p<0.0001$). There is an opportunity here to back this up with further research that would analyze the proposals for training the teaching staff at each university, in order to compare and contrast such data with these figures.

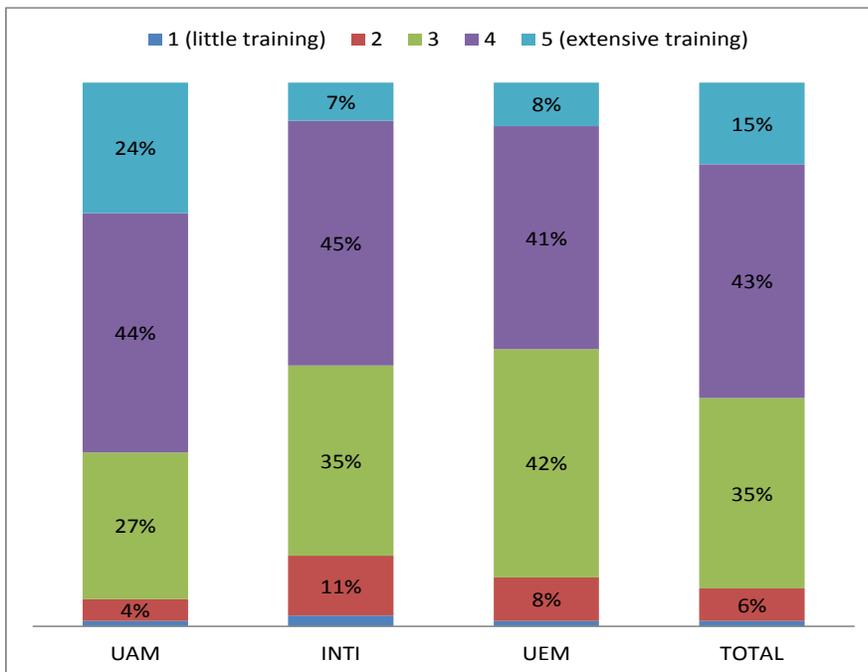


Figure 5. To what extent do you believe you have had training to assess general skills in the classroom?

As to the development of each particular competence, the researchers in this study found that teaching staff believe themselves to be better trained in evaluating the ability to apply knowledge to practice, communication, and teamwork than they are in evaluating students' global mindset or entrepreneurial spirit.

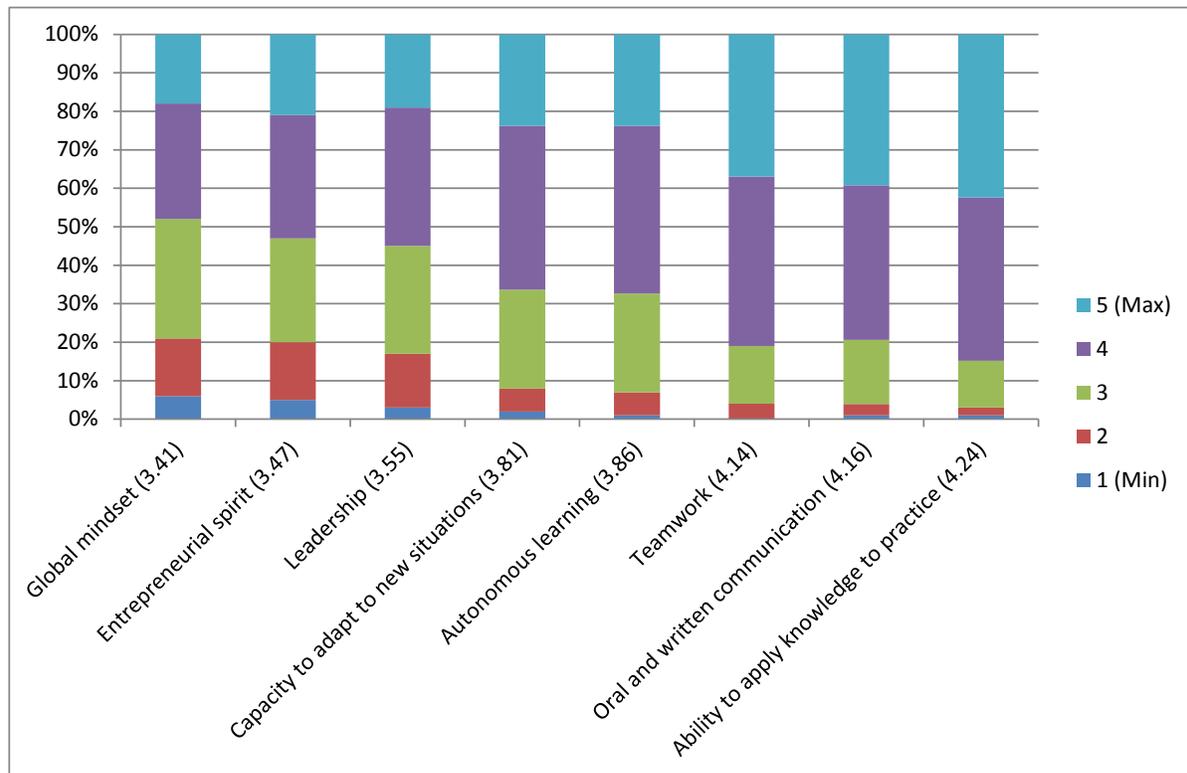


Figure 6. How much training have you had in assessing the development of these general competencies?

Figure 7 shows the methods of evaluation used by teaching staff in their classes. Teachers consider the best assessment scenarios to be those involving a certain amount of immersion in real situations, problem posing and simulations; they prefer observation techniques with rubrics as instruments over co-evaluative techniques with colleagues. It must not be forgotten that the evaluation of learning cannot be reduced to a qualification nor can it be applied during a key period in the learning process, as its purpose is to be a tool for learning. It would be appropriate to evaluate acquired skills using a number of different methods that both enable further understanding of the development stages and indicate areas for improvement. Further references are provided by authors such as McDonald, Boud, Francis, and Gonczi, (2000), Segers and Dochy (2001), and Gerard and Bief (2008).

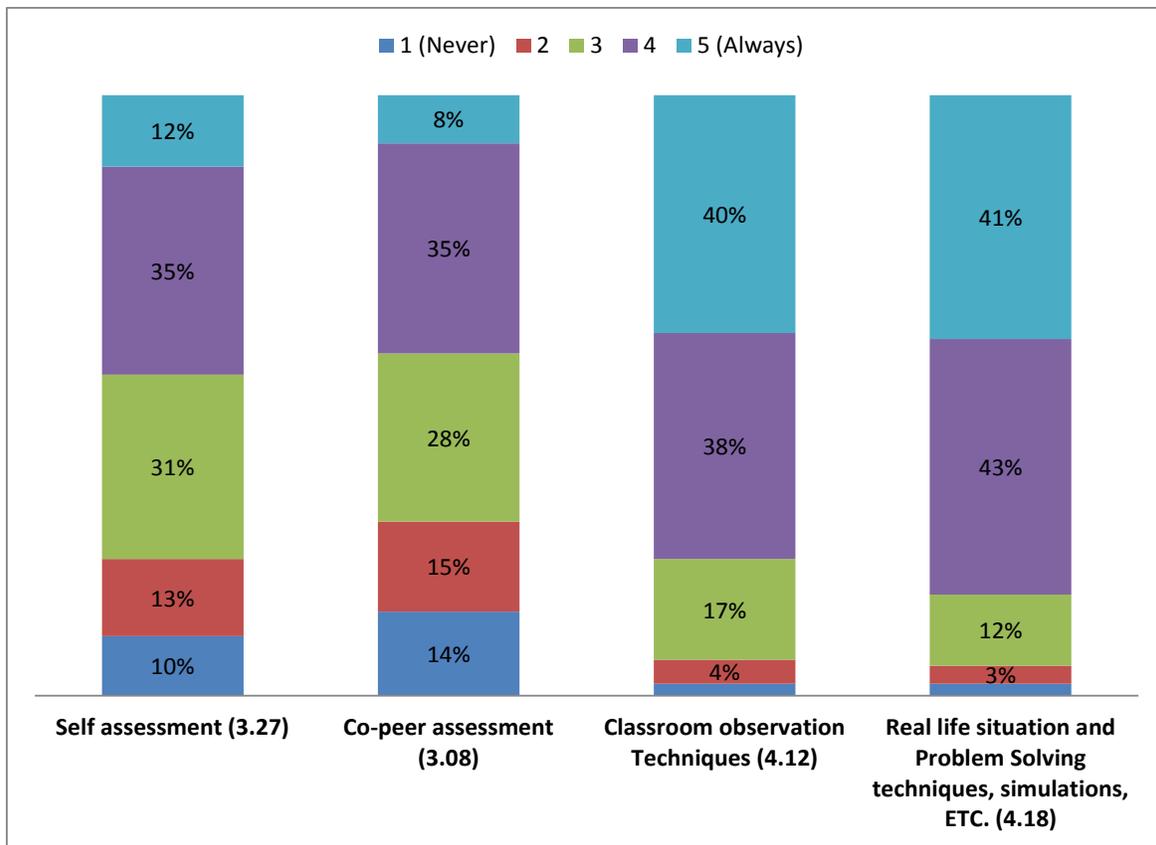


Figure 7. What kinds of techniques or tools do you most frequently use to assess the development of the skills demonstrated by your students?

The answers to the open survey questions were categorized in order to detect unexpected difficulties and identify needs. Based on these categorized responses from teachers regarding needs and difficulties encountered in the development of their students' skills, the following issues emerged:

- A change in the mentality of students is necessary for raising the profile of competence assessment within general assessment. (Numerical grading is still their top priority).
- The felt need to create academic communities for learning in which faculty members can research, collaborate, enrich, and share best practice is of great importance. These academic communities must be divided into areas of qualification and expertise.
- It is important to concentrate on the weakest competencies of entrepreneurship and leadership, and create specific training to develop them.
- Practical tools commonly used, such as activity files, should be made available to teachers.
- Other issues emerged such as lack of time, greater class sizes and too many skill areas per subject (the need to focus on a few).

These findings show the need to improve development programs for teaching staff, so that they are better qualified to develop their students' skills.

Concerning the evaluation of the development of competencies, the following findings were obtained:

- A common assessment tool is seen as a potentially useful addition, since it would allow an objective evaluation of competency development, and it would also allow cross-curricular comparisons to be made without having to standardize results.
- It would be helpful to include tools or technical support to facilitate the evaluation process.
- It would be advisable to offer specific training and practice that focuses especially on areas of competence such as entrepreneurial spirit and leadership.
- Raise the profile of competence assessment and students' perception of it.
- Set up academic groups for teacher training and better coordination.
- Other issues are lack of time and class sizes.

The above ideas contributed by university teaching staff should lead to new improvement plans instituted in universities to improve skill-based learning. There is a need for institutions to address the issues raised and reflect on ways of helping teachers fulfill their tasks.

Conclusions

The concept of higher education has changed throughout the world, and a new paradigm is being adopted that seeks to develop students' general competencies along with their specific knowledge. Employers seek graduates who possess not only excellent knowledge of subject matter, but also additional competencies that indicate their ability to successfully confront problems and continue acquiring knowledge throughout their working life. University teachers play a key role in making possible this competence-based learning model. It is for this reason that it is crucial to listen to their opinions and consider their needs in this respect.

In this study, teachers in universities across three countries reported their ability to develop general competencies in their students and, as appropriate, to introduce learning strategies into their classrooms on a regular basis. However, from the eight chosen competencies, faculty are less comfortable working and assessing global mindset, entrepreneurial spirit and leadership, which indicates the need of focusing training in these areas.

The evaluation of these competencies is also an important topic, and one to which teachers are giving their full attention. Some of the needs mentioned by teaching professionals concerned with improving development of competencies among their students are the need to create communal work spaces for sharing experiences and the need for objective and standardized evaluation methods. The responses from teaching professionals have also shed light on the most appropriate combinations of teaching strategies for each of the competencies that are targeted for improvement.

References

- Abdul-Ghafar, M. N. (2003). *Reka Bentuk Tinjauan Soal Selidik Pendidikan*. Universiti Teknologi Malaysia: Penerbit UTM.
- Barrales, A., Villalobos, M., Landín, M. del R., Pérez, M., Cruz, I., & Rodríguez, A. (2012). El enfoque educativo basado en competencias, un reto que enfrenta la Universidad Veracruzana [Educational approach based on competencies, a challenge at the Universidad Veracruzana]. *Educación*, 21(41), 23-39.
- Bartram, D., & Roe, R. A. (2005). Definition and assessment of competencies in the context of the European diploma in psychology. *European Psychologist*, 10(2), 93-102.
- Boyatzis, R. E. (2007). Competencies in the 21st century. *Journal of Management Development*, 27(1), p. 5-12.
- Cambridge, D. (2008). Universities as responsive learning organizations through competency-based assessment with electronic portfolios. *JGE: The Journal of General Education*, 57(1), 51-64.
- Chan, I. Y. S., Liu, A. M. M., Cao, S., & Fellows, R. (2013). Competency and empowerment of project managers in China. In *Proceedings of the 29th Annual ARCOM Conference*, (pp. 383- 392). Reading, UK: Association of Researchers in Construction Management (ARCOM).
- Corominas, E., Tesouro, M., Capell, D., Teixidó, J., Pèlach, J., & Cortada, R. (2006). Percepciones del profesorado ante la incorporación de las competencias genéricas en la formación universitaria [Faculty perceptions facing the introduction of generic competences in university education]. *Revista de Educación*, 2006(341), 301-336.
- Draycott, M., & Rae, D. (2011). Enterprise education in schools and the role of competency frameworks. *International Journal of Entrepreneurial Behaviour & Research*, 17(2), 127-145. doi:10.1108/13552551111114905
- European Commission, Directorate-General for Employment, Social Affairs and Inclusion, & Directorate-General for Education and Culture. (2009). *New skills for new jobs: Anticipating and matching labour market and skills needs*. Retrieved from <http://ec.europa.eu/social/main.jsp?catId=93&langId=en>
- Fletcher, S. (1997). *Analysing competence: Tools and techniques for analyzing jobs, roles and functions*. London: Kogan Page.
- Gerard, F. M., BIEF. (2008). *Évaluer des compétences: Guide pratique* [Evaluating competences : A practical guide]. Bruxelles: De Boeck.
- Gibb, A. (2002). Creating conducive environments for learning and entrepreneurship; living with, dealing with, creating and enjoying uncertainty and complexity. *Industry and Higher Education*, 16(3), 135-148. doi:10.5367/000000002101296234
- Gibb, A. (2008). Entrepreneurship and enterprise education in schools and colleges: Insights from UK practice. *International Journal of Entrepreneurship Education*, 6(2).
- Halász, G., & Michel, A. (2011). Key competencies in Europe: Interpretation, policy formulation and implementation. *European Journal of Education*, 46(3), 289-306. doi:10.1111/j.1465-3435.2011.01491.x
- Holmboe, E. S., Ward, D. S., Reznick, R. K., Katsufakis, P. J., Leslie, K. M., Patel, V. L., Ray, D. D., & Nelson, E. A. (2011). Faculty development in assessment: The missing link in competency-based medical education. *Academic Medicine*, 86(4), 460-467. doi:10.1097/ACM.0b013e31820cb2a7
- Huanca Rojas, F. (2010). Currículo flexible por competencias y calidad de formación profesional en la Facultad de Ciencias Sociales de la UNA-Puno [Flexible curriculum according to competencies and quality of professional training at the Social Sciences Faculty of the UNA-Puno]. *COMUNI@CCIÓN: Revista de Investigación en Comunicación y Desarrollo*, 1(1), 18-21.
- Hynes, B., O'Dwyer, M., & Birdthistle, N. (2009). Entrepreneurship education: Meeting the skills needs of future graduates in Ireland. In G. P. West III, E. J. Gatewood, & K. G. Shaver (Eds.), *Handbook of university-wide entrepreneurship education* (pp. 95-106). Gloucestershire, UK: Edward Elgar Publishers.

- Juhdi, N., Abu Samah, A. J., & Yunus, S. (2004). Perceived employability skills of graduating students: Implications for SMEs. *Unitar e-Journal*, 4(1).
- Lozano, J. F., Boni, A., Peris, J., & Hueso, A. (2012). Competencies in higher education: A critical analysis from the capabilities approach. *Journal of Philosophy of Education*, 46(1), 132-147. doi:10.1111/j.1467-9752.2011.00839.x
- Lwoga, E. T. (2013). Faculty perceptions and practices in health sciences information literacy instruction in Tanzania. *Library Philosophy and Practice (e-journal)*, Paper No. 1017. Retrieved from <http://digitalcommons.unl.edu/libphilprac/>
- Mansfeld, R. S. (1996). Building competency models: Approaches for HR professionals. *Human Resource Management*, 35(1), 7-18. doi:10.1002/(SICI)1099-050X(199621)35:1<7::AID-HRM1>3.0.CO;2-2
- Markus, L. H., Cooper-Thomas, H. D., & Allpress, K. N. (1997). Confounded by competencies? An evaluation of the evolution and use of competency models. *New Zealand Journal of Psychology*, 34(2), 117-126.
- McDonald, R., Boud, D., Francis, J., & Gonczi, A. (2000). Nuevas perspectivas sobre la evaluación [New perspectives on evaluation]. *Boletín Cinterfor*, 149, 41-72.
- Mir Acebrón, A. (2008). Las competencias transversales en la Universidad Pompeu Fabra. La visión de los docentes y estudiantes de segundo ciclo [Transversal competencies at the Pompeu Fabra University. Faculty and graduate students perspectives]. *REDU. Revista de Docencia Universitaria*, 6(1), 1-16.
- Perrenoud, P. (2013). *Desenvolver competências ou ensinar saberes? A escola que prepara para a vida* [Developing competencies or teaching knowledge? The school that prepares for life] (L. S. Pereira, Trans.). Porto Alegre, RS: Editora Penso.
- Prince, K. J. A. H., van Eijs, P. W. L. J., Boshuizen, H. P. A., van der Vleuten, C. P. M., & Scherpbier, A. J. A. (2005). General competencies of problem-based learning (PBL) and non-PBL graduates. *Medical Education*, 39(4), 394-401. doi:10.1111/j.1365-2929.2005.02107.x
- Roe, R. A. (2002). What makes a competent psychologist? *European Psychologist*, 7(3), 192-202. doi: 10.1027//1016-9040.7.3.192
- Ropé, F., & Tanguy, L. (1997). *Saberes e competências. O uso de tais noções na escola e na empresa* [Knowledge and competencies. The use of such concepts in school and business] (P. Chittoni Ramos, Trans.). Campinas, SP: Papirus.
- Rychen, D. S., & Salganik, L. H. (2000). *Definition and selection of key competencies*. Geneva, Switzerland: INES General Assembly 2000, DeSeCo Program, Organisation for Economic Co-operation and Development (OECD). Retrieved from <http://www.deseco.admin.ch>
- Schaeper, H. (2009). Development of competencies and teaching-learning arrangements in higher education: Findings from Germany. *Studies in Higher Education*, 34(6), 677-697. doi:10.1080/03075070802669207
- Segers, M., & Dochy, F. (2001). New assessment forms in problem-based learning: the value added of the students' perspective. *Studies in Higher Education*, 26(3), 327-343. doi:10.1080/03075070120076291
- Smith, M. K. (1996, 2005). Competence and competencies (What is competence? What is competency?). *The encyclopaedia of informal education*. Retrieved from www.infed.org/biblio/b-comp.htm
- Spencer, L. M., & Spencer, S. M. (1993). *Competence at work. Models for superior performance*. New York: Wiley.
- Spronken-Smith, R., Walker, R., Batchelor, J., O'Steen, B., & Angelo, T. (2012). Evaluating student perceptions of learning processes and intended learning outcomes under inquiry approaches. *Assessment & Evaluation in Higher Education*, 37(1), 57-72. doi:10.1080/02602938.2010.496531
- Ting, S. K. T., & Ying, C. Y. (2012). Is there a gap between practitioners' and academicians' perceptions on business graduates' competencies in Malaysia? *Journal of Education & Vocational Research*, 3(5), 167-172.
- Wilson, M., & Scalise, K. (2006). Assessment to improve learning in higher education: The BEAR assessment system. *Higher Education*, 52(4), 635-663. doi:10.1007/s10734-004-7263-y