

## STUDENT SELF-ASSESSMENT A FEEDBACK SEEKING STRATEGY THROUGH COMPETENCE EVALUATION

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### Abstract

There is a body of literature that suggests that student self-assessment is a main goal in higher education (Boud et al., 1995; Tan, 2008); moreover new forms of work organization require a high level of skills and competences. The efforts to deal with competence gaps could be developed at many levels, such as employers, educational institutions, individuals and public agents. Employers could put into practice competence development programs to moderate these gaps. Educational institutions can restructure the curriculum to support students in attaining the competences that are essential in the labour market. Individuals themselves may deploy their resources (time and money) in general or specific competence training. Further, government agencies could fund competence promotion programs.

Such challenges for education drive change in learning curricula and method, to properly include the competences required for developing global workers who can move beyond basic competence, to enhanced flexibility and adaptability. In performance assessment methods, there is a shift from the traditional exam-based assessments to more innovative task assessment, which considers performance in multiple different tasks carry out by students.

ICTs make it technologically feasible to carry out a complete and complex self-assessment of competences, which provides immediate results to students or other recipients. In the case of students, the evaluation of competences is relevant as developing competences is part - if not all - of the objectives of education. Therefore, it is an important element of the quality of educational organizations (e.g., universities), and of their organizational success. Further, educational organizations may put special emphasis on some differentiating competences, which can be a means of positioning and differentiation from competitors. Competence assessment is an instrument to make students conscious of their strengths and weaknesses, leading to higher motivation to develop their own learning career.

### Background

Different ways of experiencing student self-assessment are offered (Tan, 2008) for involving students: in judging their behaviour in self-assessment activities, in judging their knowledge in self-assessment activities, in judging their standards within the programme of study, in judging their proficiency within the programme of study, and in judging their self-evaluation capacity beyond the programme of study.

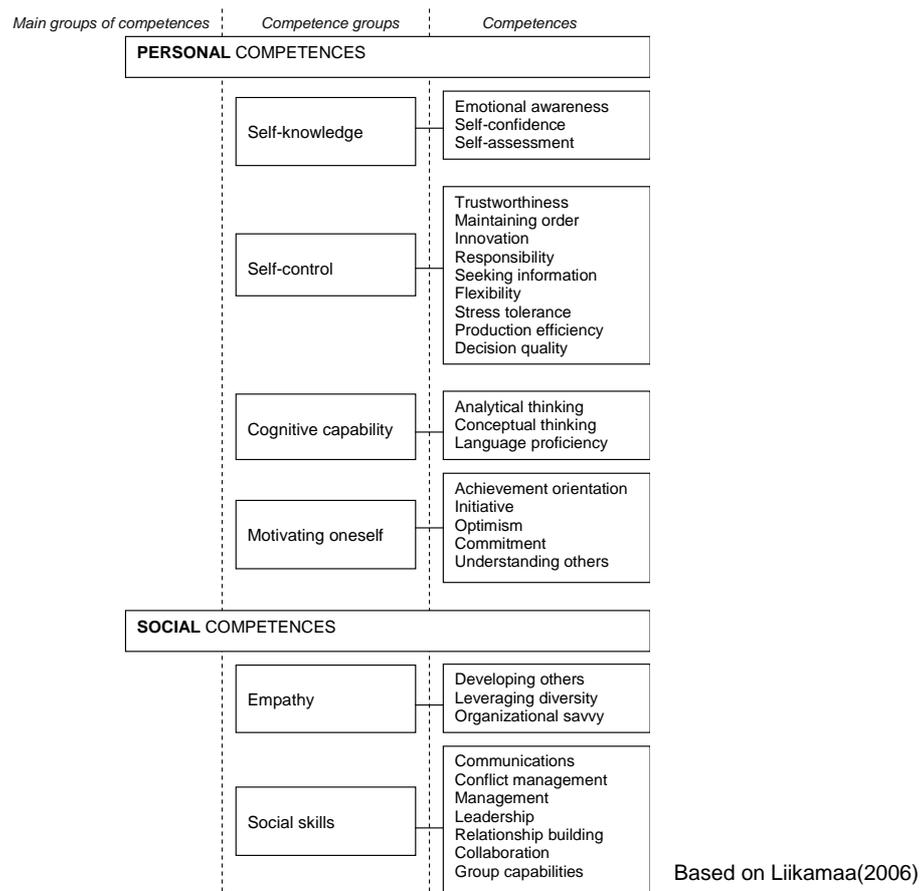
Considering previous work (Tan, 2008; Boud, 1998) the present study contemplates different perspectives: the vision students have over their lacks in accordance with their perception over reality, as well as in conformity with the experience and information they have. This vision results into, on the one hand, a differential between the labour market's demands and students' competences. On the other hand, a differential between their study's demand and the real competences student perceive they have.

Thus the focus of the present study is on how self-assessment increases awareness and how students' vision and perception becomes a valuable source of information for continuous improvement at both persona/individual level and institutional/university level.

The competence approach is widely adopted, despite the conceptual ambiguity. The competence framework literature provides an integrative system for human resource management. For example, the competence is often conceptualized as the underlying characteristics of the individual (Boyatzis, 1982; McClelland, 1973; Spencer and Spencer 1993) and as a combination of skills, knowledge and attitudes (Akin, 1987; Tannenbaum, 1997).

In this paper competences refer to traits, knowledge, skills, experience and values that an individual needs to accomplish his or her tasks. Competence assessment becomes a significant instrument for predicting work-role performance, and accordingly a core element for human resource management practices. Moreover the potential for an individual to contribute to effectiveness in an organizational level depends on the embeddedness of his or her work role in the social context. An individual can be effective by simply managing the responsibilities of his or her role as an individual within an organization.

**Figure 1: The Cycloid competence model**



Firstly we reach to explore the association between competence assessment and task performance differentiating traditional methods of evaluation from task performance (included as innovative framework for students' evaluation). Moreover, the deployment of social and personal competences could be related to specific indicators of students' performance.

## Results

This study was conducted during October-November 2006 at the University of Girona, Students were enrolled in their last courses in their technical studies (Technical architecture - TA, Degree in Informatics Engineering - INFE, Degree in Industrial Engineering - IE). Their proximity to finishing their degree, and the fact that some of them were already working, made them especially receptive to competence evaluation and to consider themselves as project managers of their learning career.

Approximately one week before use participants were instructed about the use of the application and the output reports. The application is a specially aimed to the competences of the project manager work role tested by means of 120 statements related to individuals' every day work. It requests the self-assessment of the current competence level and the target level desired by the respondent, identifying the possible creative tension. The responses are given on a fuzzy scale guided by standard linguistic labels (e.g., always, often, seldom, never). The results can be visualized in detail at the level of 30 competences, grouped in 6 competence groups than can be further classified as personal or social main groups of competences. Immediately after completing the survey an additional survey was returned including questions in order to test de subjective validity of the evaluation and the impact on the awareness of the students towards improving competences and their intentions to improve

**Table 1: Participants profile**

		(N=86)
Age	<20	19
	20-24	50
	25-29	10
	>30	3
	Not available	4
Gender	Men	61
	Women	23
	Not available	2
Situation	Full time student	43
	Studies and partial time work	32
	Studies and full time work	7
Working experience	No working experience	9
	<3 years	48
	3-5 years	14
	>5 years	11
Studies	Technical architecture (TA)	52
	Degree in Informatics Engineering (INFE)	8
	Degree in Industrial Engineering (EI)	26

From the sample of 119 University of Girona undergraduate students, 86 participate in the competence evaluation (72,3%). Table 1 shows the demographic profile of participants. The academic results are available for 78 students (TA=48; INFE=7; IE=23), this represents 65,5% of the sample. By gender the sample with academic results is distributed as follows: 69,2% men and 29,5% women. A summary of the sample's demographic information and academia results is shown on tables 1 and 2.

**Table 2: Academic results**

	Mean	N	Std.
Gender			
Men	6.2	54	1.88
Women	5.5	23	1.35
Not Available	5.0	1	.
Studies			
TA	5.2	48	1.40
INFE	5.9	7	.63
IE	7.7	23	1.43
Total	6.0	78	1.74

When analysing the additional survey, after joining the study participants increase their awareness and their intention to improve competences. Working experience increases the "self-identification" with the results attained in their individual competence assessment (Table 3). The perceived importance of competences is correlated specially with the intention to ameliorate. Awareness and intention are also correlated.

**Table 3: Creative tension correlation results**

	Mean	Std	Self-control	Cognitive capability	Motivating oneself	Empathy	Social skills
Self-knowledge	4.34	0.91					
Self-control	2.04	1.31	.445(**)				
Cognitive capability	1.72	1.13	.459(**)	.440(**)			
Motivating oneself	1.41	0.94	.460(**)	.610(**)	.416(**)		
Empathy	1.81	2.88	.288(**)	.831(**)	.195	.394(**)	
Social skills	1.50	0.86	.518(**)	.600(**)	.616(**)	.704(**)	.428(**)

\*\* p< .01 (bilateral). Note: N=86 except for academic results N=78.

Table 4: Actual competence level correlation results for IE students

	Self-knowledge	Self-control	Cognitive capability	Motivating oneself	Empathy	Social skills
Self-control	.554(**)					
Cognitive capability	.305	.530(**)				
Motivating oneself	.730(**)	.624(**)	.488(**)			
Empathy	.492(**)	.965(**)	.424(**)	.523(**)		
Social skills	.694(**)	.668(**)	.662(**)	.821(**)	.566(**)	

\* p<.05 \*\* p<.01. Note: N=26 except for Acad\_results N=23

## Conclusions

The involvement on the study increases the awareness and motivation of participants. When instructors could integrate perhaps "personal strategy" case studies or "mini" cases asking students to apply organization behaviour concepts to their own academic circumstances, performance could be improved. Moreover, adult learners bring many life

experiences to the learning environment and are motivated learners because they take responsibility for their own learning.

More research is essential in the area of designing instruction to meet needs of students with different abilities, skills, personality types and learning preferences.

Although we have an educational context, our findings can provide further ideas on the possible uses and increased value of self-assessment and competence evaluation and development, to be used for performance prediction in other settings.

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### Questions and/or considerations for discussion

*The experience of self-assessment and limitations*

People with higher levels of self-rated competences choose more demanding tasks than those which low self-ratings. Consequently the information gathered from the competence evaluation and the quantification of creative tension could help instructors in adapting their learning methodology to the real context.

For example, it would be interesting to include in the analysis of learning styles and their learning environment as level of synchronism of activities. Considering the individual characteristics and adapting the learning styles would be a possible option. Several models of learning styles are available, different students learn differently and students with a high level of satisfaction and better outcomes should be expected if learning style and learning methods are aligned. Of course controlling all the moderating variables in a learning environment is very difficult and at least challenging, if not impossible, task.

Future research should focus on different methods of evaluation and practices applied in learning environments. Special focus should be put on the different types of interactions that occur in learning environments, the internal and external motivators that allow students to succeed and social interactions promoted in classrooms, among others.

### Appendix: Competence list

Emotional awareness	Ability to recognize, understand and analyze one's own feelings
Self-confidence	Belief in one's own capacity, competence and value
Trustworthiness	Honesty and following professional ethics
Maintaining order	Maintaining order, quality and accuracy
Innovation	Natural and open attitude towards new ideas, views and information
Responsibility	Conscientiousness and the sense of responsibility of one's own actions
Seeking information	Satisfying curiosity and thirst for knowledge
Analytical thinking	Dividing problems to parts and organizing the parts systematically on rational basis
Conceptual thinking	Recognizing, applying and defining concepts
Language proficiency	Ability and courage to use foreign languages
Achievement orientation	Will to develop or to pursue still better performance
Initiative	Perceiving opportunities, seizing opportunities and ability to create new opportunities
Optimism	Reaching for goals regardless of obstacles and setbacks
Understanding others	Perceiving, considering and understanding other peoples' emotions and views
Developing others	Noticing other peoples' development needs and promoting their capabilities
Communications	Sincere listening and sending messages
Conflict management	Conciliating and settling of disagreements
Management	Management focusing on matters
Leadership	Management focusing on people
Relationship building	Establishing, maintaining and developing beneficial relationships and unofficial networks
Collaboration	Working together with others for common goals
Self-assessment	Understanding one's own weaknesses and strengths
Flexibility	Flexible attitude towards changes and diversity
Stress tolerance	Ability to handle unfavorable, tiring as stressful matters and situations and strong emotions
Commitment	Adopting the goals of a group or an organization
Production efficiency	Performing tasks quickly and effectively
Decision quality	Making decisions based on high principles, goals and values
Leveraging diversity	Pursuing goals together with the diversity of people
Organizational savvy	Recognizing and utilizing organizational dynamics for achieving goals
Group capabilities	Creating synergy while reaching for common goals