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# Time management: skills to learn and put into practice

Time  
management

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## Abstract

**Purpose** – The knowledge society determines a work scenario in which it is essential to manage time efficiently; a non-innate skill that should be learned at the university. The paper aims to discuss this issue.

**Design/methodology/approach** – This research analyzes the attitude, habits and time management of the Economics and Business students of the UPV/EHU, in order to propose/design/specific activities for its achievement. Through a self-administered questionnaire, the sample data are obtained, which are analyzed at a descriptive and multivariate level.

**Findings** – The decisive factor is not the amount of time available but the management that is made of it. In general, students pay attention to short-term planning and lack habits and attitudes in the long term.

**Practical implications** – Unaware of the advantages of a correct use of time, students do not develop skills such as self-organization, prioritization of objectives and activities, etc., which is why the intervention of the educational system is necessary in order to develop this skill.

**Originality/value** – This study focuses on the importance of developing skills, beyond the strictly technical, essential in professional performance regardless of the function assigned in the organizational chart/organization. It is about assessing time management as an integral part of higher education, competition expressed on paper, but not developed in practice. The originality and novelty of this research consists of defining new dimensions of time management and proposing some specific actions to be implemented to get a better time management.

**Keywords** Higher education, Learning, Time management, Planning, Employability skills, Business abilities

**Paper type** Research paper

## 1. Introduction

The conception of time, its perception and management, depends on the culture we belong to as masterfully expressed Edward Hall (1959) in his seminal work *The Silent Language*, “Time talks. It speaks more plainly than words. The message it conveys comes through loud and clear. Because it is manipulated less consciously, it is subject to less distortion than the spoken language. It can shout the truth where words lie” (p. 1). Therefore, while in occident it is conceived linearly, with a beginning and ending, in other cultures, the time is considered cyclic, and for that, without an ending. “People of the Western world, particularly Americans, tend to think of time as something fixed in nature, something around us and from which we cannot escape; an ever-present part of the environment, just like the air we breathe” (Hall, 1959, p. 6).

As the conception of time determines our behavior, our life (Hall, 1959; Pant, 2016), several studies on perception and management have been carried out. In the business field, from the classic studies of McCay (1959), Drucker (1967) or Lakein (1973) to the most recent of Hassan (2003), Kannan and Tan (2005) and Cockerell (2016), there has been great interest in analyzing the planning and organization of time, in order to determine its link with performance or income. The relationship of time management with non-strictly economic variables such as anxiety, physical and psychological well-being has also been analyzed (Macan, 1994; Ho, 2003; Misra and McKean, 2000; Pérez-González *et al.*, 2003; Strazdins *et al.*, 2011; Boixadós *et al.*, 2012).



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In the field of education it is essential to know how the students use their time, especially since the ECTS (2015) enhances autonomy and critical skills of the student, and considers that the workload includes different types of learning activities: readings, seminars, projects, individual and group practices (p. 10).

This diversity of tasks requires the student to adequately manage their academic time and, by extension, their overall time, facing the challenge of organizing it appropriately in order to correctly fulfill all the activities of their daily life and finally validate the acquisition of competencies (Lay and Schouwenburg, 1993; Marchena *et al.*, 2009; Romero and Barberà, 2011; Hellsten, 2012; Barberà *et al.*, 2015).

The attainment of the final goal undoubtedly involves prioritizing the different tasks, short-term and long-term planning and specifying “skills such as focusing on urgent and important tasks, rather than those that are not important or do not move you towards the goals, elaborate list of decisions, avoid procrastination or persevere when things are not working” (Tortajada *et al.*, 2015, p. 7). In short, all the activities are determined by the student’s ability to achieve the objectives set without anxiety, stress or the feeling of inability to take on all the tasks, being often the student unaware of the “correct” management of time.

In the current knowledge society, information and communication technologies (ICTs) pose great challenges and offer immense opportunities. They not only transform the previous modalities of learning and socialization, but also the relationship between knowledge and learning processes (Shulman, 1987; Duderstadt, 1994). It is therefore essential to redefine the concept of knowledge, which “is in continuous and progressive expansion and renewal” (Tejada Fernández, 2000, p. 4), the forms of transmission of it and its ontology.

ICTs enable self-training and cooperative learning, so the university and its teachers have ceased to be mere transmitters of technical knowledge to become suppliers of methods of analysis and reasoning, in short, of capabilities, not only aimed to the elite, but to the society as a whole with which it is “more reflexively connected” (Delanty, 2001).

The growth of knowledge from collective exchange (Levy, 2000), the largest and fastest distribution of information (Lara, 2005), requires controlling this environment in which these processes are developed, where it is very easy to get distracted; in short, effectively manage the limited resource that is time. The challenge is to learn to live surrounded by apparent multiple possibilities (Bauman, 1991) in a globalized world dominated by uncertainty (Barnett, 1999).

If one of the objectives of the university is to prepare students for their labor insertion, time management becomes an essential competence for the link of formation with the professional world. Education systems should “guide individual careers of knowledge spaces and contribute to the recognition of individuals’ capacity, including non-academic knowledge” (Levy, 2000, p. 24).

The aim of the research we have developed, whose main results appear in this paper, is grasping the attitude and time management of the students of the Faculty of Economics and Business of the University of the Basque Country (UPV/EHU). The objective is to raise new demands for educational programs that allow the development of the skills and competences necessary for professional performance and continuous learning.

The main results of the research show that the university students are not conscious of the need to manage time efficiently, being the majority of them focused only on the short-time planning (daily, weekly), and also that the important issue is not the amount of available time but the use of it.

In the communications-driven society, the scenario defined by the ICTs carries the new challenge of dealing with many disturbing elements, reason why the university of the twenty-first century must provide the intellectual and programmatic framework for

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continual experimentation (Attali, 1992), taking into account that the results of the students very much depend on their capacity to manage time efficiently. Therefore, this paper proposes that the university teaches the students how to organize and manage their time, creating new persons capable of developing their tasks without anxiety, stress, at a personal and professional level.

This paper begins with a general theoretical framework about time, its perception and management. Then, it gives the main points of the different models developed for time management and it analyzes the role of the university in the knowledge society. Afterwards, it presents the methodology and principal results of the empirical research developed to know how the Economics and Business students of the UPV/EHU perceive and use their time. It finishes with some proposals to teach the students the required skills.

## 2. Time management and higher education

The management of time in organizations has been almost an obsession since the times of Frederick Taylor, being able to find in the recent literature, fundamentally, two different ways of understanding time: as an objective phenomenon, which exists independently of human action; or as a subjective phenomenon, built socially from human action (Orlikowski and Yates, 2002). This objective/subjective dichotomy is also reflected in the distinction between *chronos* and *kairos*, *chronos* being “the chronological, serial time of succession [...] time measured by the chronometer not by purpose” and *kairos* “the human and living tie of intentions and goals [...] the time not of measurement but of human activity, of opportunity” (Jaques, 1982, pp. 14-15).

A third proposal has come from the Massachusetts Institute of Technology which considers that “time is experienced in organizational life through a process of temporal structuring that characterizes people’s everyday engagement in the world” (Orlikowski and Yates, 2002, p. 684) and explicitly integrates “the notion of social practices with that of enacted structures from the theory of structuration (Giddens, 1984). This integration suggests that time is instantiated in organizational life through a process of temporal structuring, where people (re)produce (and occasionally change) temporal structures to orient their ongoing activities” (Orlikowski and Yates, 2002, p. 685).

The review of the literature allows us to detect that the definitions of time management are not frequent, although many different interpretations of the concept have been generated, being able to say that in each study the researcher assumes her/his own definition of time management. Britton and Tesser (1991) propose a time-use model that includes three factors: short-term planning, time management attitude, and long-term planning; for McKenzie (1997) it is about controlling the highest level of anxiety and stress; Hashemizadeh (2006) focuses on the optimal use of time in order to live a better and easier life that includes personal skills, goal setting, organization of activities, etc., and Covey *et al.* (1994) consider that what is relevant is to learn to focus on “what is most important” instead of following the list of pending activities.

We can conclude that there is no general theoretical model of time management (Claessens *et al.*, 2007; Hellsten, 2012) being qualitative and quantitative empirical studies frequent (Bond and Feather, 1988; Britton and Glynn, 1989; Macan *et al.*, 1990, 2010; García-Ros *et al.*, 2008; García-Ros and Pérez-González, 2012; Britton and Tesser, 1991; Gallander *et al.*, 2011; Bartholomew, 2013; Burrus *et al.*, 2017). In general, as Hellsten (2012) summarizes, the data demonstrate that a correct management of time leads to better results, being more efficient the individuals who set goals and objectives, as well as priorities; or individuals who have received training in time management, and are generally more prone to planning. On the contrary, the lack of control of time produces lower performance, and a negative impact on the psychological resources of individuals (anxiety, stress, etc.) (DTI, 2001).

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The strong competitiveness business organizations face in an environment of continuous change involves the search for cost reduction and increased productivity, all of which require the employee greater requirements in terms of tasks and hours of work. In order to face the challenge “without dying in the attempt,” not only specific technical knowledge of each discipline is required, but also a set of skills, among which the efficient use of time stands out (MCI, 1997; Green and Skinner, 2005). Knowing how to manage time is not innate, and the absence of many previous patterns of behavior of the individual (capacity for self-organization, personal initiative, prioritization of objectives and activities, etc.) does not help good management, nor an environment where it is very easy to get distracted (overabundance of data and information). All this decisively influences the lack of “control” of time as confirmed by the results of the time budget surveys (INE, 2002/2003/2009/2010; EUSTAT, 1993/1998/2003/2008/2013).

Since the Industrial Revolution, the university is linked to the work environment and from it comes the qualification of the human capital required by the company at all times. Nowadays, ICTs have changed the way to access teaching and the role of its main characters – students, professors, managers – but the role of the university as a learning institution that facilitates the acquisition of habits and behaviors that companies need and by extension the society in which they are integrated has not changed. The needs have also changed, not only specific knowledge is required, which will be obsolete soon, but generic competences. “Economics graduates need to be equipped with concepts that have transformed their way of thinking. With these concepts in hand, graduates can then integrate these transferable skills into their careers” (Karunaratne *et al.*, 2016, p. 493).

The efficient administration of time is a tangible “know-how” that can be acquired through specific activities to promote this set of skills, which will allow to successfully assume the transition from the educational/university system to the professional world (ANECA, 2003, 2005[1]). “Conceptually, time management is a set of habits or learnable behaviors that may be acquired through increased knowledge, training, or deliberate practice” (MacCann *et al.*, 2012, p. 619). Therefore, the acquisition of skills is the result of a temporary process that starts at school and is enriched by experience.

The literature confirms that the individuals who establish goals and objectives, as well as priorities, are tied to a correct management of time leading to better results (Hellsten, 2012; Darren, 2012). In this context, González-Brignardello and Sánchez-Elvira Paniagua (2013) established that students who feel incapable of setting priorities are those most likely to delay activities. Other study confirmed that the correlation between academic procrastination and inefficient time management is significantly strong, the latter being the strategy of action of individuals tending to delay the completion of tasks [2]. Gallander *et al.* (2011) and Häfner *et al.* (2014) also showed that people with more training in relation to time management are able to make a more equitable allocation of time to tasks and better control the procrastination.

In general, the methods used to evaluate time management are based on self-report surveys[3], with little use of other tools such as diaries or experimentation. A common feature of time management questionnaires is that they all include items related to planning behavior. The TMBS model sets a dimension on “the establishment of objectives and priorities,” the TSQ model on the “structured routine” and in the subdimensions of the TMQ “short-term planning” and “long-term planning” appear. In any case, we must not forget that in addition to behavior there are numerous factors influencing the efficient organization of time: technical errors, external realities or psychological obstacles (Claessens *et al.*, 2004).

### 3. Methodology

#### 3.1 Population subject of study and sample

The sample used in this study is made up of 304 students enrolled during the 2015–2016 academic year in the different degrees offered at the Faculty of Economics and Business of the University of the Basque Country (UPV/EHU), representing 10 percent of the total population of students (Table I).

#### 3.2 Instruments and variables

The case study developed in this research is based on the TMQ-type attitude scale questionnaire (Britton and Tesser, 1991). In its original version or adapted to different contexts this questionnaire has been tested in many countries and has confirmed the factorial structure and its multicultural validity (Trueman and Hartley, 1995; Pérez-González *et al.*, 2003; García-Ros and Pérez-González, 2012; De la Barrera *et al.*, 2008; Zampetakis *et al.*, 2010; Nadinloyi *et al.*, 2013; Al-Khatib, 2014).

The set of TMQ items contemplates seven components of time management: choice of objectives and sub-objectives; establishment of priorities among the objectives; generation of tasks and subtasks; prioritization between tasks; creation of task lists; task planning; and completion of tasks. In this investigation, the TMQ has been conveniently adapted to be able to examine new dimensions considered more appropriate for the objectives of the research that allow us to understand better different aspects of time management:

- Short-term planning: composed of seven items related to the use of short-term planning strategies and tools that facilitate such organization.
- Long-term planning: consisting of two items that try to determine the student's ability to set and follow their own objectives of study when there is no immediate obligation to fulfill a task; that is, determine the student's willingness to establish long-term planning.
- The time-use style: collected in the two items related to the student's tendency to be involved in one activity at a time or the execution of two or more tasks simultaneously.
- The study environment: defined by the two items that try to capture the conditions in the home suitable for the study.

	Sample (%)	Faculty (%)
<i>Degree</i>		
Business administration	52.86	51.25
Economics	29.29	17.43
Finance	3.37	8.37
Taxation	5.05	6.64
Marketing	5.72	9.79
Law+business administration	3.71	6.52
<i>Course</i>		
First	22.37	22.43
Second	10.20	23.35
Third	42.11	23.47
Fourth	25.32	30.75
<i>Sex</i>		
Female	52.63	47.44
Male	47.37	52.56

**Table I.**  
Description of  
participants

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- The control of time and perception of control of time: defined by four items which try to capture if the student is able to manage efficiently her/his time and to know her/his feeling about it (Table II).

The questionnaire used for the research is a closed self-report one, where students indicate the frequency with which they perform the various activities proposed using a five-point Likert scale[4].

*Process.* In order to guarantee the representativeness of the sample, the method of data collection is based on the stratified random sampling, taking into account the degree/speciality, course and sex, and tries to avoid the possible problems related to small sample size related to same specialities (Table I).

#### 4. Results

##### 4.1 Descriptive analysis

Measuring the reliability of the set of items that appear in the questionnaire using the Cronbach  $\alpha$  coefficient (Cronbach, 1951), a value (0.701) is obtained that is within the range of acceptability suggested by different authors (George and Mallery, 2003; Panayides, 2013) for the internal consistency of the measurement instrument. The dimension with the highest internal consistency (0.819) is short-term planning.

In general, the highest means obtained correspond to the items related to short-term planning[5] (Table III). The highest average of all of the study, with a great homogeneity of answers (CV = 0.2358), corresponds to the item try to accomplish the priorities set for the week ( $m = 3.90$ ), followed by establish priorities among the activities to be carried out during the week ( $m = 3.66$ ).

The average (520) of the long-term planning, consisting of two items, reflects in general a lack of long-term vision of the students. It is noteworthy that almost one in four students (21.8 percent) never establishes a list of objectives for the entire semester and a low

**Table II.**  
Dimensions

Britton and Tesser	UPV/EHU
Short-term planning	Short-term planning
Attitude	Control of time
	Perceived control of time
Long-term planning	Long-term planning
	Time-use style
	Good study environment at home

**Table III.**  
Basic statistics of planning, the time-use style, the home environment and attitude

	Average	Minimum	Maximum	Coef. variation
Planning				
Short term	23.13	7	35	0.2358
Long term	5.20	2	10	0.3317
Time-use style				
Polychronicity	2.98	1	5	0.3305
Monochronicity	3.50	1	5	0.2936
Home environment	6.97	2	10	0.2888
Attitude				
Control of time	5.47	2	10	0.3172
Perception of control of time	5.69	2	10	0.2369

percentage (9.2 percent) declares to do so always. On the other hand, a very small proportion (1.3 percent) of the students has the habit of reading the notes and/or manuals of the subject even if there is not a next test, and a higher percentage (13 percent) never does.

Regarding the style of time use, students show preference for single-tasking vs multitasking (Table III). The mean of the variable polychronicity[6] (2.98) is lower than the mean of the monochronicity (3.50) and although both distributions are quite homogeneous, it is more the one of the monochronicity ( $CV = 0.2936/CV = 0.3305$ ). In short, the students define themselves more as people with preference to wait to finish a task before another, being foreseeable that in their future professional endeavor they should simultaneously carry out multiple tasks. In this sense, Kirchberg *et al.* (2015), when studying the labor context, find that the multiactivity seems to have a general impact on a lower well-being and on the perception of a lower performance for the individual. Although on the other hand they also conclude that the tendency toward polychronicity seems to “absorb” in part the negative effects of multitasking on performance and personal well-being.

The students recognize that they are lucky with the study conditions they have at home, being always or almost always appropriate for more than half of them (62.0 percent) while a small percentage of them (6.9 percent) always lack the optimal requirements, which rises (18.4 percent) if those who rarely enjoy the favorable requirements for studying at home are included. This variable is not totally controllable by the student, but, in general, it is revealed as a “plus.”

Regarding the control of time, it is right to conclude that the students are prone to be disturbed by “les gloutons” of time, which brings lack of concentration, as the majority of the students (50 percent) consider there are, always or many times, avoidable and inescapable disturbing elements. Nevertheless, they think they use their time efficiently and they feel they can do it better.

#### 4.2 Multivariate analysis

In order to detect the underlying dimensions of the variables observed more accurately, an exploratory factor analysis (EFA)[7] was carried out with the questionnaire questions[8] that attempt to “measure” short-term, long-term planning and attitudes and habits of students related to time management.

The initial results highlight the adequacy of the data, given that both the Kaiser–Meyer–Olkin (0.775) measure of sample fit and the Bartlett ( $\chi^2(136) = 1,216,509$ ;  $p < 0.000$ ) sphericity test presented adequate values.

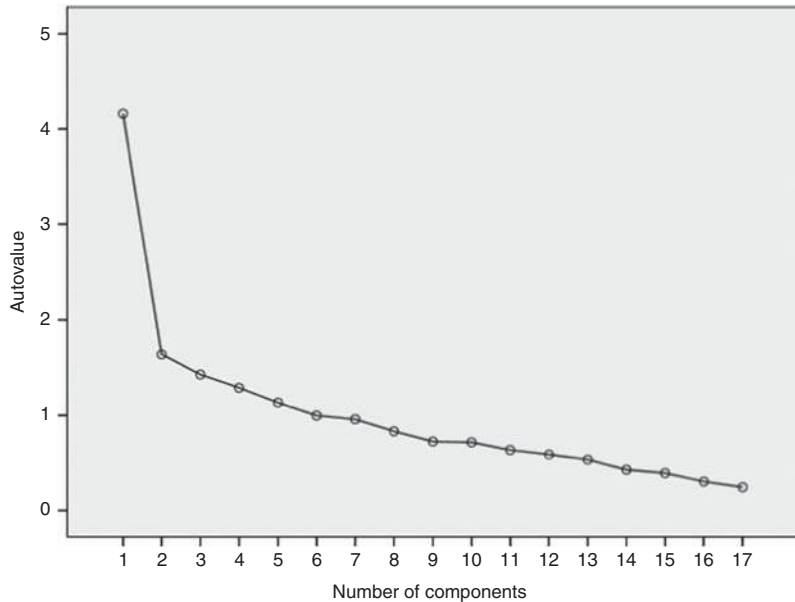
The suitability of the method is confirmed by analyzing the communalities obtained, with the variables best explained by the model (communalities  $> 0.7$ ) being those related to short-term planning and poly-diversity (Table IV).

The extraction method used was that of principal components, and as shown in Figure 1, it is advisable to consider the first five components[9], which explain 56.738 percent of the total variance of the system (Table V).

As shown in Table V, the first principal component explains 15.621 percent of the variance of the system and among the first five, 56.738 percent of the total variance of the system.

	Communality	
Do you make a list of activities to do during the week?	0.802	<b>Table IV.</b> Highest communalities
Do you try to meet the priorities set for the week?	0.768	
Do you list the list of activities in an agenda?	0.744	
If you have several activities to do, do you wait to finish one before starting another?	0.707	





**Figure 1.**  
Sedimentation

Component	Initial value	% variance after rotation	% accumulated after rotation
1	4.160	15.623	15.621
2	1.638	14.561	30.182
3	1.427	10.037	40.219
4	1.288	7.577	48.763
5	1.133	6.666	56.738

**Table V.**  
Explained variance

Undoubtedly, the challenge is to try to interpret these components, for which attention must be paid to the loadings factors, after a varimax rotation has been carried out (Table VI).

It can be said that the first component/factor is related to the prioritization of activities in the short term and their fulfillment; the second, with the planning of activities in the short term; the third, with the conditions of the study environment; the fourth with control of time and the fifth with time-use style.

## 5. Conclusion

Person's perception and use of time is highly influenced by culture and in the globalized society of the beginning of the twenty-first century these cross-cultural differences must be analyzed in order to better understand them and therefore organize effective work teams.

In the current new and very competitive world of work, managing time efficiently can be a key ability, not always innate but which can be learnt, reason why we consider necessary that the university forms the students and prepares them for developing this fundamental skill.

Willing to know how the university students perceive and manage their time, we selected a case study and analyzed their habits and behaviors. The results of the research demonstrate that the students of the Business and Economics Faculty of the University of the Basque Country (UPV/EHU) are aware of the need for short-time planning in order to

Time  
management

	F <sub>1</sub>	F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	F <sub>5</sub>
Do you try to meet the priorities set for the week?	0.858				
Do you meet the priorities set for the week?	0.798				
Do you establish priorities among the activities to be carried out during the week?	0.765				
Do you list the list of activities in an agenda?		0.856			
Do you make a list of activities to do during the week?		0.871			
Do you plan every day?		0.640			
Do you consider that there are adequate conditions in your home to study?			0.773		
Do you usually have the study table organized, with what you need at that time?			0.698		
Do you often find yourself doing things which interfere with your schoolwork simply because you hate to say "No" to people?				0.762	
Do you have to deal with inescapable activities which interfere with your schoolwork?				0.784	
If you have several activities to do, do you wait to finish one before starting another?					-0.822

**Table VI.**  
Rotated factor loadings

achieve objectives through the correct use of time. On the other hand, they do not show the same behavior in relation to long-term planning. In the current knowledge society, the immediacy takes precedence over anything and students demonstrate with their behavior these types of characteristics, which is consistent with their tendency to procrastinate.

The correct use of time is intimately related to the setting of short-term priorities and the attempt to fulfill them, for which it is not enough to rely only on memory alone, being also necessary to draw up lists of activities to be carried out. Instruments such as agendas (on paper, digital) play a very important role in this process.

The analysis allows us to conclude that the decisive factor is not the amount of time available, but the use that is made of it, through a good organization of the priorities and activities to be carried out.

In the knowledge society determined by ICTs, where it is very easy to get distracted, managing time efficiently becomes a necessity not only at the university but also in the workplace, reason why it is essential to teach these skills to the students in order to prepare them for the optimal development of their activity in the professional world. The knowledge society has changed our relationship with knowledge and therefore the way of learning and teaching. In this new scenario, the university faces the challenge of teaching students to think and analyze, a lifelong learning, and not only transmit knowledge related to a specific area. The students must be prepared for avoiding procrastination, establishing priorities, planning and organizing multiple tasks, etc., employability skills fundamental in order to be ready for the work market.

The knowledge society requires the university to redefine its paradigms and form the students to live and work in a very competitive and changing scenario where time management is a key element. Therefore, the students must learn: to pose new problems and to find alternative solutions to real ones; to define objectives and to develop strategies to reach them; to distinguish the important from the accessory, etc., taking into account that time is a limited raw material that they must use effectively and efficiently.

To get a better time management the students should use a diary to set goals and the technique of timeboxing to fix the time needed to finish each task, as this favors setting priorities and making decisions. When defending the dissertation, or presenting any task/exercise required during the seminars, the students should also present the real time box and explain the possible differences between the original one and this one

dedicated to carry out the task. They must develop awareness for where they spend their time and time tracking, learning to be flexible and to say “no” in order to avoid procrastination and distraction.

The challenge is so attractive that further research is coming to evaluate the results of the proposed curriculum planning ideas, taking into account some descriptive variables (gender, enrollment year, degree, morning or afternoon study, working or not while studying, etc.).

### Notes

1. The European convergence program indicates that “learning results are sets of competencies that express what the student will know, understand or be able to do after completing a learning process, short or long” (ANECA, 2003, p. 9). And the White Paper of Economy and Business indicates that “the level of degree allows to obtain a qualification with professional qualification in the European labor market. Its orientation is professional and must provide training in which basic generic competences are integrated, transversal competences related to the integral formation of people and the most specific competences that enable professional guidance” (p. 157).
2. Procrastination affects between 40 and 70 percent of university students and is closely related to academic performance (see Pastana and Codina, 2014).
3. TSQ (Time Structure Questionnaire) by Bond and Feather (1988); TMBS (Time Management Behavior Scale) in its original state of Macan *et al.* (1990) or modified Macan (1994); TMQ (Time Management Questionnaire) by Britton and Tesser (1991) based on the study by Britton and Glynn (1989).
4. 1: Never; 2: Seldom; 3: Sometimes; 4: Many times; 5: Always.
5. The range of possible values for each variable/item is included in the interval (1–5). Since short planning is composed of seven items, it can therefore obtain values within the interval (7–35).
6. The possible range of values is included in the interval (1–5).
7. Although based on the TMQ questionnaire, some new dimensions have been considered, reason why the EFA has been used instead of the confirmatory factor analysis (CFA).
8. A total of 17 items of the questionnaire have been used.
9. Components with an eigenvalue greater than 1.

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