anales de psicología, 2012, vol. 28, nº 3 (octubre), 860-865
http://dx.doi.org/10.6018/analesps.28.3.156231

ISSN edición impresa: 0212-9728. ISSN edición web (http://revistas.um.es/analesps): 1695-2294

Extra-curricular involvement, academic adjustment and achievement in higher education: A study of Portuguese students

Leandro S. Almeida[1*], M. Adelina Guisande[2] and Joanne Paisana[1]

[1] *University of Minho, Portugal*
[2] *University of Santiago de Compostela, Spain*

Título: Participación en actividades extracurriculares, ajuste y rendimiento académico en la Educación Superior: Un estudio con estudiantes portugueses.

Resumen: La participación en actividades extracurriculares se ha destacado como un factor importante en la adaptación, el éxito y el desarrollo de los estudiantes en la Universidad. El presente estudio analiza la experiencia académica, el rendimiento y el ajuste de los estudiantes universitarios mediante la comparación de tres grupos: (i) estudiantes sin ningún tipo de participación en actividades extracurriculares; (ii) estudiantes que participan en los órganos de gobierno de la Universidad; y (iii) estudiantes implicados en actividades de la Asociación de Estudiantes. A principios del segundo semestre, los estudiantes seleccionados de la Universidad do Minho (N=223) respondieron a un Cuestionario de Experiencias Académicas (AEQ; Almeida y Ferreira, 1997) y a un breve cuestionario sobre su asiduidad a las clases y su participación en actividades extracurriculares. Los resultados obtenidos en los tres grupos se relacionaron estadísticamente con determinadas dimensiones de su proceso de ajuste académico, así como de su rendimiento académico. Cuando se compara el grupo de estudiantes que no participa en actividades extracurriculares con el grupo de estudiantes implicados en actividades de administración, deportivas, culturales y sociales de la asociación de estudiantes se observaron diferencias estadísticamente significativas. Este último grupo presenta una menor asiduidad a las clases y un menor rendimiento académico.
Palabras clave: Educación superior; rendimiento académico; ajuste académico; participación en actividades extracurriculares.

Abstract: Involvement in extra-curricular campus activities has been underlined as an important factor in promoting the adjustment, success and development of students during their university course. The present study analyses the academic experience, achievement and adjustment of university students through the comparison of three groups: (i) students without any involvement in extra-curricular campus activities; (ii) students involved in University Governing Bodies; and (iii) students involved in Student Union activities. At the beginning of the second semester, selected students of the University of Minho (*N*=223) responded to a questionnaire - *Academic Experiences Questionnaire* (AEQ; Almeida and Ferreira, 1997) - and a short questionnaire about their diligence in classes and their involvement in extra-curricular campus activities. The results obtained in the three groups were statistically related to certain dimensions of their academic adjustment process, as well as to their academic achievement. Significant statistical contrasts are noticeable when students with no involvement in extra-curricular activities are compared with those involved in Student Union administration, sports, cultural and social activities. The latter group presents lower class diligence and academic achievement.
Key words: Higher education; academic achievement; academic adjustment; extra-curricular involvement.

Introduction

The adjustment of a student to university life is a complex and multi-dimensional process requiring the development of a variety of competencies to facilitate adjustment and integration into the new educational setting. Student adjustment may be considered as being associated with the interaction effect of three sets of variables: (i) an ability to cope with the varied changes associated with their coming to university; (ii) the available social support and resources provided by the family, peers and academic services; and (iii) the type and level of demand and adaptive mechanisms provided by the university (Baker and Siryk, 1989; Brooks and DuBois, 1995; Felner and Felner, 1989; Lee, Olson, Locke, Michelson, and Odes, 2009; Soares, Almeida and Guisande, 2011; Soares, Guisande, Diniz and Almeida, 2006; Terenzini and Wright, 1987).

For the majority of authors, higher education has a positive impact on student development (Pascarella and Terenzini, 2005). However, some personal and contextual variables such as interests, expectations, self-esteem, coping strategies, social level, gender, relationships with peers and family, place of residence or institutional characteristics, among others, seem to moderate this impact (Astin, 1993; Fleming, 1984; Nicholson, Putwain, Connors and Hornby-Atkinson, *in press;* Pascarella and Chapman, 1983). Therefore, recognising that academic adjustment is a strong predictor of academic achievement and of the psycho-social development of a student during university studies (Gerdes and Mallinckrodt, 1994; Longden, 2006; Soares, Guisande and Almeida, 2007; Tomlinson-Clarke, 1998), it is critical to identify personal and contextual variables involved in the school-to-university transition, as well as to maximise their impact when positively associated with the quality of the adaptation, achievement and psychological development of the student (Brooks and DuBois, 1995; Sander, Stevenson, King and Coates, 2000; Soares et al., 2006).

At this level, among the variables that are indicated as playing an important role in student adjustment and integration to the new university context is their participation in extra-curricular activities (Astin, 1993; Pascarella, 1984; Weidman, 1989). A wide variety of activities, services and groups are included here, as long as they are organised in connection with the higher educational institution. Student participation in volunteer programmes or services on campus or in the community is considered to have a positive impact on personal and educational development, on the acquisition of important life competencies and on the moral, civic and social development of the student (Astin and Sax, 1998; Batchelder and Root, 1994; Markus, Howard and King,

*** Dirección para correspondencia [Correspondence address]**: Leandro S. Almeida, Institute of Education, University of Minho, Campus Gualtar, 4710-057 Braga (Portugal). E-mail: leandro@ie.uminho.pt

1993; Persell and Wenglinsky, 2004). Involvement in extra-curricular activities tends to be associated with higher levels of development, learning and academic satisfaction (Kuh, 1993; U.S. Department of Education, 1984) and better interpersonal and intimate relationships (Hood, 1984). Academic leadership activities appear to be linked to altruistic and social values (Pascarella, Ethington and Smart, 1988), as well as to more realistic and consistent life projects (Williams and Winston, 1985). Also, student participation in campus sports activities, whether in terms of competition or leisure, seems to be positively associated with self-esteem and leadership development, to academic fulfilment and to better indicators of physical and emotional health (Astin 1993; Ryan, 1989; Taylor, 1995). These activities may develop self-discipline, teamwork, co-operation, self-confidence and the ability to deal with failure (Lapchick, 1987). Some activities, for example sport, also enhance the status and image of a student on campus (Cantor and Prentice, 1996). Obviously it is not claimed that the simple participation of students in such activities promotes their psychological development. These activities merely facilitate certain processes that assist psychological development (Cornelius, 1985).

However, in spite of the positive effects derived from involvement in such extra-curricular activities, the practice of such activities can also cause problems. The authors underline the difficulties in reconciling the time and energy spent on such activities with class attendance, learning activities and academic achievement. After all, are they primarily students, athletes or Union leaders? (Leonard, 1985). The situation becomes more complicated when such activities require an excessive student involvement in social and leisure activities (Parham, 1993). Also, such activities may be an influential context for the development of anti-social behaviours (Rees, Howell and Miracle, 1990). In this case, the beneficial effect associated with the practice of such activities may disappear and some indicators of institutional and academic adjustment problems may emerge, even if associated with a "positive socio-relational adaptation". Nowadays, high consumption rates of alcohol and other substances by some student groups are evident, especially in particular academic events and festivities (Alva, 1998; Capraro, 2000; Londoño, 2010). Learning capacity and academic adaptation and achievement seem to be seriously affected in these circumstances (Astin, 1993; Kuh, 1993; Rosenthal, Russell and Thomson, 2008; Soares, Almeida and Guisande, 2011).

This study examines how student involvement in extra-curricular campus activities affects their academic experiences, achievement and adjustment. The analysis considers three student sub-groups: students without any kind of extra-curricular involvement in campus activities, students involved in formal academic bodies and students who have been elected to the Student Union for its administration, social, sporting and/or cultural activities.

Method

Participants

This study concerned 223 students of the University of Minho: 64 students (28.7%), who were involved in University Governing Bodies or had academic functions such as student representatives in the University Assembly and Academic Council, a further 71 students (31.8%) belonging to the Student Union or who had Student Union functions such as membership of the Student Board and some 88 students (39.5%), who were not involved in extra-curricular campus activities. With respect to gender, the majority of respondents were women, whether considering the global sample (58% women and 42% men) or two of its groups. Nevertheless, in the one group of students with Student Union functions, the contrary situation applied in that the respondents are predominantly male (61% men to 39% women). Table 1 presents the distribution of the three groups of the participants by age and gender.

Table 1. Student distribution by age and gender

		Age				Gender	
GROUPS	N	*M*	*SD*	*Min*	*Max*	Male	Female
Without any functions	88	21.4	3.10	18	40	30	58
With Academic functions	64	21.5	2.87	19	37	21	43
With Student Union functions	71	21.5	1.60	18	26	43	28

Instruments

The *Academic Experiences Questionnaire* (AEQ; Almeida and Ferreira, 1997, 1999) is composed of 170 items, which are distributed among 17 sub-scales covering personal, academic and institutional dimensions of student adjustment to the university environment. The AEQ has been adapted and validated by professors from the University of San Francisco, Brazil (Granado et al., 2005) and also from the University Concepción, Chile (Abello, 2008), and it has been used in several research projects in both countries. For each AEQ item, students mentioned their degree of agreement or disagreement using a five-point *Likert* scale.

This study used the sub-scales *Institutional adaptation* (11 items related to institutional services, campus context or timetables, for example, *"There is a computer laboratory with up-to-date equipment"*; this sub-scale presents a Cronbach´ alpha coefficient of .72); *Teacher relationships* (14 items related to student-teacher interaction, teacher support, self-evaluations of the competencies of teachers, for example, *"Teachers make themselves available out of class to clarify uncertainties"*; this sub-scale presents a Cronbach´ alpha coefficient of .79); *Peer rela-*

tionships (15 items related to interpersonal relationships, intercultural tolerance or co-operation, for example, *"I have a few colleagues who I can ask for help with personal problems"*; this sub-scale presents a Cronbach´ alpha coefficient of .87); *Autonomy* (12 items related to independence from family, emotional autonomy from friends or daily self-management, for example, *"I am able to successfully manage my budget each month"*; this sub-scale presents a Cronbach´ alpha coefficient of .76); *Career development* (14 items related to learning investment, vocational commitment and definition of vocational choices, for example, *"I have a clear idea about what I want to do professionally, after graduation"*; this sub-scale presents a Cronbach´ alpha coefficient of .85); and *Physical well-being* (13 items related to sleeping and food, perception of general health and use of substances, for example, *"My sleep patterns are adequate for my needs"*; this sub-scale presents a Cronbach´ alpha coefficient of .79).

A short questionnaire was administered to collect information about student involvement in curricular activities (classes) and about their type of participation in extra-curricular campus activities. Academic achievement information was obtained with the help of the Student Academic Services. In this study, academic achievement corresponds to the curricular mean weighted by the number of curriculum units passed. A z score was obtained into each field graduation in order to compare the classifications of students.

Procedures

The enquiry was conducted at the beginning of the second semester in a classroom context i.e. during a class period. For those with Student Union functions, the enquiry was conducted collectively but also out of a classroom context; namely, at the University of Minho Student Union, as a follow-up to Union meetings. In each situation, the enquiry took place after a concise explanation of the purpose of the research and the students participated voluntarily. Confidentiality was stressed and it was only necessary for each student to provide a little personal information in order to enable access to their academic records. Generally, students participated in a conscientious and interested way. Statistical analyses were made with the statistic package IBM SPSS Statistics Program (version 19.0 for *Windows*).

Results

An analysis was made of the results obtained using either certain academic achievement indicators or the AEQ subscales for each of the three student groups. In Table 2, the mean and standard deviation of the number of evaluated disciplines with success or failure at the end of the first semester is presented. *F-oneway* analyses of variance with *Scheffe* contrasts were made in order to study the differences among the three groups.

Table 2. Academic achievement results of the three student groups.

Academic	Without any functions		With Academic functions		With Student Union functions	
Achievement	*M*	*SD*	*M*	*SD*	*M*	*SD*
Disciplines successfully completed	3.84	1.90	2.95	2.07	2.43	1.89
Disciplines failed	1.39	1.65	1.57	1.64	3.00	3.12

The values obtained show that a higher number of disciplines were completed successfully by the students without Student Union functions and the contrary occurred where students with Student Union functions were concerned [$F(2, 220) = 6.31$, $p < .01$]. Different values were found between these two groups concerning failed disciplines, where students with Student Union functions presented a higher mean [$F(2, 220) = 8.23$, $p < .001$]. It is important to point out that the students involved in academic functions presented mean values in between the two groups considered.

On the other hand and concerning the analysis of class diligence, it was verified that only 14% of the students had not skipped any theoretical class in the previous month (44% claimed to have missed between one to three times and 42% more than three times). Regarding theoretical-practical lectures and practical classes, this value rises considerably (33% and 40% of the students respectively had not skipped classes in the previous month). The results show that the mean for skipping theoretical lectures is 2.3 (*SD*=2.26), while for theoretical-practical lectures it is 0.9 (*SD*=1.25) and for practical classes the skipping mean is 0.5 (*SD*=0.97). Nevertheless and in spite of this general pattern, it was possible to identify important statistical differences considering a *F-oneway* analysis of the groups, as can be seen in Table 3.

Table 3. Diligence in the theoretical, theoretical-practical and practical classes.

Missed classes	Without any functions		With Academic functions		With Student Union functions	
	M	*SD*	*M*	*SD*	*M*	*SD*
Theoretical	1.72	1.45	2.32	2.08	3.00	3.05
Theoretical-practical	0.45	0.84	0.79	1.22	1.51	1.45
Practical	0.27	0.69	0.58	1.27	0.61	0.93

The students without Student Union functions are more diligent, irrespective of the type of class, while the students with Student Union functions occupy the converse position [Theoretical classes $F(2, 220) = 4.62$, $p < .05$; Theoretical-practical classes $F(2, 220) = 9.27$, $p < .001$]. A lower number of absences is registered in practical classes, where the three groups present very similar values $F(2, 220) = 1.70$, $p = .19$), which may be due to genuine student interest in these classes and also to registration requirements or stricter discipline evaluation criteria e.g. requirement of their presence and participation in practical classes.

Table 4 shows the mean and standard deviations for the number of times that the three groups of students attended various student services available on campus and their answers relate to the previous week to that when the survey was conducted.

Table 4. Attendance at services on campus during the previous week.

Services frequented	Without any functions		With Academic functions		With Student Union functions	
	M	*SD*	*M*	*SD*	*M*	*SD*
University canteen	2.44	1.94	2.63	1.81	2.75	2.16
Library	2.51	1.65	2.67	3.87	1.61	1.23
Computer laboratory	2.48	3.53	2.12	1.65	2.77	2.35
Student Union	0.01	0.25	0.38	0.67	1.91	2.65

The data suggest some heterogeneity in the mean attendance of the three groups at the services indicated. In the first place, the three groups are similar regarding their number of attendances at the university canteen [$F(2, 220) = .48$, $p = .62$]. Concerning library attendance, students with academic functions presented a higher mean - a situation differing significantly only in the case of students with Student Union functions [$F(2, 220) = 3.42$, $p < .05$]. Considering optional computer laboratory attendance, the three groups do not present any significant differences [$F(2, 220) = .84$, $p = .43$], as even students with Student Union functions presented a higher rate of presence in computer laboratories. Also, students with Student Union functions keep more in touch with the Student Union activities or places. Students without any Student Union functions represent the lowest attendance rate at this kind of location or service [$F(2, 220) = 20.02$, $p < .001$].

Finally, for all three student groups, an analysis was made of the results obtained using the AEQ sub-scales (Table 5).

Table 5. AEQ subscale results of the three student groups

AEQ Subscales	Without any functions		With Academic functions		With Student Union functions	
	M	*SD*	*M*	*SD*	*M*	*SD*
Institutional Adaptation	41.7	4.62	44.2	5.51	45.4	6.42
Teacher Relationships	41.5	6.21	43.7	7.16	39.4	9.34
Peer Relationships	55.4	7.96	58.4	7.98	61.5	10.66
Autonomy	43.3	5.76	44.9	5.59	45.8	7.05
Career Development	49.5	7.70	53.4	6.82	52.0	8.41
Physical Well-Being	50.9	7.87	49.7	6.40	47.3	6.51

It is interesting to note how the three group means are related to the specific domain of each AEQ sub-scale. For example, students without any involvement in extra-curricular campus activities show a higher level of indicators on the sub-scale of "Physical Well-being" [$F(2, 220) = 4.29$, $p < .05$] mainly in relation to students with Student Union functions. On the other hand, this same group of students that "only study" shows lower results in "Institutional Adaptation" [$F(2, 220) = 8.38$, $p < .001$] compared with the other two groups of students, in "Career Development" [$F(2, 220) = 5.09$, $p < .01$] compared with the student group with academic functions and in "Peer Relationships" [$F(2, 220) = 7.86$, $p < .001$] in relation to students with Student Union functions. Also, it is interesting to note that the group of students with academic duties shows self-evaluations of better relationships with their professors, especially when compared with students having Student Union functions [$F(2, 220) = 4.98$, $p < .01$]. This fact seems inevitable, when the higher level of student-teacher contact and interaction is considered. Finally, students with Student Union functions present higher autonomous self-evaluations (2.5 points on mean differences to colleagues without any functions), although even this difference is not statistically significant.

Discussion

The results concerning learning and academic achievement show some significant differences between the three groups of students. Primarily, those students with some type of academic or Student Union function have higher mean absence rates at theoretical or practical classes, especially when compared with those students who do not participate in any extra-curricular activities on campus. This finding is supported by other authors, who state that higher levels of Student Union involvement diminish both the time available for investment in curricular activities and interactions with other

students (Astin, 1993; Leonard, 1985; Parham, 1993). Usually, the studies validate the lower academic achievement rates obtained by students involved in extra-curricular activities, mainly when these are not related to academic tasks or functions such as class or degree course pedagogical representation. Students without any extra-curricular activities show clearly superior achievement rates due to their increased academic involvement, which may be interpreted as constituting a strong positive impact on academic success (Pike, 1995; U.S. Department of Education, 1984).

On the other hand, student attendance at certain university campus services reflects not only their accessibility but also the kind of interest that these particular students demonstrate in accordance with the group to which they belong. For example, if the mean of the weekly attendance of some basic services like the university restaurant is identical in the different students groups, the same point cannot be made about the library, which the group with Student Union functions attended least, or Student Union events and services that are not used as much by the students who were more involved in academic work. Here the group without any extra-curricular activities practically does not attend, while the mean weekly attendance in the group with Student Union functions is double. These differences seem obvious, due to the type and nature of the academic involvement that characterises the students of the three groups and this can also explain the higher presence of students with Student Union functions in computer laboratories, because they usually need to prepare, produce and disseminate information, for example.

Finally, the three student groups differ significantly in some of the academic adjustment sub-scales. Students without any extra-curricular activity involvement presented better self-evaluations concerning "Physical well-being," which includes items like fatigue, substance abuse and stress. On the other hand, these students present lower self-evaluations of their personal involvement in "Institutional adaptation," "Career development" and "Peer relationships" on the AEQ sub-scales. The results suggest that students with activity in the Student Union perform better in institutional adaptation, career development and peer relationships, which may suggest that they are better prepared in some aspects for an active life after graduation compared to their colleagues, who spend their time attending classes and avoiding using up time on extra-curricular activities. Finally, when considering the student groups with academic functions *versus* the student group with strictly Student Union functions, one sees they are significantly different on the "Teacher relationships" sub-scale, which is more favourable for the students with academic functions (Creasey, Jarvis, and Gadke, 2009). This could be due to the lower class attendance, for example, of students with strictly Student Union functions and the increased student delegate-teacher interaction often necessary for academic purposes.

In conclusion, it may be stated that the students without Student Union functions exhibited higher academic achievements, as well as higher self-evaluations of "Physical well-being". However, those students with some type of function, namely in the Student Union, presented self-evaluations indicating a better adaptation to university. Moreover, students with academic functions presented self-evaluations showing a better relationship with their professors and better defined vocational goals. The latter results confirm the positive impact of extra-curricular campus activities on academic adjustment, although they are not so clear for academic success, particularly when extra-curricular activity concerns responsibilities in Student Union Departments. Since Portugal has introduced "Bologna Reform" in its Higher Education system, it is important to consider the implications of a new teaching and learning paradigm that assumes the effective class participation of students, which can reduce their participation in extra-curricular activities and consequently provides such students fewer opportunities for psycho-social development. It is believed that the competencies gained by involvement in Student Union or extracurricular activities should continue to be available for the small proportion of students interested in devoting their time to such activities and that Universities should not push too much in the direction of emphasising exclusively class attendance, as a result of their implementation of the "Bologna Reform".

References

Abello, R. R. (2008). *Vivencias, comportamiento académico, atribuciones causales, metas de estudio y autoconcepto en estudiantes universitários*. Tesis de master. Chile: Universidad de Concepción.

Almeida, L. S. and Ferreira, J. A. (1997). *Questionário de Vivências Académicas (QVA)*. Braga: Universidade do Minho, Centro de Estudos em Educação e Psicologia.

Almeida, L. S. and Ferreira, J. A. (1999). Adaptação e rendimento acadêmico no Ensino Superior: Fundamentação e validação de uma escala de avaliação de vivências acadêmicas. *Psicologia: Teoria, Investigação e Prática, 1*, 157-170.

Alva, S. A. (1998). Self-reported alcohol use of college fraternity and sorority members. *Journal of College Student Development, 39*, 3-10.

Astin, A. (1993). *What matters in college? Four critical years revisited*. San Francisco: Jossey-Bass.

Astin, A. W. and Sax, L. J. (1998). How undergraduates are affected by service participation. *Journal of College Student Development*, *39*, 251-263

Baker, R. W. and Siryk, B. (1989). *SACQ Student Adaptation to College Questionnaire Manual*. Los Angeles, CA: Western Psychological Services.

Batchelder, T. H. and Root, S. (1994). Effects of an undergraduate program to integrate academic learning and services: Cognitive, prosocial cognitive, and identity outcomes. *Journal of Adolescence*, *17*, 341-355.

Brooks, J. H. and DuBois, D. L. (1995). Individual and environmental predictors of adjustment during the first year of college. *Journal of College Student Development*, *36*, 347-360.

Cantor, N. E. and Prentice, D. A. (1996). *The life of the modern-day student-athlete: Opportunities won and lost*. Paper presented at the Princeton Conference on Higher Education, Princeton, NJ.

Capraro, R. L. (2000). Why college men drink: Alcohol, adventure and the paradox of masculinity. *Journal of American College Health*, *48*, 307-316.

Cornelius, A. (1985). The relationship between athletic identity, peer and faculty socialization, and college student development. *Journal of College Student Development*, *36*, 560-573.

Creasey, G., Jarvis, P. and Gadke, D. (2009). Student attachment stances, instructor immediacy, and student-instructor relationships as predictor of achievement expectations in college students. *Journal of College Student Development*, *50*, 355-372.

Felner, R. D. and Felner, T. Y. (1989). Primary prevention programs in the educational context: A transactional-ecological framework and analysis. In L. A. Bond and B. E. Compas (Eds.), *Primary prevention and promotion in the schools* (pp. 13-49). Newbury Park, CA: Sage Publications.

Fleming, J. (1984). *Blacks in college: A comparative study of students' success in black and in white institutions*. San Francisco: Jossey Bass.

Gerdes, H. and Mallinckrodt, B. (1994). Emotional, social, and academic adjustment of college students: A longitudinal study of retention. *Journal of Counseling & Development*, *72*, 282-288.

Granado, J. I. F., Santos, A. A. A., Almeida, L. S., Soares, A. P. and Guisande, M. A. (2005). Integração académica de estudantes universitários: Contributos para a adaptação e validação do QVA-*r* no Brasil. *Psicologia e Educação, 12*, 31-42.

Hood, A. B. (1984). *Student development: Does participation affect growth?* Bloomington, IN: Association of College Unions-International.

Kuh, G. D. (1993). In their own words: What students learn outside the classroom. *American Educational Research Journal*, *30*, 277-304.

Lapchick, R. E. (1987). The high school athlete as the future college student-athlete. *Journal of Sport and Social Issues*, *1-2*, 104-121.

Lee, D., Olson, E. A., Locke, B., Michelson, S. T. and Odes, E. (2009). The effects of college counseling services on academic performance and retention. *Journal of College Student Development, 50*, 305-319.

Leonard, W. M. (1985). Exploitation in college sport: The views of basketball players in NCAA divisions I, II, and III. *Journal of Sport Behavior*, *9*, 11-30.

Londoño, C. (2010). Resistencia de la presión de grupo, creencias acerca del consumo de alcohol en universitarios. *Anales de Psicologia, 26*, 27-33.

Longden, B. (2006). An institutional response to changing student expectations and their impact on retention rates. *Journal of Higher Education Policy and Management, 28*, 173–187.

Markus, G. B., Howard, J. P. F. and King, D. C. (1993). Integrating community service and classroom instruction enhances learning: Results from an experiment. *Educational Evaluation and Policy Analysis*, *15*, 410-419.

Nicholson, L. J., Putwain, D. W., Connors, L. and Hornby-Atkinson, P. (*in press*). The key to successful achievement as an undergraduate student: Confidence and realistic expectations? *Studies in Higher Education, 38*.

Parham, W. D. (1993). The intercollegiate athlete: A 1990s profile. *The Counselling Psychologist*, *21*, 411-429.

Pascarella, E. T. (1984). Reassessing the effects of living on campus versus commuting to college: A causal modelling approach. *Review of Higher Education*, *7*, 247-260.

Pascarella, E. and Chapman, D. W. (1983). A multi-institutional path analytic validation of Tinto´s model of college withdrawal. *American Educational Research Journal*, *20*, 87-102.

Pascarella, E. T., Ethington, C. A. and Smart, J. C. (1988). The influence of college on humanitarian/civic involvement values. *Journal of Higher Education*, *59*, 412-437.

Pascarella, E. T. and Terenzini, P. T. (2005). *How college affects students: A third decade of research*. San Francisco: Jossey-Bass.

Persell, C. H. and Wenglinsky, H. (2004). For-profit post-secondary education and civic engagement. *Higher Education, 47*, 337-359.

Pike, G. R. (1995). The relationship between self-reports of college experiences and achievement test scores. *Research in Higher Education*, *36*, 1-22.

Rees, C. E., Howell, F. M. and Miracle, A. W. (1990). Do high school sports build character? A quasi-experiment on a national sample. *Social Science Journal*, *27*, 303-315.

Rosenthal, D. A., Russell, J. and Thomson, G. (2008). The health and well-being of international students at an Australian university. *Higher Education, 55*, 51-67.

Ryan, R. J. (1989). Participation in intercollegiate athletics: Affective outcomes. *Journal of College Student Development*, *30*, 122-128.

Sander, P., Stevenson, K., King, M. and Coates, D. (2000). University students´ expectations of teaching. *Studies in Higher Education, 25*, 309-323.

Soares, A. P, Almeida, L. S. and Guisande, M. A. (2011). Ambiente académico y adaptación a la Universidad: un estudio con estudiantes de 1º año de la Universidad do Minho. *Revista Iberoamericana de Psicologia y Salud, 2*, 99-121.

Soares, A. P., Guisande, M. A. and Almeida, L. S. (2007). Autonomía y ajuste académico: un estudio con estudiantes portugueses de primer año. *International Journal of Clinical and Health Psychology, 7*, 753-765.

Soares, A. P., Guisande, M. A., Diniz, A. and Almeida, L. S. (2006). Construcción y validación de un modelo multidimensional de ajuste de los jóvenes al contexto universitario. *Psicothema, 18,* 249-255.

Taylor, D. L. (1995). A comparison of college athletic participants and non-participants on self-esteem. *Journal of College Student Personnel*, *26*, 444-451.

Terenzini, P. T. and Wright, Th. M. (1987). Influences on students´ academic growth during four years of college. *Research in Higher Education*, *26*, 161-179.

Tomlinson-Clarke, S. (1998). Dimensions of adjustment among college women. *Journal of College Student Development*, *39*, 364-372.

U. S. Department of Education (1984). *Involvement in learning: The study group on the condition of excellence in American higher education*. Washington, DC: U. S. Department of Education.

Weidman, J. (1989). Undergraduate socialization: A conceptual approach. *Higher education: Handbook of theory and research, 5*, 289-322.

Williams, M. and Winston, R. B., Jr. (1985). Participation in organized student activities and work: Differences in developmental task achievement of traditional aged college students. *NASPA Journal*, *22*, 52-59.

(Article received: 4-5-2010, reviewed: 9-2-2012, accepted: 18-2-2012)