Social skills in engagement and academic performance in university students

Habilidades sociales en Engagement y desempeño académico en estudiantes universitarios

Verónica Cajas Bravo 1,a
https://orcid.org/0000-0001-8939-3733

Marco Antonio Paredes Perez 2,b
https://orcid.org/0000-0001-5963-839X

Lorenzo Pasquel Loarte 1,c
https://orcid.org/0000-0002-7740-2329

Alexander Frank Pasquel Cajas 1,d
https://orcid.org/0000-0002-0603-0329

1 National University Hermilio Valdizan
2 National University of the Center of Peru
3 Pontifical Catholic University of Peru

a veronica.cajas64@gmail.com
b marcoparedes3973@gmail.com
c lorenzo_pasquel_loarte@hotmail.com
d apasquel@pucp.edu.pe

Received: 14/09/2019
Accepted: 10/01/2020

ABSTRACT

The study of engagement has become one of the main topics of research in academic contexts. The present investigation sought to determine the relationship between engagement and academic performance in university students. The sample population consisted of 298 students from the National University of Central Peru; the instrument used was the UWES scale on academic engagement; to evaluate performance, consolidated averages were used in three professional careers. The results indicate that there is no significant correlation between the variables studied, the correlation being significant at the 0.05 level (bilateral), with a p-value of 0.33. The Spearman correlation shows a non-significant relationship level, with a coefficient of 0.123. Students perform with levels of personal internal motivation; the main conclusion is that despite the adverse conditions and lack of motivation, they maintain a balanced academic performance.

Keywords: social skills, engagement, academic performance.

RESUMEN

El estudio del engagement se ha convertido en uno de los temas principales de investigación en contextos académicos. La presente investigación buscó determinar la relación entre engagement y el desempeño académico en estudiantes universitarios. La población-muestra esta conformada por 298 estudiantes de la Universidad Nacional del Centro del Perú; el instrumento utilizado fue la escala UWES sobre engagement académico; para evaluar el desempeño se emplearon los promedios consolidados en tres carreras profesionales. Los resultados indican que no existe correlación significativa entre las variables estudiadas, siendo la correlación significativa en el nivel 0.05 (bilateral), con un p-valor del 0.33. La correlación de Spearman muestra un nivel de relación no significativa, con un coeficiente de 0.123. Los estudiantes se desenvuelven con niveles de motivación interna personal; la principal conclusión es que pese a las condiciones adversas y desmotivación mantienen un desempeño académico equilibrado.

Palabras clave: habilidades sociales, engagement, desempeño académico.
INTRODUCTION

The man is a social organism; the communication is a necessary process because it allows the interaction, the survival, the growth and the learning from different points of view to live in harmony, sharing experiences, promoting social cohesion. Relating and developing social skills is essential in the current context to reach agreements, avoiding conflicts in interpersonal relationships. The social development starts in the first years (Navarro, 2003). The communication is an essential part of that life. When a need is expressed, the social skills are tested and help or hinder. If you can evaluate how the status of the communication is and if you can develop the interaction tools, you will be better, be more influential and have a greater facility to achieve your purposes.

The human is a social and collaborative entity. The way to they have to function is learned and, therefore, modifiable and trainable. It can vary over the years due to external influences or events that are experienced and certain tools can be learned that become part of yours (Rull, 2019). Some tools are unimportant and others are really important. The social skills, therefore, are directly related to well-being and they will help to be better and better.

The affective and social life represents dimensions far removed from the academic environment and the formal education (Riquelme and Munita, 2013). The student needs to develop in an adequate and safe environment, with quality of life that allows their personal development. The interpersonal relationships generated in their various contexts and in their school environment are agents that strengthen social skills (Guadalupe, 2015). Many students in their relationships project a fictitious identity to please others (De Onzoño, 2016). The social skills maximize the probability of obtaining external reinforcement (Gismero, 2010). This fact allow to the students greater ability to discern their behavior, controlling their emotions to express them appropriately, thus generating better quality in their lives (García, 2005).

According to Ng, Bartlett and Elliott (2018) the social skills are essential for the development and the maintaining to the successful relationships with peers, parents, teachers, employers, and new acquaintances. However, the university studies curriculum does not seem to show interest in the training of social skills in engagement in the future professionals (Herrera, et al., 2012) even though its importance for this population has been clearly demonstrated (Pades and Roso, 2013; McCarthy and Trace, 2014). A high level of social skills increases the healthier behaviors (Del Rosal, et al., 2012; Párraga, 2005) in the face of the social crisis that is worsening in the world’s societies; therefore, some researches shows concern for developing pro-social behaviors in university students (Caballo et al., 2014; Herrera, et al., 2012; León, et al., 2015; Herrera, et al., 2012; Mendo, et al., 2016; Rodríguez, et al., 2014), through the programs oriented to the cooperative learning (León, et al., 2016), evaluation of psychosocial symptoms (Wagner, et al., 2014) and adaptive interventions of students in new academic environments (Chávez, Contreras and Velázquez, 2013).

The Engagement is the human capacity to experience high levels of vigor, dedication, and absorption that a student experiences when carrying out their academic tasks; the students demonstrate intelligence, motivation and study habits in their academic performance (Borges, Hernández and González, 2012). There is considerable evidence from studies carried out regarding the factors that largely determine academic performance in students, the same ones that indicate that one of the most important variables is emotional-psychological satisfaction and are related to the final grade obtained (Guàrdia, et al., 2006). Likewise, studies show that the students with the highest levels of engagement are women, developing more activities within the university, at the same time they had better grades (Parada and Pérez, 2014).

The academic engagement has proven to be a fundamental factor in promoting the learning, the performance, the interest, the enjoyment and the psychological well-being in students. However, there are still certain conceptual fissures that must be deepened and clarified (Medrano, Moretti and Ortiz, 2015). Some authors refer that the definition of this term still requires a lot of debate and understanding, therefore the detailed description of its characteristics is important, in order to nurture the state of the art of said variable (Compagnucci, Cardós, Denegri, & Barboza, 2002). The research related to the association between the engagement and the knowledge assessment in students should be further deepened.
The engagement variable is studied more within the business context, therefore, within academic circles; its level of incidence is lower, as there is no multiplicity of studies in these settings. For this reason, this research seeks to establish the relationship between the engagement and the academic performance in students from the National University of the Center.

THEORETICAL FRAMEWORK

Social skills

The Social skills involve processes of social adaptation with empathy abilities, adequate impulse control, cooperative work, reasoning, among others (Morales, Benites and Agustín, 2013); They allow people to adapt to various social situations by generating cognitive patterns in this interaction (Zavala, Valadez, & Vargas, 2008). It is important to show these skills to achieve adequate adaptation and coexistence in various settings (Betancourth, Zambrano, Ceballos, Benavides, and Villota, 2017).

An important aspect is that these skills are learned as interactions with the environment are established; therefore, they can be modified and developed since they do not represent an immovable construct in the personality structure (Rovira, 2018). The Neuroscience research indicates that they activate brain structures that allow a better understanding of the feelings of the other, favoring social interaction (Cacioppo, Cacioppo, & Cole, 2013). Basically, they seek to teach the individual how to carry out the most beneficial behavior for his interests without being harmed in the short or long term; therefore, they maintain a close relationship with life skills, since they contain similar skills to develop (Patricio, Maia, & Bezerra, 2015).

Engagement

This term arises from physical, cognitive and emotional manifestations expressed by a worker in the development of his obligations (Kahn, 2018). The engaged subject is energetic, effective in the entrusted work, with high energy, enthusiastic, shares his knowledge acting in a committed way, with fullness and self-realization (…). In addition to the indicated qualities, it presents various categories: energy-vitality, involvement-commitment and effectiveness at work (Ruiz, 2017). It implies feelings of fulfillment, dedication and dedication for the occupations, even in the midst of adversity the commitment and tenacity for the occupations are maintained (Maury, Martínez and González, 2016).

The engagement is characterized by the Vigor, Dedication and Absorption in the work. The Vigor is linked to high levels of energy, resilience and high effort in activities even when obstacles appear along the way. The dedication supposes a high labor implication, feelings of meaning, enthusiasm, inspiration, pride and challenge for the work done. The Absorption is the mental state that occurs when one is totally concentrated on work; it is experienced that time “flies by”, accompanied by strong doses of enjoyment and pleasure (Pena and Extremera, 2012).

The Engagement or commitment is based in the positive psychology, and has been studied in the academic context, where it has been defined as an affective, positivistic condition (García, Labajos and Fernández, 2015) and motivational linked to the student area (Macarena, Aja and Plaza, 2018; Montoya and Moreno, 2012). The students maintain a psychological state of well-being, dedication and effort before studies (Caballero, Hederich & García, 2015), show high performance, being persevering, participatory and committed to their academic aspirations (Medrano, Moretti & Ortiz, 2015), with the ability to adapt to their teachers, classmates and the general environment.

At the university level, it is usually demonstrated in intellectual, participative students who maintain clear objectives in their lives and who are actively involved in their career (McInnis et al., 2000). In this context, the academic engagement combines performance and a favorable level of integration in the university (Horstmanshof & Zimitat, 2007); the students show traits of self-efficacy, academic satisfaction and permanence in studies (Schaufeli et al., 2002; Bresó, Llorens, & Salanova, 2005, Shih, 2012); as well as the interest and the enjoyment in their learning, which has a favorable impact on the results of the evaluations, benefiting learning in this stage (Mih and Mih, 2013; Martin, 2008).

According to Portalanza, Grueso and Duque (2017), they point out that the engagement has a behavioral and psychological component. The first serve to guide to the students to seek advice from their teacher, uses hours outside of class for their academic activities and develops
meaningful learning. These behaviors demonstrate responsibilities that go beyond the scope of the university classroom (Horstmanshof and Zimitat, 2007; Hughes, et al., 2009). The psychological component focuses on affective responses oriented to learning. It is reflected in feelings of self-worth for the achievements achieved and also negative as a result of the fatigue experienced by the student (Medrano, Moretti and Ortiz, 2015). It also has an inter-individual nature, since this state is integrated and shared with group members, giving rise to collective engagement (Salanova and Schaufeli, 2009).

**Academic performance**

The University is the entity to train and transform, allowing to the students to acquire skills that develop analytical and critical knowledge (López, 2016). The Academic performance refers to the performance acquired in the school or university environment. It represents a measure of the student’s abilities, which expresses what he has learned throughout the training process (Willcox, 2011). It can also be defined as the level of knowledge demonstrated in an area compared to the norm of age and academic level (Jiménez, 2000), being the product between what was obtained in the school and the effort used to obtain it, expressed in a qualification (Lamas, 2015). It is a current phenomenon, because it determines the quality and quantity of learnings (Ruiz, 2002), and multidimensional, since it integrates various components: cognitive-affective-behavioral-institutional (Fernández, 2010), where skills are highlighted linked to volitional, affective and emotional aspects to respond to institutional objectives (Reyes, 2003; Díaz, 1995).

The Academic performance includes several components: learning processes, cognitive aspects, educational structure, these showing variations according to the organic and environmental conditions that determine skills and experiences. It is influenced by the intellectual level, personality, motivation, study habits, interests and self-esteem (Martí, 2003). It is a product conditioned by multiple variables (Nieto, 2008). According López (2009), cited by Ramón (2013) indicates as factors that influence in the performance the intellectual aspects (abilities, aptitudes and intelligence); psychic aspects, such as personality, motivation, self-concept, adaptation, since the school failures occur more frequently in students living with emotional and affective problems; socio-environmental aspect: represented by the influence exerted by the environmental conditions surrounding the student (family, neighborhood and social stratum) and pedagogical aspect that includes learning problems.

Several authors support the need to use multiple assessment strategies to determine the level of student performance (Schwartz, 1992; Schwartz, 1994; Hull, 1995; Collins and Gamble, 1996; Schuwirth and Van der Vleuten, 2004; Carr, 2004; Van der Vleuten and Schuwirth, 2005). Likewise, the study plans and the programs must clearly specify what learning must be achieved and how to evaluate it so that the evaluation is useful (Wass, 2001). However, what is truly important is the defining the educational objectives to which we aspire, analyzing the contexts and difficulties to generate proposals and mechanisms of action that allow progress to be made on this path.

**METHODOLOGY**

The research was carried out in the Faculty of Applied Sciences to the National University of the Center of Peru with students from the professional careers of business administration, hotel administration and tourism and agro-industrial engineering, in Pomachaca Tarma, Junín, Peru-2018.

The study was of a correlational level, non-experimental, transectional design, which was operationalized through the UWES internationally validated scale of academic engagement (Medrano, Moretti and Ortiz, 2015), the items of each factor present a high homogeneity, thus observing a optimal internal consistency (α values between, 80 and, 90), with a high ratio (higher than ar =, 65) between its components (Salanova et al., 2000). The questionnaire evaluated the variable academic engagement in the dimensions: vigor, dedication and absorption; for the evaluation of academic performance, the consolidated averages of three professional careers were considered. It was aimed at all the students, made up of a sample population of 298 students from the three professional careers of the Faculty of Applied Sciences, considered according to the enrollment forms.

To check the association of variables, the Spearman correlation coefficient was used for categorical qualitative non-parametric samples, the
significance level was to the 5%, and the confidence level was to the 95%. The Neamer statistical test, non-parametric and for the inferential analysis of the Chi-Square results was used. The data was processed in the SPSS 22 statistical package.

The students were convened and informed by the researchers obtaining the pertinent permits. The process took into consideration the national and international ethical considerations. It was approved by the University’s Ethics Committee.

RESULTS AND DISCUSSION

The most important finding is that there is no significant correlation between the engagement and the academic performance, from which it is contrasted with the empirical evidence, and there is an appropriate level of motivation and responsibility in the students of the Faculty regarding their studies.

The intention was to demonstrate the existence of a significant correlation between social engagement skills and academic performance in students of the Faculty of Applied Sciences, a p-value of 0.33 was obtained, therefore, it is inferred that there is no significant correlation between the engagement and the academic performance, likewise, the correlation coefficient 0.123 indicates a low level of association between these variables.

In the Agro industrial Engineering Professional School, the best academic performance was obtained by the students of the IX semester with 13.19 on average, followed by the VII semester with 12.36, V semester with 11.90 and the III semester with 10.40; likewise all the students (82) had an average of 12.51. In Hotel Management and Tourism, the best academic performance was in the V semester with 14.46 on average, followed by the IX semester with 14.06, VII semester with 13.39 and the III semester with 13.32; likewise all the students (78) have an average of 13.87. In Business Administration, the best performance was in the IX semester with 14.67 on average, followed by the V semester with 13.68, III semester with 13.58 and the II semester with 13.32, also all students (138) have an average of 13.79.

<table>
<thead>
<tr>
<th>Table 1. Academic performance of students from the Faculty of Applied Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades average</td>
</tr>
<tr>
<td>Valid N (by list)</td>
</tr>
</tbody>
</table>

From the 298 students of the Faculty of Applied Sciences, of the 3 professional careers under study the minimum grade is 2.30 and the maximum is 17.41, with an average of 13.46 and standard deviation of 1.94 (Table 1).

The Academic performance implies reaching a certain level of knowledge, which is measured in an evaluation that considers a grade as a criterion (Solano, 2015). The findings of Mizola (2005), show that the effort put in by the university student, his previous knowledge and competences are factors that affect academic performance, also considering the presence of internal institutional factors typical of universities (Agudelo, Martinez & Ortiz, 2013).

When the performance is below the expected, it generates dissatisfaction in the students, and these results may be linked to didactic methodologies (Chipana, 2012; Lamas, 2015). On the other hand, students with high academic performance develop higher probabilities to stay in university (Houn and Sankey, 2000; Potts, Schultz and Foust, 2003; Krause, et al., 2005). To leave the studies generates effects not only in the development of learning, but in some components of social skills such as motivation and personal confidence, impacting on the low achievement of better learning (Reyes, 2007).

<table>
<thead>
<tr>
<th>Table 2. Social skills in Engagement in students of the Faculty of Applied Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level</td>
</tr>
<tr>
<td>Social skills in engagement</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

The 52.7% of university students (157) have a high
level of Social Skills in academic engagement, demonstrating vigor, dedication and absorption, which show a high effort and persistence, accompanied by a sense and enthusiasm for the activities they carry out. Similar results reflect recent research (Dávila, Retamozo and Vásquez, 2015; Zúñiga, 2017; Arroyo, 2018), showing that these influence the way of dealing with situations that arise in personal and academic life, being a fundamental pillar in any scenario.

Table 3. 
Kolmogorov-Smirnov Test of Social Skills in Engagement and Academic Performance

<table>
<thead>
<tr>
<th>Kolmogorov-Smirnov Test</th>
<th>Shapiro-Wilk Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sig.</td>
<td>Sig.</td>
</tr>
<tr>
<td>Social skills in Engagement and academic performance</td>
<td>.289 298 0.000</td>
</tr>
<tr>
<td>Grade point average in the Faculty of Applied Sciences</td>
<td>.368 298 0.000</td>
</tr>
</tbody>
</table>

The data allow us to affirm that we are dealing with a non-parametric sample of the categorical variables.

Table 4. 
Spearman Correlation Vigor and Academic Performance

<table>
<thead>
<tr>
<th>Variable dimension</th>
<th>p-value</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vigor Dimension of Engagement and Academic Performance</td>
<td>0.29</td>
<td>.127</td>
</tr>
</tbody>
</table>

In the vigor dimension of engagement, students show high levels of energy and resilience, willingness to dedicate efforts, not fatigue easily and persistence in the face of difficulties. The academic vigor and performance are not significantly correlated, having obtained a p-value of 0.29 and a Spearman correlation coefficient of .127, (Table 4), contradicting what was established by Parra (2011), who states that satisfaction is conceptualized as a dimension of engagement, favoring student performance and better coping with stressful situations.

About the dedication dimension of engagement, the students find meaning in the activities they carry out, accompanied by enthusiasm and pride. The dedication and the academic performance also found no significant correlation with a p-value of 0.115 and a Spearman correlation coefficient of 0.91, (Table 5) refuting what was expressed by Gonzales, Caso, Díaz, and López (2012) who point out that the performance Academic is primarily about challenge, achievement, and academic results.

Table 5. 
Spearman Correlation Dedication and Academic Performance

<table>
<thead>
<tr>
<th>Variable dimension</th>
<th>p-value</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement Dedication Dimension and Academic Performance</td>
<td>0.115</td>
<td>.091</td>
</tr>
</tbody>
</table>

In the dimension of engagement absorption and academic performance, a p-value of 0.38 and a Spearman correlation coefficient of .120 (Table 6) were obtained, with no significant correlation, disagreeing with Cominetti and Ruiz (1997) cited by Edel (2003) who refer that the expectations of the direct environment of the student allow to bring out the positive and negative paradigms that accompany the student and that will be decisive in their academic performance and achievements.

Table 6. 
Spearman correlation Absorption and academic performance

<table>
<thead>
<tr>
<th>Variable /Dimension</th>
<th>p-value</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement Absorption Dimension and Academic Performance</td>
<td>0.38</td>
<td>.120</td>
</tr>
</tbody>
</table>

In the dimension of engagement absorption and academic performance, a p-value of 0.33 and a Spearman correlation coefficient of 0.123* (Table 7), it is concluded that there is no significant correlation between social engagement skills and academic performance in students of the Faculty of Applied Sciences (Table 7).

Table 7. 
Spearman’s correlation Social skills in engagement and academic performance

<table>
<thead>
<tr>
<th>Variables</th>
<th>p-value</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social skills in Engagement and academic performance</td>
<td>0.33</td>
<td>0.123*</td>
</tr>
</tbody>
</table>

* The correlation is significant at the 0.05 level (bilateral).
Regarding the main purpose of the research, it is stated that social skills in engagement do not have a significant relationship with academic performance, which shows that students present adequate levels of vigor, dedication and absorption, showing interest in learning, studying and research, reaffirming what expressed by Fenollar, Román and Cuestas (2007) who conclude that there is no significant relationship between expected results and the average of the grades.

At the same time, the results refute what was reported by Harackiewicz, et al. (2000), who found that the combination of both variables can have beneficial consequences within the educational context, which is not conclusive in this study, but it is appreciated that academic engagement is a neuralgic element to promote positive psychological aspects in learning of the students, coinciding with Martin (2008) and Salanova and Schaufeli (2009).

The researches developed on social skills and academic performances have revealed inconsistent results that allow us to reflect that there is a causal relationship between these variables (Lewis and Taylor, 2007). Such is the case of our findings where it is evident that there is no such relationship, as in the study by Ortiz, et al. (2018) where an inverse negative correlation without a statistically significant association was determined (r = 0.073, p <0.135).

Other authors conclude that the high levels of learning are linked to advanced social skills (Kholin et al., 2016; García, 2015). There is also a strong and direct association between self-esteem and the academic performance of university students (Acuña, 2013; Nicho, 2013); However, other researches indicate the opposite (Chilca, 2017). These criteria are shared, since the findings show adequate social skills in student engagement; however, if they increase, their academic performance does not necessarily increase in the same proportion, responding to causal phenomena. This criterion is evidenced in multiple researches (Cañabate et al., 2018; Rytkönen et al., 2012). Additionally, although some researchers suggest that engagement can be facilitated by the relationship with teachers and the school climate (Martin, 2008; Mih and Mih, 2013, Shih, 2012), there are not many studies carried out in this context that supports these claims.

It is appropriate to cite Mizola’s approach (2005) about the need to measure academic performance and define strategies for its improvement by reviewing the elements that influence it, considering that performance is a variable that depends on various factors. Based on the above, Edel (2003) mentioned four aspects that intervene in the academic performance: supplies, school motivation, student self-control and social skills. These aspects are considered to require assessment in university contexts to determine their impact on academic performance.

The Social skills in engagement are necessary for the university student to develop in this context, but they are not essential to obtain adequate academic performance. The measurements made in this research did not strictly control the factors that could be present in the studied correlation; therefore, researches must be carried out that have to go to a next level in order to explain the origin of the weak relationship of the variables studied and their possible causes.

With this research, new possibilities are opened for the research of the academic engagement, along with other variables linked to the university context and the personal processes of the students. This will allow deepening the knowledge related to these topics.

CONCLUSIONS

This research has shown that there is no significant relationship between social engagement skills and academic performance, so it could be expected that in the future, suddenly and unexpectedly, the students lose interest in their studies and consequently lower their grades cyclically or leave their studies.

The students show adequate social engagement skills in the vigor dimension, performing with high levels of energy and mental resistance; however, these behaviors are not related to academic performance. The Engagement in the dedication and absorption dimensions are not related to the academic performance. The enthusiasm for academic challenges as well as concentration and satisfaction with these activities do not determine learning achievement.

To achieve an optimal academic behavior requires the student interest and active commitment, but...
adverse situations may arise that do not necessarily affect the performance. Additionally, the presence of multiple protective factors can contribute to an adequate performance and to the psychological well-being. Even when the academic results are not as expected; it is important to value and feel emotionally committed to studies, showing vigor, energy, dedication, enthusiasm and concentration; This will allow for a better disposition to learning, preventing maladaptive behaviors that increase the student’s vulnerability.

Acknowledgement

To the members of the Faculty of Applied Sciences of the National University of the Center, affiliate Tarma, Junin. In the same way, we want to thank to the members of the Post Degree School of the National University Hermilio Valdizán for their unconditional support in the development of the research.

Conflict of interest

The authors declare that they have no conflicts of interest, in relation to the information, related to engagement and academic performance.

BIBLIOGRAPHIC REFERENCES


Integrating psychology with interpersonal communication skills in undergraduate nursing education: Addressing the challenges. 


Nieto, S. (2008). Hacia una teoría sobre el rendimiento académico en enseñanza
primaria a partir de la investigación empírica: datos preliminares. *Teoría de la Educación*, 20, 249-274.


Pena, M., & Extremera, N. (2012). Inteligencia emocional percibida en el profesorado de Primaria y su relación con los niveles de burnout e ilusión por el trabajo (engagement). *Revista de Educación* (359), Sep-Dic. 604-627


Zúñiga F. (2017). Nivel de habilidades sociales en el adolescente de 1ro de secundaria de la Institución Educativa Franz Tomayo Solares 3096 Comas. (Tesis de grado) Universidad César Vallejo. En http://repositorio.ucv.edu.pe/bitstream/handle/UCV/10916/Zu%e3%b1iga VA.pdf?sequence=1&isAllowed=y