School Wellbeing, Learning Strategies and Expected Learning in College Students

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Abstract

The scientific community recognizes the relevance that motivational elements and students planned actions have in the process of obtaining the expected learning, however, there is no research focused on exploring the association between those variables and the learning outcomes in college students. Considering this, the aim of this research was to describe the association between school wellbeing, learning strategies and expected learning in college students. A study with a descriptive and transversal design was developed. Descriptive analysis was applied using frequencies and distribution measurements. The comparisons in the learning strategies and the school wellbeing of the students were developed by grade, using one-way analysis of variance (ANOVA). The association between the study variables was established using χ². The results indicated that there is a statistically significant association between school wellbeing and expected learning; also, we found statistically significant differences between the variables when grouping by school grade according to the student’s semester, favoring the first semester students. We conclude that the school wellbeing is an element of the school life closely associated with the achievement of the expected learning in the students, being necessary to focus the attention of the future research on the role that the environment and the motivational aspects of the school interactions might be playing in the students’ academic development.

Subject Areas

Education


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School Wellbeing, Learning Strategies, Expected Learning, College Students

1. Introduction

The interest for the study techniques or strategies used by the students at the basic and superior level started in the 60 decades, acquiring a greater interest in the 80 [1] when it was identified that the educational professionals had few resources to favor the students’ learning process.

During 1980 and 1999, a series of educational researches showed that it is necessary that the students have knowledge of different study techniques, however, it is not enough for them to use them knowingly in different situations and learning contexts, considering there are internal and external factors associated between each other, where variables such as personality traits, cognitive conditions inherited and social environment, play an important role [2]. However, these procedures are not acquired in an isolated manner, but in a close interaction with the curriculum contents [3]. Although, it is important to point out that when the student educational level gets higher, there is an increase in the interaction between its behavior, performance and the degree of agreement between the student’s perception of the school curriculum activities and the relevance provided to each aspect involved in the teaching-learning process [4].

The college students’ behavior is characterized by the perceptions they have of themselves and the academic activities they are going to perform, the attitudes, interests, expectations and mental representations of the type of goals that the student pretends to reach in the educational context. All the factors mentioned previously, are influenced by contextual variables of indisputable importance in the learning-teaching process [4].

Based on the previously mentioned, we can infer that the students should know when and why is necessary to use specific learning techniques, thus, when the teaching-learning process is developed, it would be important to teach procedures that have into consideration the previous knowledge of the students. As a consequence of the previous reflections, the term learning strategies were developed, being defined as a process of decision making, aware and intentional, in which the students choose and recover in a coordinated interaction, the knowledge necessary to meet the expectation or aims involved in the educational situation in which the learning activity is produced [5].

The wellbeing concept has its origin in the organizational psychology, defined as engagement, a concept used widely in work context to investigate the protection and risks existing in the psychosocial factors present in the work environment. In this contexts, the concept work engagement is developed, which can be translated into work wellbeing, however, currently we do not have an adaption to school contexts of the existing measurements instruments for the evaluation of work engagement, modifying the concept into school engagement. Palací [6]
offers the definition of the school wellbeing concept (school engagement) as an affective positive state, relatively persistent, characterized by the strength, dedication and absorption or concentration in the school activities.

In other words, when a person performs any productive activity and a feeling of being competent emerges, generating new demands, aspirations and higher dedication to the task, we can talk about the existence of a high level of wellbeing or engagement. Thus, it is possible to identify a link between the self-efficacy and the motivation; in academic contexts this link provides the students with a self-motivator mechanism that emerge as consequence from the observation of the own competences. Considering this, when the self-evaluation about the competences of the students in the academic context and the self-efficacy concept are positive, it is possible to say that those students have a high level of school wellbeing or school engagement, as the concept was originally established.

There are at least two elements that intervene in the accomplishment of the expected learning in the students, on one side, the school wellbeing is strongly related to the self-efficacy feeling and the motivation developed in the students with the purpose of learning in the school context or generate their own learning processes outside the school. The other factor that plays an important role in the expected learning is the learning strategies that the students have. Moreira [7] points out that for the significant learning to emerge, it is essential that the students have the explicit intention of establishing associations between their cognitive structures and the new information, in order to generate modifications on it, which relates to the acquisition of information that is going to constitute as a significant learning. A process will be more efficient and effective if the students have a repertoire of techniques to design effective learning strategies that allow them to learn the contents reviewed. Thus, it is necessary to evaluate the learning strategies that the students use and the level of wellbeing that they have, considering the strong motivational component that this concept implies in the learning processes.

Even when there is a relative homogeneity in the teaching styles of the professors at the college level, in which this study was developed, we found a discrepancy in the results obtained by the students in different evaluations, both internal and external, thus, it is important to investigate about the learning strategies and wellbeing of these population. Despite the relevance that the wellbeing and the learning strategies have in the accomplishment of the expected learning, we were not able to find research developed in the college level where the association between those variables was studied. Considering this, the aim of this study was to describe the association between school wellbeing, learning strategies and expected learning in college students.

2. Methodology
2.1. Participants

The sample was selected using a census technique, including all the students...
present at the time of the data collection. The participants were students enrolled regularly in one Public College Institution. The sample included 249 students that were attending the school in different semesters (first, third and fifth).

2.2. Research Setting

The surveys were administered in one public college Institution in Guadalajara, Mexico. The participants answer the surveys during school hours and in the school facilities.

2.3. Instruments

2.3.1. Learning Strategies

We used the Scale for Learning Strategies (Escala de Estrategias de Aprendizaje, ACRA), in the shorten version [8] validated with college population, published in a self-report version in Spanish by Román and Gallego [9]. This scale is based in the cognitive principles of the information processing, allowing to quantitatively evaluate the different learning strategies used by the students during the study activity, and its different phases, such as acquisition, codification, recuperation or information support [10]. The scale includes three dimensions, thirteen factors and 44 items whit five answer options going from never to almost always. The first dimension is cognitive strategies and learning control, it includes 25 items comprehending the following factors: a) selection and organization; b) highlighting; c) Conscience about the functionality of the strategies; d) Elaboration strategies; e) Planning and answer control in evaluation situations; and, f) Repetition and re-reading. The second dimension, called Support to learning strategies, includes 14 items divided in the following factors: a) Intrinsic motivation; b) Anxiety control; c) Contradictory conditions; d) Social support; and, e) Schedule and work plan. The final dimension, study habits, has five items, involving two factors: a) Comprehension; and b) Study habits. The coefficient alpha of the scale is 0.90, considered satisfactory to be use in this study.

2.3.2. Scholar Wellbeing

The scholar wellbeing was evaluated using the Wellbeing in Academic Context Survey UWES-S 17 [11]. The survey is a self-report with 17 items and seven answer options that go from never to everyday. The instrument has a Cronbach’s alpha of 0.93, constituted by three dimensions:

1) Vigor: evaluates the energy and mental resistance while attending a school, the desire of putting an effort, time and persistence in the school activities, even when obstacles and barriers appear, including six items.

2) Dedication: evaluates the sense of significance, enthusiasm, inspiration, pride and challenge towards the education process, including six items.

3) Absorption: evaluates the frequency in which the students finds himself into a total immersion to the task state, in which the individual is incapable to separate himself from the academic work, even when a long time has elapsed, including five items.
2.3.3. Expected Learning
The level of expected learning reached by the participants was determined by the results, obtained in their last departmental exam, which is taken at the end of the semester. The institution teachers developed the exam, who designed a series of questions with multiple response options that reflected the knowledge that the students were supposed to have at the time.

2.4. Procedure
The data was collected using a self-report system. During the school hours, the main researcher and one person from the auxiliary staff, both trained in the application of this type of test, attended the school classrooms of the first, third and fifth semester students. First, we invited the students to participate, explaining them the aim and procedure for the research. After this, a package with the surveys was delivered to each student, asking them to read the instructions as they were answering the instruments. There was no time restriction and the researcher was available all the time in the classrooms to answer doubts and watch over the application conditions. When the participants finished, the package returned to the researcher, proceeding to verify that the student had answer all the surveys.

We proceeded to develop a database in the SPSS, version 21.0 program. All the information collected was validated checking that the student answered the surveys fully; also, the database was validated through the random checking of the data against the printed surveys.

2.5. Data Analysis
On a first stage, descriptive statistics were calculated. The comparisons between the learning strategies and the school wellbeing was developed using one-way analysis of variance (ANOVA), as well as the mean comparison. Finally, the analysis of the association between the study variable was applied using $\chi^2$.

2.6. Ethical Considerations
Previously to the data collection we requested the voluntary participation of the students, and those that accepted to participate in the research, signed an inform consent letter.

3. Results
The sample included 249 students, with a mean age of 23 (ED 5) years, having a minimum of 18 and a maximum of 51. About gender, 60% of the participants were female and 40% male. Most of the students are single (84%), while 13% were married, and the rest divorced, separated or living in free union. Only 16% of the participants referred to have children. Regarding their participation in a remunerated activity besides the school, 52% of the participants are currently involved in a remunerated activity (Table 1).

We compared the learning strategies according to the school semester of the
students, the results are presented in Table 2, where we can observe differences between the first semester students and the rest of the groups, not like this between the third and fifth students. Those differences were in favor of the first semester students.

We applied the same analysis to the results obtained from the Scholar Wellbeing survey. The differences found were between the first semester students and the participants from other semester, these differences were observed in all the dimensions and the total score of the instrument (Table 3).

For the analysis of the association between the expected learning, the scholar wellbeing and the learning strategies, we applied $\chi^2$, considering significant $p \leq 0.05$. The results obtained indicate a significant association in all the dimensions and the total score of the UWES-S17 and the expected learning, meanwhile, there was no significant association found with any of the ACRA dimensions (Table 4).

**Table 1.** Sociodemographic data of the participants.

<table>
<thead>
<tr>
<th>Variable</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>150</td>
<td>60</td>
</tr>
<tr>
<td>Male</td>
<td>99</td>
<td>40</td>
</tr>
<tr>
<td>Civil status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>207</td>
<td>83</td>
</tr>
<tr>
<td>Married</td>
<td>31</td>
<td>12</td>
</tr>
<tr>
<td>Divorced or separated</td>
<td>6</td>
<td>2.5</td>
</tr>
<tr>
<td>Free union</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>No data available</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>129</td>
<td>52</td>
</tr>
<tr>
<td>No</td>
<td>119</td>
<td>47.5</td>
</tr>
<tr>
<td>No data available</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Have children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Si</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td>No</td>
<td>205</td>
<td>82</td>
</tr>
<tr>
<td>No data available</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Min.</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Max.</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>Mean.</td>
<td>22.67</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>5.448</td>
<td></td>
</tr>
</tbody>
</table>

Note: Sociodemographic data card designed by researcher. Instrument: survey. N = 249.

**Table 2.** Statistically significant differences in learning strategies by school semester.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>1˚ VS 3˚</th>
<th>1˚ VS 5˚</th>
<th>3˚ VS 5˚</th>
<th>F</th>
<th>P</th>
<th>F</th>
<th>P</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive strategies and learning control</td>
<td>15.79</td>
<td>0.00</td>
<td>7.76</td>
<td>0.00</td>
<td>1.12</td>
<td>0.29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning support strategies</td>
<td>10.13</td>
<td>0.00</td>
<td>9.48</td>
<td>0.00</td>
<td>0.02</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study habits</td>
<td>5.21</td>
<td>0.02</td>
<td>1.41</td>
<td>0.23</td>
<td>1.06</td>
<td>0.30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total ACRA</td>
<td>16.19</td>
<td>0.00</td>
<td>9.86</td>
<td>0.00</td>
<td>0.73</td>
<td>0.39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Instrument used Learning Strategies Scale (Escala de Estrategias de Aprendizaje ACRA) shorten versión (De la Fuente, 2003). N = 249.
Table 3. Statistically significant differences in school wellbeing by school semester.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>1˚ VS 3˚</th>
<th>1˚ VS 5˚</th>
<th>3˚ VS 5˚</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>P</td>
<td>F</td>
<td>P</td>
</tr>
<tr>
<td>Vigor</td>
<td>36.58</td>
<td>0.00</td>
<td>24.07</td>
</tr>
<tr>
<td>Dedication</td>
<td>51.81</td>
<td>0.00</td>
<td>40.72</td>
</tr>
<tr>
<td>Absorption</td>
<td>26.21</td>
<td>0.00</td>
<td>7.15</td>
</tr>
<tr>
<td>UWES total</td>
<td>48.39</td>
<td>0.00</td>
<td>33.13</td>
</tr>
</tbody>
</table>

Note: Instrument used Wellbeing in Academic Context Survey UWES-S 17 (Schaufeli, 2003) N = 249.

Table 4. Association between the expected learning and the ACRA and UWES-S17 dimensions.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Chi²</th>
<th>P</th>
<th>OR</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACRA DI</td>
<td>0.35</td>
<td>0.55</td>
<td>0.83</td>
<td>0.45 - 1.51</td>
</tr>
<tr>
<td>ACRA DII</td>
<td>3.43</td>
<td>0.06</td>
<td>0.56</td>
<td>0.30 - 1.03</td>
</tr>
<tr>
<td>ACRA DIII</td>
<td>0.10</td>
<td>0.74</td>
<td>0.90</td>
<td>0.49 - 1.65</td>
</tr>
<tr>
<td>ACRA TOTAL</td>
<td>3.07</td>
<td>0.07</td>
<td>0.58</td>
<td>0.31 - 1.06</td>
</tr>
<tr>
<td>UWES VIGOR</td>
<td>7.14</td>
<td>0.00</td>
<td>0.43</td>
<td>0.23 - 0.80</td>
</tr>
<tr>
<td>UWES DEDICATION</td>
<td>6.93</td>
<td>0.00</td>
<td>0.43</td>
<td>0.23 - 0.81</td>
</tr>
<tr>
<td>UWES ABSORPTION</td>
<td>3.81</td>
<td>0.05</td>
<td>0.54</td>
<td>0.29 - 1.00</td>
</tr>
<tr>
<td>UWES TOTAL</td>
<td>6.42</td>
<td>0.01</td>
<td>0.45</td>
<td>0.24 - 0.84</td>
</tr>
</tbody>
</table>

Note: Instruments used were the Learning Strategies Scala (Escala de Estrategias de Aprendizaje ACRA) shorten versión of De la Fuente, 2003, and the Wellbeing in Academic Context Survey UWES-S 17 (Schaufeli, 2003) N = 249.

4. Discussion

The aim of this research was to describe the association between school wellbeing, learning strategies and expected learning in college students. The results obtained indicate that the school wellbeing is an element associated with the accomplishment of the expected learning in the students at this educational level, while the learning strategies did not present any association.

Regarding the Scholar wellbeing, it is important to point out that there are few studies about the engagement or wellbeing developed in the school environment, considering that this construct originated in the business organization aiming to identify the level of work engagement, needing to adapt this conceptualization to the school topic [11].

Moving to talk about the learning strategies, the results obtained from this research indicate that the cognitive and learning control strategies are the most frequently used by the participants. This findings are consistent with other studies developed to identify the learning strategies involved in the English learning process, in which they suggested that the communication strategies are the most commonly used by the college students in this process, among which we can find the cognitive and metacognitive, memory, affective and compensation strategies. However, in our research we also found that the participants also use frequently
strategies such as learning support and study habits.

Some authors mention that there is a higher use of learning strategies and a deeper process of information in the higher grade students, whom tend to have better academic achievements [2] [4] [12] [13] [14]. This affirmation disagrees with the findings of this research in which we found that the first semester students scored higher in the measurement instruments used, this results lead us to consider that is necessary to review in detail the data collection processes applied in the different researches developed about this topic, as well as the instruments used. Besides, it is important to establish longitudinal studies that can identify specific strategies in the students before, during and after the development of their higher education.

According to different authors, it is possible to affirm that the learning style, the academic confidence and satisfaction are important factors in the college students’ academic achievements [15] [16]. However, in the results found in this study the expected learning only has a statistically significant association with the school wellbeing and not with the learning strategies. Differing with studies such as the developed in Buenos Aires, in which reported that the students with high academic achievements used different learning strategies more frequently, finding an association between those variables, nevertheless, we agree with the authors about the positive association among the learning strategies and the motivational factors [17].

This result can be explained through the finding of an association between the learning strategies and the school wellbeing perception, considering that the students that presented high levels of expected learning and adequate learning strategies, tended to have a more satisfactory perception of the educational context and were able to establish the importance of each of its aspects, favoring the generation of positive school expectations. Cabrera and Galán [4] had already emphasize about this association, when they studied the self-concepts of the students with high and low academic performance, and its association with the perception of the educational context, finding similar results to the observed in this research. It is important to note that those students that feel good at school and have better learning strategies can be more prone to reach academic success reflected in the achievement of the expected learning, having more personal and professional satisfaction, which creates a virtuous circle.

Rosario, Pereira, Högemann, Nunes, Figueiredo, Nuñez, et al. [18] mentioned there are variables such as the motivation and intelligence, that can be related to the academic performance, so, it would be important to develop future research that includes this type of variables in order to determine the role that might be playing the accomplishment of the expected learning. Several authors point out that variables from a motivational nature, should be included in the explanation of the difference existing in the college students expected learning, considering these variables could influence the level of commitment to school activities, even leaving aside the role that intelligence might be playing [19] [20] [21].

The previously mentioned agrees with the results obtained in this research, in
which we can observe an association between the expected learning and the school wellbeing variable, which includes a strong emotional and motivational load. Additionally, other authors report a correlation between the psychological wellbeing and the teaching practices with motivational effects oriented to the learning. In this association, the variables have a conceptual content that relates to emotional and motivational dimensions, giving a significant relevance to these elements in the learning process, which can explain the association found in this research with the school wellbeing and not with the cognitive variable, represented in the learning strategies [22].

Likewise, other important finding from this research was that the students from the first semester scored higher, that the rest of the students, in the learning strategies and school wellbeing. One possible explanation to this result rest in the proposal of other authors who mentioned that the motivational aspects related with the goals that the students establish in their learning process, which allow them to guide their interest in specific information and to gather the strategies needed to appropriate it in their knowledge baggage [23]. Considering this, we could say that the students from the first semester have higher expectations related to the learning they expect to gather, which might diminish as the students move forward to higher semesters, showing an increase at the last semester, maybe because it includes activities in real work situations, which results interesting for them.

Flores-Hernández, Sánchez-Mendiola and Martínez-Gonzalez [22], point out that the teacher performance is a determinant factor for the academic achievements of the students, however, it is necessary to deepen in the factors that integrate such performance in future research, in order to establish if the teacher activities influence the cognitive or motivational aspects in the students.

It would be important to remember there are other factors that relate positively to the academic achievement of the students that also need to be taken into consideration in future research, such as the self-efficacy, self-regulation and spirituality. These variables are conceptually close to the school wellbeing, factor that presented a high association to the expected learning.

Finally, regarding to the limitations of this study, we could say that one limitation is that the results are only applicable to college students from one institution, being necessary to develop future research that include more participants, from different college institutions and degrees, in order to be able to perform comparison. In addition, it would be important to develop studies under different methodological designs, in order to include longitudinal research that can provide important comparison data regarding the evolution of learning strategies, school wellbeing and expected learning during college. Other important suggestion would be to include other emotional variables that can provide information about the role they play in the accomplishment of the expected learning.

5. Conclusions

The association between the school wellbeing, learning strategies and expected
learning is an important topic in the educational context, because it refers to the importance that the environment and the students’ preparation to deal with the demands present in the school have in the accomplishment of the expected learning. It is noteworthy that the first semester students presented the higher use of learning strategies, having a decreasing tendency in the third semester students and an increase in the fifth ones. In addition, regarding the school wellbeing, it is noticeable that also the first semester students obtained the higher scores, presenting statistically significant difference between them and the rest of the students.

Talking about the association of the elements previously mentioned, the results indicated that the expected learning has a statistically significant association with the three dimensions and the total score of the School Wellbeing instrument, concluding that the students’ connectedness with the school and the academic activities is the factors that influence the academic achievements.

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References


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