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Artículos Científicos

Estilos de aprendizaje en los estudiantes de Educación Física y Ciencias del Deporte de la Universidad Autónoma de Querétaro

Learning styles in the students of Physical Education and Sports Science of the Universidad Autónoma de Querétaro

Estilos de aprendizagem em estudantes de Educação Física e Ciências do Esporte da Universidade Autônoma de Querétaro

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Resumen

Los estilos de aprendizaje son métodos que se emplean con el fin de organizar las cogniciones sobre el mundo para comprenderlo mejor. Un estilo no es una aptitud, sino una forma de pensar y una manera preferida de emplear las aptitudes que se poseen. Con estos antecedentes, Alonso y Honey refieren cuatro estilos básicos de aprendizaje: activo, reflexivo, teórico y pragmático. Explicado esto, el principal objetivo de este trabajo fue documentar el estilo de aprendizaje preferente en estudiantes de la licenciatura en Educación Física y Ciencias del Deporte de la Universidad Autónoma de Querétaro. El estudio fue no experimental, descriptivo-transversal, y se incluyó a la totalidad de estudiantes de la referida carrera. Para la recolección de datos se utilizó el *Cuestionario Honey-Alonso de estilos de aprendizaje* que consta de 20 reactivos para cada uno de los cuatro estilos de aprendizaje.

Se excluyeron de la investigación a estudiantes que no asistieron el día de la recolección de datos o que no aceptaron participar. Asimismo, se eliminaron los cuestionarios no respondidos en su totalidad. Para realizar el análisis estadístico descriptivo se utilizó el programa Statistical Package for the Social Sciences (versión 20) y se emplearon los algoritmos de Honey-Alonso para establecer el tipo de estilo predominante. Al momento de la aplicación del instrumento se explicó a los estudiantes los objetivos de la indagación y se solicitó su consentimiento verbal y su participación voluntaria. Se observó que el estilo de aprendizaje activo tuvo una preferencia entre alta y muy alta (62.75 %); sin embargo, la preferencia en el estilo reflexivo fue baja o muy baja (52.94 %). En relación con la preferencia para los estilos pragmático y teórico, esta fue moderada (55.56 % y 52.94 %, respectivamente). El estilo de aprendizaje que predominó fue el activo con 67.32 %, situación que soslaya el estilo de aprendizaje reflexivo que, según Honey y Alonso, es el preferente en carreras del área de humanidades.

Palabras clave: CHAEA, docencia, estilos de aprendizaje, estudiante universitario.

Abstract

Learning styles are methods that are used to organize cognitions about the world, to better understand it. A style is not an aptitude, but a way, but a way of thinking and preferred way of using the skill that are possessed. With this antecedents, Alonso and Honey refer four basic styles of learning: Active, Reflective, Theoretical and Pragmatic. Explained this, the main objective of this work was to document the style of preferential learning in students of Physical Education and Sports Science of the Universidad Autónoma de Querétaro. The study was Non-experimental, descriptive-transversal, and all the students of the aforementioned career were included. For data collection, the "Honey-Alonso Learning Styles Questionnaire" was used, consisting of 20 items for each of the four learning styles. Students who did not attend the data collection day or who did not accept participation were excluded from of the investigation, the questionnaires not answered in their entirety were eliminated. To perform the descriptive statistical analysis the Statistical Package for the Social Sciences program (version 20) will be established and the Honey- Alonso algorithms will be used to establish the predominant type of style. At the time of the application of the instrument, the students were explained the objectives of the inquiry and verbal consent and voluntary participation were requested. It was observed that the active learning style had a preference between high and very high (62.75%); however, the preference in the reflective style was low or very low (52.94%). In relation to the preference for the pragmatic and theoretical styles, this was moderate (55.56% and 52.94% respectively). The predominant learning style was active with 67.32%, a situation that ignores the reflective learning style that according to Honey and Alonso is the preferred one in careers in the humanities area.

Keywords: CHAEA, teaching, learning styles, university student.



Resumo

Estilos de aprendizagem são métodos usados para organizar cognições sobre o mundo para melhor entendê-lo. Um estilo não é uma aptidão, mas uma maneira de pensar e uma maneira preferida de usar as habilidades que você possui. Com esse pano de fundo, Alonso e Honey se referem a quatro estilos básicos de aprendizado: ativo, reflexivo, teórico e pragmático. Explicou isso, o principal objetivo deste trabalho foi documentar o estilo de aprendizagem preferido em estudantes da graduação em Educação Física e Ciências do Esporte da Universidade Autônoma de Querétaro. O estudo foi não experimental, de corte transversal descritivo, e todos os alunos da carreira mencionada foram incluídos. Para a coleta de dados, foi utilizado o Questionário Honey-Alonso sobre estilos de aprendizagem, composto por 20 itens para cada um dos quatro estilos de aprendizagem.

Os alunos que não compareceram ao dia da coleta de dados ou que não concordaram em participar foram excluídos da investigação. Da mesma forma, os questionários não respondidos na íntegra foram eliminados. Para a análise estatística descritiva, foi utilizado o programa Statistical Package for the Social Sciences (versão 20) e os algoritmos Honey-Alonso para estabelecer o tipo de estilo predominante. No momento da aplicação do instrumento, os objetivos da investigação foram explicados aos alunos e seu consentimento verbal e participação voluntária foram solicitados. Observou-se que o estilo de aprendizagem ativo apresentou preferência entre alta e muito alta (62,75%); no entanto, a preferência no estilo reflexivo foi baixa ou muito baixa (52,94%). Em relação à preferência pelos estilos pragmático e teórico, este foi moderado (55,56% e 52,94%, respectivamente). O estilo de aprendizagem predominante foi ativo com 67,32%, situação que evita o estilo reflexivo de aprendizagem que, segundo Honey e Alonso, é preferido nas carreiras na área de humanidades.

Palavras-chave: CHAEA, ensino, estilos de aprendizagem, estudante universitário.

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Introduction

According to Sternberg (1997), learning styles (EA) have historically been defined as the methods used in order to organize our cognitions about the world to better understand it. A style is a way of thinking and a preferred way to take advantage of the skills that are possessed; This means that aptitude refers to the way someone knows how to do something, while style has to do with the way that someone likes to do something.

This concept takes up the proposal of Dunn, Dunn and Price (1985) and Keefe (1988), who affirm that the EAs are linked to the personality of the student; For example, if you compare outgoing students to introverted students, the former acquire better interpersonal communication skills, while the latter develop academic language skills more.

For Alonso, Gallego and Honey (2007) there are four basic learning styles: active, reflexive, theoretical and pragmatic. The characteristics of people according to the style of preference are described succinctly in Table 1.

Tabla 1. Características de las personas según el estilo de aprendizaje preferente

Activo	Reflexivo	Teórico	Pragmático
Están llenos de actividad.	Reúnen datos y los clasifican.	Encuadran los problemas por etapas lógicas y coherentes.	Descubren el aspecto positivo de las nuevas ideas y las experimentan.
Se crecen ante los desafíos	Tratan de dar una conclusión.	Gustan de sintetizar y analizar.	Son los primeros en actuar con mucha seguridad en proyectos que les son atractivos.
No gustan de largos plazos.	Son prudentes.	Son muy profundos en su sistema de pensamiento a la hora de establecer alguna teoría, principio o modelo.	Son impacientes cuando a su alrededor hay personas que teorizan.
Son de mente abierta.	Consideran todas las alternativas antes de proceder.	Son muy racionales y objetivos.	Tienen los pies en la tierra cuando hay que tomar decisiones o resolver un problema.
Primero actúan y luego ven las consecuencias.	Gustan de observar y escuchar a los demás, pero intervienen solo cuando se sienten dueños de la situación.	Adaptan todo lo que observan dentro de teorías tanto lógicas como complejas.	Son prácticos en ideas y acciones.
Gustan de soluciones prácticas e inmediatas.	Gustan considerar las cosas desde diferentes perspectivas.		
Son del aquí y ahora.			

Fuente: Elaboración propia a partir de Alonso, Gallego y Honey (2007)

Continuing with Alonso et al. (2007), it is elementary to mention that this classification is not directly related to intelligence, since there are always people with this faculty regardless of their predominant learning style. In this regard, the aforementioned authors explain: "It seems useful the strategy to partially dispense with the insistence on the intelligence factor, which is not easy to modify, and insist on other aspects of learning that are accessible and improvable" (Alonso et al. , 2007, p. 70).

Even so, and from the classification of Alonso et al. (2007), different studies have been carried out in which it is shown in general terms that the learning style that stands out in university students is reflective, regardless of discipline (Acevedo, Cavadla and Alvis, 2015; Camarero, Del Buey y Blacksmith, 2000).

However, regarding the background that can be mentioned about the study of learning styles, it is worth mentioning the research of Serra-Olivares, Muñoz, Cejudo and Gil (2017)

carried out with university students of Physical Education of the Catholic University of Temuco (Chile) (lapse 2015-2016). In this work, the CHAEA questionnaire was applied, whereby it was determined that in the participants predominantly combined (56%) and active (21%) learning styles. In addition, students with an active learning style demonstrated significantly lower academic performance than their peers who had a pragmatic and combined learning style.

In another similar inquiry, developed in Spain, Gil et al. (2007) evaluated the learning styles of teaching students in the specialty of Physical Education. The objective was to intervene in the implementation of the plans and programs of study that would contribute to the degree of the students; in this work it was found that the predominant learning style was reflexive (44%), followed by active (23%), theoretical (19.01%) and pragmatic (13 %).

Likewise, in the work of Salas-Cabrera (2014), carried out at the National University in Costa Rica on the predominant learning styles in students of the School of Sciences of the Human Movement and Quality of Life, it was found that in most of the Students excelled a reflective learning style.

In accordance with the above, Acevedo et al. (2015) carried out an investigation with students of the Faculty of Engineering of the University of Cartagena Colombia. The results of this work showed that the predominant learning style was reflective, with 31.9% in men and 36.1% in women.

Similarly, in an article by Isaza Valencia (2014) developed in the Minute of God University Corporation (Bello sectional), it was determined that they highlighted the pragmatic and theoretical styles over others such as active or reflective. These findings contrast with those raised in some pedagogical models of higher education, since it would be expected that the latter should be predominant in students.

Objective

The objective of the present investigation was to document the learning style that predominates in the students of the degree in Physical Education and Sports Sciences of the Autonomous University of Querétaro.

However, taking as a reference what was suggested in different studies that the most common learning style in university students is the reflexive one, regardless of the specialty studied, in this work the following hypothesis has been proposed:

Hi The style of learning that predominates in the students of the degree in Physical Education and Sports Sciences is the reflexive-theoretical one.

Methodology

A non-experimental descriptive and cross-sectional study was carried out in which the total number of students of the degree in Physical Education and Sports Sciences (153) were included to whom a sociodemographic identification card was applied, in addition to the Honey-Alonso Questionnaire of learning styles (CHAEA) (1986), which is authorized for use by the authors.

The questionnaire consists of 80 reagents, distributed equally (20) for each of the four learning styles referred to. It should be noted that students who did not attend the day of the application of the questionnaire or who did not accept to participate were not included; In addition, the questionnaires not answered in their entirety were eliminated. To carry out the field work, the Research Committee of the Faculty of Nursing of the Autonomous University of Querétaro was approved. In addition, jointly with the coordinator of the degree, a date was set for the application of the questionnaire in the classroom and during school hours.

The questionnaire was self-administered, for which the understanding of the indications was verified and the filling of the questionnaires was validated. Students were also asked to complete the exercise of locating their preferred learning style at the end of their requisition and a brief interpretation of the result was offered. The SPSS program

(version 20) was used for the descriptive statistical analysis. At the time of application of the instrument, the objectives of the study were explained and their consent and voluntary participation were requested verbally.

Results

153 students of the degree in Physical Education and Sports Sciences participated, of which the following results are presented when applying the CHAEA. Table 2 shows that the participation of male students predominates (74.3%); In addition, according to the distribution per semester, the highest percentages were for the second (25%), eighth (13.2%) and seventh (12.5 %).

Tabla 2. Frecuencia de participantes según sexo y semestre cursado

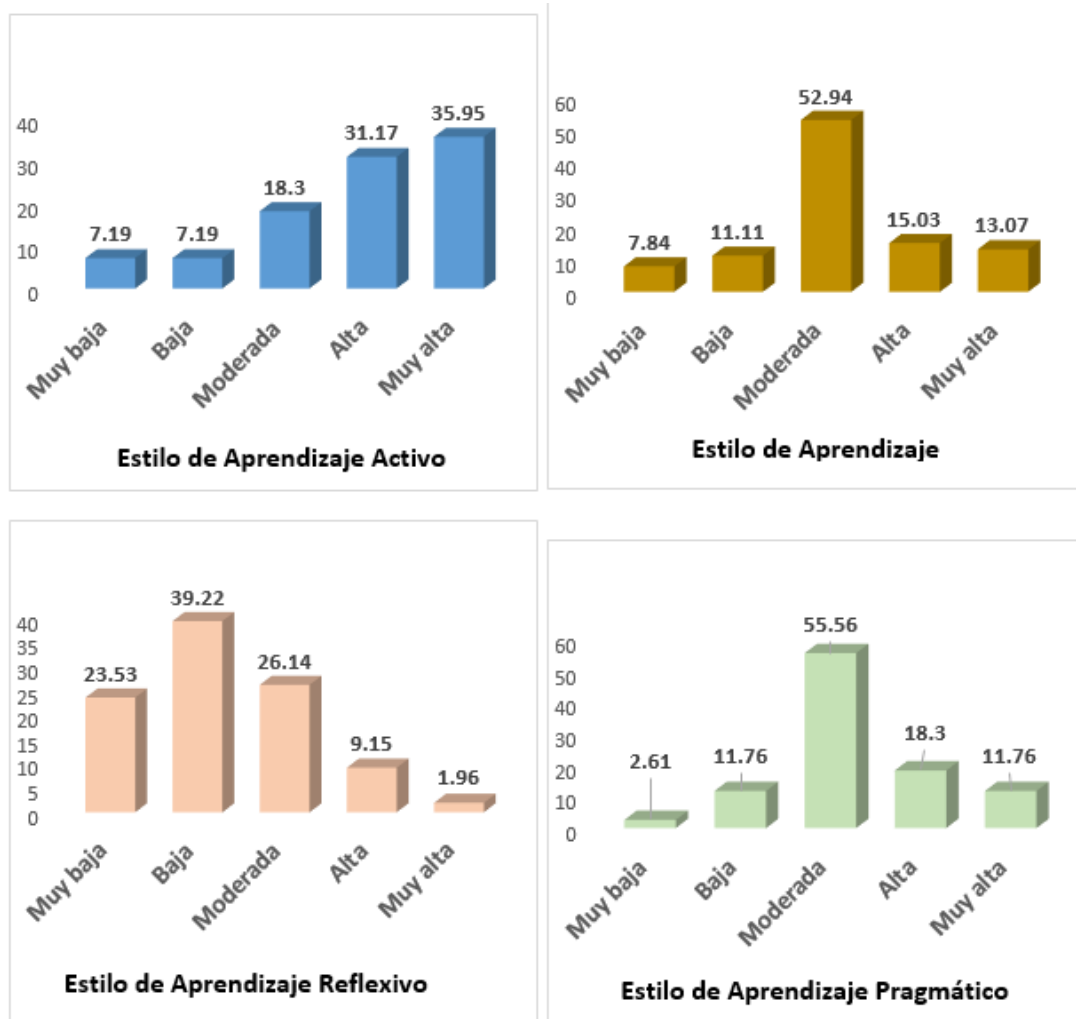
Variable		Frecuencia	%
Sexo	Femenino	37	25.7
	Masculino	107	74.3
Semestre	1	13	8.6
	2	39	25.7
	3	17	11.2
	4	18	11.8
	5	12	7.9
	6	14	9.2
	7	19	12.5
	8	20	13.2

Fuente: Cédula de identificación n = 153

In Figure 1, it is observed that the active learning style is the one that predominates among the participants, preferably “high and very high” (67.32%), while the reflexive learning style has a “low and very low incidence” (88.89%), a result that is contrary to the proposed research hypothesis. On the other hand, the students had a moderate preference for the pragmatic (55.56%) and theoretical (52.94%) styles, a situation that contrasts with the findings reviewed in the available literature that included Physical Education students, where it is shown that the style that stands out is the combined one, that is, reflexive-theoretical and

active-theoretical-pragmatic (56%), followed by active (21%), theoretical (13%) and pragmatic styles (4 %) (Serra-Olivares *et al.*, 2017).

Figura 1. Nivel de preferencia según estilo de aprendizaje en estudiantes de la licenciatura en Educación Física y Ciencias del Deporte

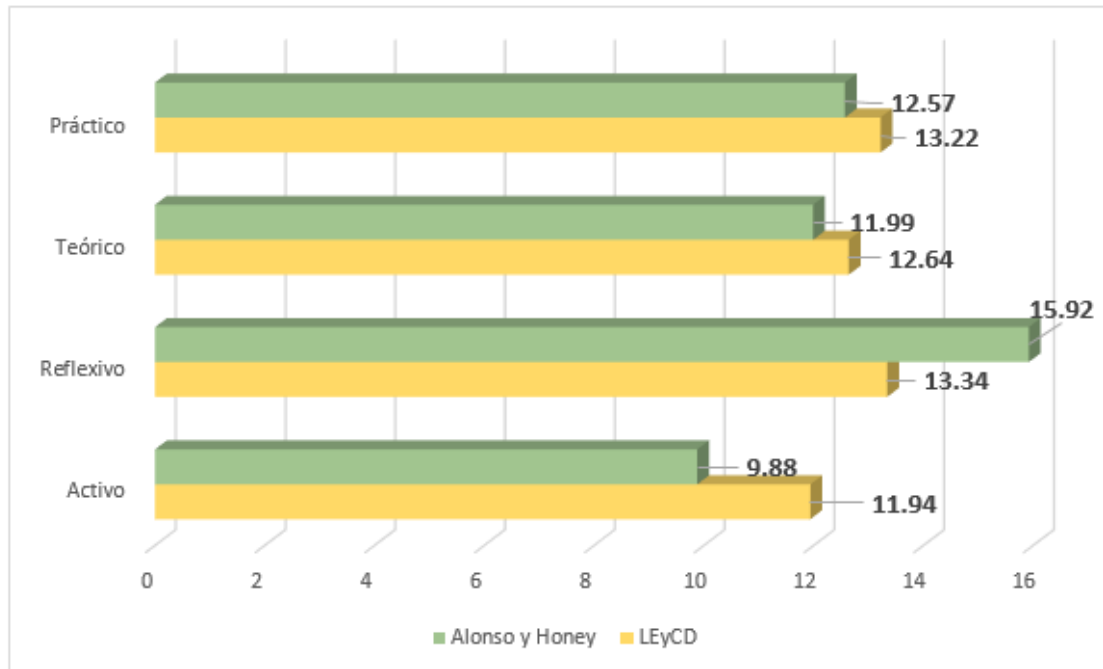


Fuente: Elaboración propia

However, when comparing the interpretation scales of the four learning styles of Alonso *et al.* (2007) for careers in the area of humanities with the data obtained in the present study, it can be indicated that the active style is the most preferred among students (with an average of 11.99), while the reflective style is the least preferred (with an average of 13.34), which means a positive difference of 2.06 points for the first style, but negative by 2.58 points for the second. Regarding the theoretical and practical styles, their statistical means are

greater than those proposed by the cited authors (figure 2).

Figura 2. Media de estilo de aprendizaje preferente en estudiantes de Educación Física y Ciencias del Deporte en comparación con la propuesta de Honey *et al.* (2007) para carreras de humanidades



Fuente: Elaboración propia

The data collected in the study on learning style in students of the degree in Physical Education and Sports Science show a high and very high preference for active style, moderate for theoretical and pragmatic styles, and low for reflective style. In other words, it can be indicated that students have the presence of combined learning styles (active-pragmatic and active-theoretical), moving away from reflective style, a situation that differs from most of the literature reviewed that included university students from physical education, in which the reflexive style predominates (Alonso *et al.*, 2007; Gil *et al.*, 2007; Serra-Olivares *et al.*, 2017).

Discussion

Based on the research results, it can be affirmed that among the students of the degree in Physical Education and Sports Sciences, the style of active learning stands out, a finding contrary to the hypothesis of research raised, in which the style of These students' learning was thoughtful. In fact, this work has shown that the participants of this research presented a moderate preference for pragmatic (55.56%) and theoretical (52.94%) styles.

In this regard, it can be noted that the nature of the discipline under study in this work requires a high level of activity and agility, as well as practical and decisive solutions, with a high degree of participant attitude; However, it should also be noted that for all this you must have a theoretical basis that allows you to understand and apply current and current models correctly.

Likewise, it is necessary to comment, regarding the limitations of the study, that the questionnaire was applied in a single moment, so it would be convenient to use it also during the entire training of the students to observe and record if there are changes in the course of their educational process.

Finally, the main strength of this inquiry lies in the contribution made to specialized literature on the subject in question, since it has been shown that learning styles do not necessarily follow a universal constant. In this sense, different variables must be taken into account, such as the country, the way of life and, of course, the characteristics of each discipline. In a nutshell, in the education of people you cannot start from established recipes due to the complexity of the human essence.

Conclusions

According to the different authors cited in the introduction of this article, at the university level students should develop the style of reflective learning; However, in the present study the opposite was found, since the style that predominates in students of the degree in Physical Education and Sports Sciences of the Autonomous University of Querétaro is the active one. In addition to this, it can be affirmed that there is also a tendency for students to combine learning styles (eg, active-practical and active-theoretical), which corresponds to the characteristics of the career they study, where more practical and active activities should be carried out. Even so, it should be noted that the employment profile of this professional future must also be linked to the attention of people from different age groups with specific characteristics and / or with different abilities, which require a delimited analysis of their needs and activities physical that must develop.

Given this situation, it is proposed to carry out more research on the topic of learning styles and review the strategies used by teachers in classrooms to develop intervention programs that will also enhance reflective learning; that way, more tools can be offered so that graduates integrate more easily and more efficiently into the labor field.

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