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Learning and teaching styles in traditional dances[1]

Estilos de aprendizaje y de enseñanza en las danzas tradicionales

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Abstract

Teaching styles applied in physical activities and sports help in the achievement of students' objectives and influence their motivation. It is important to know the preferences that future teachers have about the application of different teaching styles. Therefore, the aim of this study was to analyze the perception of teaching styles in dance learning, as well as to know the differences in preferences between the practice style and the divergent style. An intervention was carried out with a sample of 30 students studying the Higher Degree of Technician in Education and Socio-Sports Animation, where different dances from different countries were taught with each of the teaching styles. After its application, some of the conclusions obtained refer to the preference of the students in the use of the divergent teaching style for the learning of dances, as well as the preference

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in the application of this style when they are teachers, since they consider that greater freedom in learning will produce greater motivation in the learner.

Keywords: Physical Education, dance, learning style.

Resumen

Los estilos de enseñanza aplicados en las actividades físicas y deportivas contribuyen a la consecución de los objetivos de los alumnos e influyen en su motivación. Es importante conocer las preferencias que los futuros profesores tienen sobre la aplicación de los diferentes estilos de enseñanza. Por ello, el objetivo de este estudio fue analizar la percepción de los estilos de enseñanza en el aprendizaje de la danza, así como conocer las diferencias de preferencias entre el estilo práctico y el estilo divergente. Se realizó una intervención con una muestra de 30 alumnos que cursaban el Grado Superior de Técnico en Educación y Animación Sociodeportiva, donde se enseñaron diferentes danzas de distintos países con cada uno de los estilos de enseñanza. Tras su aplicación, algunas de las conclusiones obtenidas hacen referencia a la preferencia de los alumnos en el uso del estilo de enseñanza divergente para el aprendizaje de bailes, así como la preferencia en la aplicación de este estilo cuando son profesores, ya que consideran que una mayor libertad en el aprendizaje producirá una mayor motivación en el alumno.

Palabras clave: Educación Física, danza, estilos de aprendizaje.

Introduction

The teacher's and student's decision-making patterns in the teaching and learning process will set the teaching intentions, learning objectives and learning outcomes

(Mosston & Ashworth, 2008). In other words, the way of teaching affects learning environment, which in turn can affect learning outcomes (Awally et al., 2023).

In 1966, Muska Mosston created The Spectrum of Teaching Styles and nowadays it is a reference for physical education teachers, who apply some styles or others according to the needs of students and the objectives that are intended to be achieved in each of the contents taught. Therefore, all teaching styles without exception are useful; the use of one teaching style or another will depend on the objectives that have been established in the psychomotor as well as in the cognitive and emotional areas (Kyritsopoulos et al., 2023).

The premise of this theory is teaching behavior consists of a chain of decision making (Yanik et al., 2023). “The teaching–learning behaviors within the Spectrum are tools for accomplishing the various functions of education” (Mosston & Ashworth, 2008, p.5).

Based on learners’ capacity to reproduce and produce knowledge, Mosston and Ashworth classified the teaching styles into two groups, the reproduction cluster and the production cluster (Syrmpas et al., 2020).

The reproduction cluster includes A: Command Style; B: Practice Style; C: Reciprocal Style; D: Self-check Style; and E: Inclusion Style; and productive teaching styles include F: Convergent Discovery Style; G: Divergent Production Style; H: Learner Designed Individual Program Style; I: Learner´s Initiated Style; and J: The Self-teaching Style (Mosston & Ashworth, 1993). Styles classified in the reproduction cluster are characterized by learners reproducing known knowledge and models. On the other hand, the main characteristic of the styles included in the production cluster is that the teacher guides students in the discovery of knowledge (Syrmpas et al., 2020). In these two cluster, the role of the teacher and the learner in learning is clearly differentiated: teacher-

centered or learner-centered (Rothmund, 2023).

Due to the importance of the teaching styles implemented in Physical Education and Physical-Sports Activities, it is relevant to know the teaching styles used in these classes according to the contents taught, as well as the perceptions of the students about the teaching styles applied for those specific contents. It is equally important to identify students' learning styles (Romanelli et al., 2009).

There are four categories into which the students' learning styles can be classified (Alonso et al., 1994):

- Theoretical: to solve problems they go through logical stages until they reach the solution. They are methodical, logical, rigid, objective and structured. They are very good at creating models or theories.
- Active: they like to constantly face new challenges; they need new experiences and a constant change of stimuli to learn. They are animators, discoverers, improvisers, risk-takers and spontaneous.
- Reflective: to solve a problem they prefer to observe and evaluate the possible answers or options. They are thoughtful, conscientious, receptive, analytical and exhaustive people.
- Pragmatic: before putting their ideas into practice, they will previously evaluate their feasibility and suitability. They are experimental, practical, direct, effective and realistic.

There is research that affirms that some of the most used styles in Physical Education classes are reproductive (Styles A-E) (Aktop & Karahan, 2012; Jaakkola & Watt, 2011; Kulinna and Cothran, 2003, Cotrhan et al., 2005; Requena & Martín, 2015; Zeng, 2016).

The study by Zeng (2016) analyzes student teachers' perceptions of the use of teaching styles in a physical education teacher education program (PETE). Among the most relevant findings, it is shown that they most frequently apply reproductive styles and consider that the styles that would most motivate their students to learn are command, practice, reciprocal, inclusion, convergent and divergent discovery.

On the one hand, the application of reproductive styles will allow students to feel more competent in such learning, while the application of productive styles, due to uncertainty, makes students more insecure about whether their performance is correct (Zapatero, 2017). However, it is observed that students' motivation, both intrinsic and extrinsic, to perform tasks is greater with productive styles than reproductive ones (Real-Pérez et al., 2021).

On the other hand, de las Heras-Fernández et al. (2019) affirm that the cognitive, affective and physical development of students when carrying out dance activities will be more favored through the problem-solving styles or divergent style. Productive teaching styles, such as the problem-solving styles or divergent style applied to dance, biodanza and mindfulness, allow the students to be more involved in their own learning and therefore produce greater development, mainly at the emotional level (Constantino & Espada, 2021).

Despite this, it is important to implement teaching styles according to the needs of the content taught. The research by Villard-Aijón, et al. (2013) claims that teachers prefer to use some of the productive styles proposed by Delgado (1991) to teach body expression content, such as the style of free exploration and problem solving, which would be equivalent to styles G, the Divergent Production Style, and J, The Self-teaching Style, as classified by Mosston and Ashworth (1993). In the research by Romero-Barquero (2015),

it is stated that the teaching styles most used for the content of popular dance were A, the Command Style and G, the Divergent Style and that both the application of one or the other, as well as the attitude of teacher, will influence the achievement of objectives by the student. Byra et al. (2014) indicate that the command style is not adequate to achieve the objectives related to dance classes, since these contents tend to be related to cognitive involvement, for which it would be necessary to apply productive styles focused on the student, such as the divergent style.

The fields of physical education and dance are rich in opportunities to discover, design, and invent. There is always another possible movement or another combination of movements, another dance choreography, or an additional piece of equipment. The variety of human movement is infinite—the possibilities for episodes in Divergent Discovery are endless (Mosston & Ashworth, 2008).

The content of corporal expression allows students to achieve the competences related to Physical Education and develop aspects such as self-esteem or interpersonal relationships, in addition to allowing students' disinhibition (Lafuente, 2022; Romero-Barquero, 2015). Specifically, traditional dances as a technique of corporal expression allow the approach to other cultures. For all these reasons, corporal expression and, consequently, dance, must have the importance it deserves and not be worked on only in isolation through the creation of choreographies (Cunliffe et al., 2011). To avoid this, it is necessary to analyze the previous experiences of the students with this content, since if they have been negative, it will hinder their participation in the tasks and decrease their motivation (Lafuente, 2022). In addition, it should be taken into account that the positive attitude of the teacher towards this content will influence the motivation and attitude of the students (Arias et al., 2021; Dolenc, 2022; Romero-Barquero, 2015). Also, the

teaching styles implemented by teachers will influence students' motivation as well as the learning of skills (Dolenc, 2022). For this, it must be borne in mind that, as the subject taught does not always coincide with the interests of the students, the type of motivation that should be encouraged is the intrinsic one (Bardorfer & Dolenc, 2022). A positive attitude of the teacher towards the content of corporal expression can be achieved thanks to an adequate training of the future teacher in the content of corporal expression (Archilla, 2013).

Objectives

- To compare preferences towards practice and divergent teaching styles for dance learning after an intervention.
- To analyze students' perceived learning styles for learning dance.

Method

The present research follows a mixed methodology, combining quantitative and qualitative research techniques (Sánchez, 2015).

To develop the first objective, the study follows a quantitative method. A pre-experimental design of non-equivalent groups pre-established by their class group was used, with two experimental groups to which different experimental treatments were applied, analyzing pre- and post-intervention results (Campbell & Stanley, 1963; Laher & Kramer, 2019).

To develop the second objetive, the present research follows a qualitative method. Semi-structured interviews were carried out to obtain information on the students' learning style perceptions (Ríos, 2019; Nieto, 2010) Through the Atlas ti software and after the transcriptions of the interviews, an overall view of the documents was obtained in order to perform basic functions such as: simple coding and multiple coding of fragments (Colás & Rebollo, 1993). Likewise, another coding strategy was used through codes extracted from

the theoretical framework, which facilitated the discussion of results. Subsequently, the network tool was used to create a network linking codes and families of codes, generating a conceptual map.

Participants

The participating subjects were 30 2nd year students of Professional Education from the Higher Degree of Technician in Education and Socio-Sports Animation (TSEAS).

Table 1. Participants' sex.

	n	%
Women	9	30.0
Men	21	70.0
Total	30	100

Students ranged in age from 18 to 35 years with a mean age of M=20.20, and a standard deviation of SD=3.43.

The center where the intervention was carried out was a private school providing High School studies and Professional Education in the Autonomous Region of Madrid, in the municipality of Madrid.

Procedure

To carry out the study, 4 sessions were planned where the dance content was applied, teaching a total of 4 traditional dances, two from Spain and two from another country. Each session was carried out with different teaching styles, so that two sessions were carried out using the practice style (reproductive styles), and another two with the divergent production style (productive styles). In each of them, two traditional dances were taught.

The dances used in the classes were as follows:

Table 2. Dances from Spain and another country

	Dance 1	Dance 2

Dances from Spain	El candil (Badajoz)	Txulalai (Basque Country)
Dances from another country	Samoth (Israel)	Hora Chadera (Israel)

Although the two groups that experienced the intervention were from different shifts and there was no contact between them, the order of application of the teaching styles and type of dance for each of the groups was modified, leaving the distribution for each group as follows:

Table 3. Organization of dances and teaching styles in the sessions

		Teaching Style	Dance
Group 1	Session 1	Practice Style	Spain
	Session 2	Divergent Style	Another country
	Session 3	Divergent Style	Spain
	Session 4	Practice Style	Another country
Group 2	Session 1	Divergent Style	Another country
	Session 2	Practice Style	Spain
	Session 3	Practice Style	Another country
	Session 4	Divergent Style	Spain

Instruments

The questionnaire used was on the students' experiences with and perceptions of teaching styles (Cothran et al., 2005). The adaptation and validation for the Spanish version was carried out in order to be used in the Spanish educational context (Espada et al., 2021). A Cronbach's α coefficient of 0.89 was obtained in the instrument. The questionnaire included a scenario for each of the 11 teaching styles (Command; Practice; Reciprocal; Self-evaluation; Inclusion; Guided Discovery; Convergent; Divergent; Individual programs; Initiated learners; Self-teaching). The internal consistency of each dimension was analyzed through Cronbach's Alpha Coefficient (α), the KMO and Barlett's test of sphericity. This research used the scenario of the practice style "The teacher establishes several stations in the gym where students work on different parts of a skill or different skills. Students rotate around the stations and do the tasks at their own pace. The teacher moves around

and helps students when needed". This dimension obtained a high internal consistency (α =.86, KMO=.81).

The other dimension that has been used in the present research is divergent style "The teacher asks students to solve a movement question. The students try to discover different movement solutions to the teacher's question. There are multiple ways for the students to answer the question correctly". This dimension obtained a high internal consistency (α =.88, KMO=.83).

Each scenario is a dimension followed by 5 items. These items were rated on a 5-point Likert scale (from 1 = never to 5 = always).

In order to obtain information on the students' learning style perceptions, 4 interviews were designed using semi-structured questions based on a prior bibliographical review.

It was carried out a expert judgment for the instrument's validity process (Dorantes-Nova et al., 2016). The specialists consulted carried out considerations on the textual wording of the questions-infusing on the fact that they were all open-ended and adjusted to a technical language-without pointing out the elimination or inclusion of specific questions. The questions revolved around the students' preferences about their dance learning process, depending on whether the teaching was more directed or more open, how they felt in different physical, emotional, and cognitive dimensions.

Statistical analysis

Statistical analysis was performed using SPSS (Windows, v.27.0). Statistical significance was set at $P<0.05$. To test the normality of the distributions, we used the Kolmogorov-Smirnov test was used. As the variables did not follow a normal distribution Non-parametric tests were used (Wilcoxon test) as well as contingency tables, including the phi coefficient and Pearson's Chi-squared value and its significance. A repeated-measures ANOVA test

(gender and group as factors). To examine pairwise comparisons of each significant factor, and the effect size (ES) was calculated by ηp^2. The alpha level was set at $p < 0.05$.

The data analysis software ATLAS.TI, version 23.1.0 (Lopezosa, et al., 2022) was used for the qualitative analysis of the interviews. The questions were formulated on the basis of theories related to teaching and learning in education (Colás & Rebollo, 1993). Codes and code fragments were extracted in relation to questions that were asked about the dance learning experience. In this case, several words and text fragments linked to the teaching styles (Sicilia & Delgado, 2002) and learning styles (Kolb, 1976; Alonso et al., 2005) were located.

Results

Quantitative results

The students slightly decreased their score after the intervention in all items, except in the last item, related to motivation for learning when using this teaching style (Table 4). Moreover, there was a statistically significant relationship in this item (p=.027).

Table 4. Practice Style

	pre M±SD	post M±SD	p
I had a physical education teacher that taught this way.	2.75±.99		.683
I intend to make use of this teaching style in the future as a PE teacher.	3.26±.63	2.81±.98	.485
I think this way of teaching would make class fun.	3.74±.77	3.13±.49	.858
I think this way of teaching would help students learn skills and concepts.	3.94±.62	3.71±.69 3.81±.65	.429
I think this way of teaching would motivate students to learn.	3.42±.76	3.81÷.60	.027

Table 5 shows the results related to the divergent teaching style, the score increased in all the items, except in those related to learning and motivation of the students when using this teaching style in the classes, which decreased after the intervention. There was a

statistically significant relationship in the first item (p=001), in which the students identified this teaching style more easily after experimenting with it in the intervention.

Table 5. Divergent Style

	pre M±SD	post M±SD	p
I had a physical education teacher that taught this way.	1.84±.73	2.58±.80	.001
I intend to make use of this teaching style in the future as a PE teacher.	2.94±.72	3.00±.51	.467
I think this way of teaching would make class fun.	3.61±.88	3.84±.63	.169
I think this way of teaching would help students learn skills and concepts.	4.00±.73	3.65±.70	.082
I think this way of teaching would motivate students to learn.	3.68±.79	3.55±.67	.500

Table 6 shows how the students preferred the divergent style before and after the intervention, although after the intervention it decreased slightly. Despite this, no significant relationship was found between these variables [$X^2_{(1)} = 2.162$; $p = .26$; $\Phi = .14$].

Table 6. Preferences in teaching styles

	Practice	Divergent
Pre	38.7%	61.3%
Post	41.9%	58.1%

Results from two dimensions have been presented in Table 7 with no differences either within or between styles.

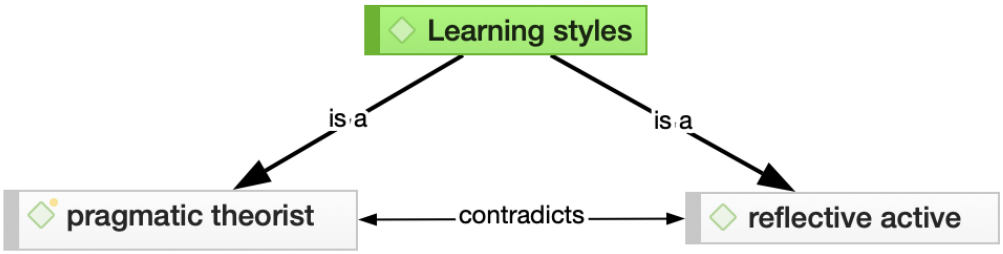
Tabla 7. Interaction effects (gender x group)

	Pre-intervention	Post-intervention		Gender	Group	Gender x Group
Practice	3.35 ± 0.11	3.47 ± 0.95	F =	0.38	1.08	1.51
			p =	0.54	0.30	0.23
			η_p^2 =	0.14	0.39	0.05
Divergent	3.37 ± 0.11	3.65 ± 0.10	F =	1.14	2.94	0.22
			p =	0.29	0.09	0.63
			η_p^2 =	0.63	0.09	0.00

Qualitative results

Qualitative analysis of the information was carried out with the software Atlas ti, achieved the discrimination of the categories and sub-categories present in Figure 1 (see Figure 1). The analysis made it possible to establish one main category and two fundamental sub-categories in dance learning. Two subcategories were established: 1.1. theoretical, pragmatic style and 1.2. active and reflective style. These categories were extracted from the codes and code fragments generated from the analysis. Thus, it was possible to generate as a main category the learning styles linked to Kolb's theory (Kolb, 1976; Alonso et al., 2005) which establishes four types of learning styles: active, reflective, theoretical and pragmatic. After the analysis of the students' answers, the presence of the four styles pointed out by the author, but grouped in two clusters, was revealed: theorethical - pragmatic style (sub-category 1) and active-reflective style (sub-category 2).

Figure 1. Students' learning style perceptions.



In category 1) learning, interviewees responded about the form of learning that they felt best developed motor competence. Sub-category 1.1) theorethical -pragmatic style: some students stated that, through practice instruction, experimentation and repetition it was "easier to learn it" [interviewee 4, man]. This preference for learning based on reproduction and repetition of a model could fit more with the theoretical learning style (Alonso et al., 2005) in which students are methodical, logical and structured. Moreover, many of the

responses showed the relationship of this way of learning with Physical Education teaching styles in the same way as pointed out by Sicilia & Delgado (2002), who relate learning styles (Kolb, 1976; Alonso et al., 2005) with Physical Education teaching styles. Thus, students linked it to traditional, reproductive teaching styles. "The teacher directed us, she practically taught us the steps and what we had to do, I found it more educational (...) she taught us the right way to dance" [Interviewee 3, woman]. Again, this statement about direct experiential practice linked to pragmatic learning style (Kolb, 1976; Alonso et al., 2005) is related to traditional reproductive teaching styles linked to repetition and direct instruction (Sicilia & Delgado, 2002).

On the other hand, the sub-category 1.2). active-reflective style: some students showed a preference for more social and cooperative learning, emphasizing integration with peers and fun "you socialize more with peers [interviewee 2, woman] "more freedom (...), more fun (...) decision-making power [interviewee 1, man]. This is related to active- reflective learning styles (Alonso et al., 2005): the active learning style is characterized by students seek practical application, are entertainers, improvisers, discoverers and creators people and reflective learning style students seek in an imaginative way (Kolb, 1976; Alonso et al., 2005), which in turn are related to more socializing and creative teaching styles (Sicilia & Delgado, 2002) in which students are more participative and show greater social awareness.

Discussion and conclusions

This study investigated the use of the practice style in comparison with the divergent teaching style to identify students' perceptions of learning styles in learning traditional dance contents.

When students learned traditional dance through the practice teaching style, their

intention to use this teaching style in their future work as teachers decreased because, after the intervention, they perceived that it is a style that does not help them learn the skills and concepts even though they consider that it is a style that increases motivation for learning (p=.027). However, in the qualitative results some students indicated that to learn more effectively it is necessary to imitate a model. These finding are similar to those of Kılıç and Ince (2023) that athletes valued better the reproductive teaching methods in terms of learning than others teaching styles. Likewise, the results of Brown (2021) research suggest student-centered instruction may be more effective to learn dance.

Although there is a little controversy regarding learning teaching goals because the fact of having a model and repeating the choreography at all times gives students a feeling of ease and coordination, it is not considered that always working in this way in education contributes to the development of the educational objectives linked to the cognitive channel in the aspects of creation and mental involvement (de las Heras-Fernández et al., 2019). In line with the theory of constructivism, students construct knowledge based on their own experience and interactions with others (Rakha, 2023).

In the research carried out by Zeng (2016) the student teachers stated that implementing some teaching would motivate their students to learn better. These styles are command, practice, reciprocal, inclusion, convergent and divergent discovery. According to Cuellar-Moreno (2016) it is important that dance teachers apply a teaching style with which they feel comfortable in order to teach the essence of dance.

Regarding the divergent style, it is striking how students identified this teaching style better after experimenting with it in the intervention (p=.001). In addition, they indicated to a greater extent after the intervention that they would use this teaching style in their future as teachers since they considered that it is a style that allows them to make classes

more fun. Besides, previous research in the field of dance has shown that by giving students more responsibility in their teaching and learning process, they obtained better results (de las Heras-Fernández et al., 2022; Pitsi et al., 2023).

This is consistent with Nájera et al. (2020) mentioning that the Physical Education teachers who prefer cognitive styles tend to be more supportive of students' autonomy since these styles promote students' self-learning and independence, which would enhance students' needs and decrease their frustration towards physical education class. However, Torrents et al. (2015) revealed that the limitations in the instructions clearly conditioned the choreographies performed by the dancers, as well as their creative behavior.

The qualitative analysis shows how some of the students indicated that with the divergent teaching style they feel more freedom and have more possibilities to socialize. Similarly, Nájera et al. (2020) said that the creative teaching style encourages students to think independently and offers them the possibility to express themselves freely.

Finally, the results show that the students preferred the divergent style to the practice style for learning traditional dances. In this vein, it is very important to keep in mind the perception that students have in the teaching and learning process since this information will allow us to improve the training process (Gaviria-Cortés & Castejón-Oliva, 2019).

After analyzing the results obtained, it can be affirmed that the students considered that the practice style is more effective for learning content. However, besides not being a motivating style for the students, it does not contribute to their cognitive development because it is based on the reproduction of models; on the contrary, the divergent style is more popular among the students of this study because they consider that autonomy and freedom in learning allow them to socialize more and make the classes more fun.

According to Yudho et al. (2023) the increase in motivation has a positive impact on the learning process.

On the other hand, it is stated that this freedom can condition the degree of learning of the dances, which is why the students, as future teachers of physical sports activities, prefer to use the divergent style in their classes rather than the style in practice. In the same way, they prefer to learn dances with the divergent style rather than with the practice style.

Finally, it is important to point out that this study has a limitation in terms of sample size. For this reason, as a future line of research, it is proposed to carry out the study with a larger sample and in different schools, so that a greater comparison can be made.

Authorship contribution:
María Espada-Mateos: Concepción y diseño, Metodología, Análisis e interpretación de datos, Redacción del artículo.
Rosa de las Heras-Fernández: Concepción y diseño, Análisis e interpretación de datos, Redacción del artículo.
María Fernández- Rivas: Concepción y diseño, Recopilación de datos, Redacción del artículo.

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The authors declare no conflict of interest.

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