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MOTIVATION TOWARDS DANCE WITHIN PHYSICAL EDUCATION ACCORDING TO TEACHING TECHNIQUE AND GENDER

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ABSTRACT

This is qualitative study with the objective to analyse motivation towards dance by comparing two teaching methodologies within the education context, depending on gender. The self-report technique was applied with 47 students (29 girls and 18 boys) aged 14 to 16 years (14.84±0.48) from a secondary school in Extremadura (Spain) to explore the reasons that engage them in dance classes during Physical Education (PE) classes. Twelve dance-teaching sessions of 50 minutes, distributed across two days a week, were presented to each group. Twenty (20) students received the lessons that applied the Direct Instruction Technique and 27 students received instruction by means of the creative inquiry technique. Self-reporting was applied at three different assessments (sessions 4, 8 and 12), of the intervention with both groups. The results show important gender differences in the students' motivation towards participation in dance in the PE context when different teaching techniques were used. This suggests that teachers may need to apply a different treatment depending on gender.

Key words: Motivation; Teaching methodology; Gender; Dance; Physical Education.

INTRODUCTION

Positive experiences in PE may influence young people to create adherence to physical activity (PA) and to adopt a healthy lifestyle during their adult life, which can have a positive influence on public health (Sallis *et al.*, 2012). Therefore, motivation is an important variable to be considered in PE (Lonsdale *et al*., 2011), in order to understand the cognitive, emotional and behavioural processes that underpin engagement and adherence to physical exercise (Hagger & Chatzisarantis, 2012).

In this sense, the Self-Determination Theory approach (Deci & Ryan, 1985; Ryan & Deci, 2000), can be especially useful to study motivation, as it has been applied successfully within the context of PE (Hassandra *et al.*, 2003; Lonsdale *et al.*, 2009). The Self-Determination Theory points out that human behaviours are voluntary or self-determined and it proposes that motivation is multi-dimensional, evolving throughout a self-determination continuum that includes different types of motivation that have differing degrees of self-determination, from more to less (Deci & Ryan, 2000). These types of motivation are intrinsic motivation (where the person acts due to inherent interest in a certain activity), extrinsic motivation

(where the person acts to achieve external consequences), and amotivation (where the person does not know exactly why he/she keeps practising the activity) (Deci & Ryan, 1985). Extrinsic motivation is divided into four types of regulation that vary depending on the degree of self-determination (from a higher to a lower level). These can be referred to as integrated regulation (behaviour that contributes to defining who one is), identified regulation (behaving in a way that is felt to be personally important), introjected regulation (behaving to avoid a sense of guilt or to prove something), and finally, external regulation being the least self-determined regulation (behaving to avoid punishment or gain some reward) (Deci & Ryan, 2000).

Along the same line, this theory indicates that the self-determination level of a person towards a certain activity, is directly influenced by the satisfaction of three basic psychological needs (Deci & Ryan, 1985): autonomy; competence; and relatedness. The perception of autonomy appears when the student is the driver of his/her behaviour; the perception of competence is the feeling of efficiently interacting with the environment; and the perception of relatedness is the positive interaction with other people, developing feelings of belonging. The satisfaction of these three needs increases the level of self-determination, so that within the context of PE, it has been shown that students who consider themselves to be more autonomous, competent and attached to their social environment, present more self-determined practise reasons (Moreno-Murcia *et al*., 2009; Zhang *et al*., 2011; Sánchez-Oliva *et al*., 2012).

Self-determined motivation has been associated in this field with effort, fun, usefulness and adherence within PE (Taylor *et al*., 2010; Granero-Gallegos *et al*., 2012). However, several studies have pointed out that frustration of basic psychological needs is associated with negative consequences on health and well-being (Adie *et al*., 2008; Hodge *et al*., 2008; Jang *et al*., 2009), as with non-self-determined motivation, which is related to boredom, unhappiness or negative effects (Standage *et al.*, 2007; Lim & Wang, 2009; Sánchez-Oliva *et al.*, 2014).

However, it should be noted that apart from motivation, gender is another aspect that has proved to be relevant to having a positive or negative effect on students' perceptions and attitudes towards PE (Lyu & Gill, 2011). Traditionally, girls in particular, have shown less joy, interest and pleasure during PE classes than boys (Fisette, 2011; Cairney *et al.*, 2012; Goodyear *et al*., 2012). Some studies have analysed these disengaged girls and the results indicate that individual predisposing factors, such as perceptions of competence and identity in the PE classes along with the social context (peers and teachers), the competitive nature of activities often offered in PE (Mitchell *et al*., 2013), or the ineffectiveness of programmes proposed (With-Nielsen & Pfister, 2011), are some of the factors that contribute to the disengagement of girls' during PE.

A possible way to solve this lack of motivation and engagement of a proportion of the girls towards PE, could involve addressing the dance content within the corporal expression block, as dance is a form of PA that awakes greater interest among girls (Grieser *et al*., 2006; O'Neill *et al*., 2011). Thus, given that during adolescence there is a marked drop of PA levels in girls (Pate *et al*., 2009), it could be necessary to offer different content, such as dance, that could help to increase PA participation levels of girls.

The problem that might arise with respect to dance content in PE lies in the difficulties that teachers find when they present it (Fraile & Vizcarra, 2009; Lim & Wang, 2009). The main reason seems to be the lack of own experiences related to dance, which results in a lack of knowledge of the methodology to be applied (Pate & O'Neill, 2009; Sebire *et al*., 2013)

It is essential to study the teaching techniques that PE teachers can use to teach dance, mainly from the viewpoint of student motivation and gender differences. Two methodologies were used in this study, namely the *Direct Instruction Technique*, which is a traditional method where the teacher base his/her teaching on demonstrating the model and then the students copy the model (Kassing & Jay, 2003); and the *Creative Inquiry Technique*, where the students are the ones that initiate activity and assume responsibility for their learning, whilst the teacher acts as a mentor in the teaching process (Kassing & Jay, 2003). It is based on creativity or the ability to create different motor and expressive responses when a problem is set (Kassing & Jay, 2003).

Under the student motivation approach, studies have pointed out that the way in which the teacher organises the sessions, involves students in decision-taking, provides execution alternatives, recognises the students' feelings and provides quality feedback, are aspects that have important motivational implications (Hagger & Chatzisarantis, 2007; Hein & Koka, 2007; Standage *et al*., 2007; Koka & Hagger, 2010). Because of this, the creative teaching methodology has mainly been associated with the motivation of the students, because the teacher satisfies their preferences better. However, the problem that creative methodology may evoke in teaching artistic-expressive activities, lies in the insecurity and incompetence that not having a previous reference model may generate in the students, as occurs in the case of the direct instruction technique, which allows for self-regulation based on a given movement pattern (Sanchez-Ruiz *et al.*, 2011).

Finally, the importance of gender differences in motivation towards dance in the PE context should be highlighted (Cairney *et al*., 2012). Dance content has traditionally generated less motivation in the case of boys because they have been considered to have less qualities than their female counterparts who have to carry out this activity due to social and cultural reasons (Lyu & Gill, 2011; Chalabaev *et al*., 2013). The role granted to the learners in the methodological treatment must be taken into account, as there are differences between both genders regarding cognitive participation in the teaching-learning process (Chen & Darst, 2001), or the creativity work (Baer & Kaufman, 2008; Stoltzfus *et al*., 2011), as aspects associated with the teaching style of the teacher. With respect to the artistic-expressive content, the difficulty lies in the performances that learners must carry out with certain autonomy in front of their classmates via uncommon motor patterns (Learreta, 2009). Therefore, the way in which the teacher sets out the students' cognitive participation and creativity may be decisive for their experiences, impressions and emotions depending on gender.

PURPOSE OF STUDY

Based on the point of view of the Self-Determination Theory, the objective of this research was to analyse which of the two teaching methodologies, *Direct Instruction Technique* or *Creative Inquiry Technique*, may be more efficient, depending on the learners' gender, to

increase their motivation during the teaching of the dance content in PE. This should cast some light on the two main problems that many teachers encounter when they address artistic-expressive contents, namely which methodology to use and how to motivate the students.

METHOD

Participants

The selected sample consisted of 47 learners in their 4th year of compulsory Secondary Education (ESO), from 1 school of the Autonomous Community of Extremadura (Spain). The participants were girls (n=29) and boys (n=18), between the ages, 14 to 16 years (14.84±0.48). They were selected conveniently based on their placement 1 of the 2 classes provided. One class of 20 learners received dance teaching sessions where the *Direct Instruction Technique* was applied and the other class of 27 learners experienced dance teaching sessions employing the *Creative Inquiry Technique*. A PE teacher with dance training facilitated the application of both teaching techniques.

Ethical approval

The study was granted approval from the Ethics Committee of the University of Extremadura. All participants were treated in accordance with the ethical guidelines of the American Psychological Association with respect to consent, confidentiality and anonymity of their testimonies. Furthermore, written informed consent was obtained from parents and from the director of the school on behalf of under-aged children taking part in the study. All the children gave their assent and they committed to participate in the whole process until the end.

Measuring instrument

A qualitative research design was applied and the instrument used was the self-report method of personality assessment (Paulhus & Vazire, 2007), in order to understand the differences in the learners' perceptions and experiences, in accordance with the pedagogical proposals set out in each of the 2 dance teaching techniques.

The following premises were applied:

- The document was anonymous and the data would be treated confidentially.
- Students had to write down their thoughts and reflections, by answering to the following question: "Explain in detail all of the reasons that make you engage in the dance classes in PE and express your perception of the development of the sessions".
- The minimum length had to be 1 page, including extensive descriptions, expressing in depth what they had felt with each activity.

Variables

With reference to the variables used in this study, the application of the 2 dance teaching techniques served as intervention variables.

Firstly, the *Direct Instruction Technique* responds to the traditional methodology based on the repetition of a model and, therefore, it is a technique where learners' creativity is nullified. The teacher plans the session, demonstrates the exercises, corrects the performance and takes all didactic decisions (Kassing & Jay, 2003).

Secondly, the *Creative Enquiry Technique* is a method, which allows learners to select the level of challenge in their skills, through the different options for the task performance presented by the teacher. The teacher plans a motor challenge, asking for different alternatives in the performance, with the aim to allow learners to respond creatively. Instead of showing the model of performance with the task presentation, the teacher asks questions or gives premises that require an original answer by learners, who must find a solution thereby choosing an individual and creative answer (Kassing & Jay, 2003).

The study variables were also associated with the analysis of motivation and they were measured with a category system drawn up in agreement with the definition of variables established by the Self-Determination Theory (Deci & Ryan, 1985; Ryan & Deci, 2000). Thus, 2 analysis levels were distinguished, *basic psychological needs* (autonomy, competence and relatedness), understood in terms of satisfaction or frustration and the *type of motivational regulation* or self-determination level (intrinsic motivation, identified regulation, introjected regulation, external regulation and amotivation) (Deci & Ryan, 2000). Each factor comprising this category system is explained below.

Basic psychological needs (Deci & Ryan, 2000)

Satisfaction with autonomy: When learners feel they are playing a leading role in their learning, because they can choose among the options proposed and, therefore, they feel responsible for their behaviour. Example:

In these classes, I feel that I have more freedom when I carry out the exercises.

Satisfaction of competence: When learners consider they are efficient in all the interactions that occur in the social environment and experience opportunities to express their skills and, therefore, they believe they are good or expert. Example:

I felt quite assured when I carried out the class exercises.

Satisfaction of relatedness: When learners feel integrated and connected with others from the social environment. Example:

I felt closer to my companions and that has transmitted a lot of confidence to me.

Frustration with autonomy: When learners do *not* feel they are playing leading roles in their learning, because they *cannot* choose among the options and, therefore, they do *not* feel responsible for their behaviour. Example:

I would like the teacher to consider my opinion more in class because we always have to do what he says.

Frustration of competence: When learners do *not* feel efficient in all the interactions that occur in their social environment and do *not* experience opportunities to express their skills and, therefore, they do *not* consider they are good or expert. Example:

I felt ridiculous when I saw what we were doing as I did not do it properly; I couldn't think of anything, I was nervous.

Frustration of relatedness: When learners do *not* feel integrated or connected with others from their social environment. Example:

> *During these activities that we have carried out, at one moment when we had to change partners to achieve interaction, I felt a bit lost because there was mistrust when we had to change and when you know that you do not like that class mate very much. Well, during the interaction, there was distance, the looks and contact were cold, and I felt a bit bad and uncomfortable.*

Types of motivational regulation (Deci & Ryan, 2000)

Intrinsic motivation: When learners engage in the learning activities due to inherent reasons such as the pleasure caused by practising it. Example:

> *I liked those exercises a lot, my companion and I laughed a lot and we had a great time. I hope there will be more in the future.*

Identified regulation: When learners place value on an activity because they consider it important for them. Example:

> *Dancing, for me, teaches some personal values that are not learnt elsewhere.*

Introjected regulation: When learners have previously interiorised the external source of their motivation, but still have not accepted the behaviour. Example:

> *In class, I did it the best I could because that is what you are supposed to do; it is compulsory.*

External regulation: When a learner's behaviour is controlled by external sources such as rewards, threats and punishments. Example:

> *These exercises are only useful to carry out the activities that the teacher asks us to do in the classes for the exams.*

Amotivation: This refers to a lack of intrinsic and extrinsic motivation and represents total absence of free will or self-determination. Example:

> *I did not feel comfortable attending this class because it is a pain in the neck.*

Procedure

All those involved in the study were contacted before the data were collected, obtaining the relevant permission, informing them that participation was voluntary and that the responses would be treated confidentially.

The data-collecting method used in this study was a case study design (Stake, 1995). The research was carried out during the 1st and 2nd terms of the school year in a compulsory secondary education centre, distributed into 2 weekly sessions that took place in the school gymnasium hall. 12 dance-teaching sessions were developed for each teaching technique for each of the groups. The dance content delivered in the sessions were related to 'movement factors' (body, weight, space, time, intensity and interaction), where 2 sessions were devoted to each movement factor, based on the basic principles of contemporary dance. The 2 groups worked with the same content during the research with the only difference being the teaching technique used by the teacher.

Related to the application of the creative technique, the teacher was trained during two teaching sessions about the characteristics of this type of teaching and its practical application, showing didactic examples of the creative technique, as well as the traditional direct instruction technique. The principal investigator (PI) supervised the application of the teaching sessions with the scholars to ensure its correct application.

To collect the data, 3 situational measurements were carried out by the PI, at 3 different moments in time that coincided with sessions 4, 8 and 12 of both groups (phases 1, 2 and 3, respectively). Data collection consisted of administering a self-report questionnaire to the learners, which they completed in the classroom without the presence of the teacher and in a climate that enabled them to concentrate without any type of distraction for 40 minutes. The PI was present at all times to explain any doubts and make sure that the process was strictly followed.

Data analysis

Thematic analysis was used to analyse the self-report questionnaires of the learners. This analysis mainly comprised of 3 steps. A deductive approach was used in the 1st step (Quivy & Van Campenhoudt, 1997), that is, the generation and categorisation of the codes based on the theory established and on the results of previous research studies. The 2nd step consisted of creating and categorising new codes based on the data that did not fit into the predetermined categories.

In the 3rd step, the reliability of the codes and of the coding was determined. To achieve this, the coding process was carried out firstly by the PI and, later, by an external encoder familiar with qualitative research. They followed a training process to ensure clarity and understanding of the category system prepared with the members of the research group, bearing in mind the 2 analysis levels set out in the category system, namely basic psychological needs and type of motivational regulation. Regarding inter-rater reliability, the Cohen's kappa coefficient was used (Cohen, 1960). This coefficient was 0.72, indicating that the agreement between encoders was satisfactory according to the Fleiss scale (scores between 0.61 and 0.80, satisfactory agreement) (Fleiss, 1971).

RESULTS

The results of the motivation level reached are set out by analysing the satisfaction/frustration of basic psychological needs, on the one hand, and, on the other hand, the learners' type of motivation or self-determination level in agreement with the teaching technique used and on the gender of the learners.

Analysis according to teaching technique

Firstly, a comparative analysis was carried out between the *Direct Instruction Technique* (DT) and the *Creative Inquiry Technique* (CT) with respect to the motivational processes they trigger in learners in general, with no gender differentiation.

Table 1. **COMPARISON OF INSTRUCTION TECHNIQUES FOR SATISFACTION / FRUSTRATION: FREQUENCIES AND PERCENTAGES**

	Direct Instruction Technique			**Creative Inquiry Technique**		
Variables	Phase 1 F (%)	Phase 2 F (%)	Phase 3 F (%)	Phase 1 F (%)	Phase 2 F (%)	Phase 3 F (%)
Satisfaction BPN						
Competence	3 (20.00)	12 (52.17)	8 (42.10)	3 (37.50)	3 (23.08)	11 (25.58)
Autonomy	1 (6.66)	2 (8.69)	0	0	0	0
Relatedness	3 (20.00)	8 (34.78)	7 (36.84)	4 (50.00)	7 (53.85)	19 (44.19)
Frustration BPN						
No competence	7 (46.66)	1 (4.35)	4 (21.05)	1 (12.50)	3 (23.08)	8 (18.60)
No autonomy	0	0	0	0	0	0
No relatedness	1 (6.66)	0	0	0	0	5 (11.63)

BPN=Basic Psychological Needs Phase=Assessment F=Frequency

Table 1 shows the results of this comparison based on the satisfaction/frustration of basic psychological needs, where it can be observed that the *Direct Instruction Technique* produced an increase in the perception of competence and relatedness (P=Phase; nº= Learner number):

> *Thanks to the repetition of the movements, I was quite sure that I could do the class exercises, I knew at all times what I had to do and I believe that I did them well.* (DT, P3, nº 13)
>
> *It was a session where I felt very sociable, I felt very integrated and I had a really good time because I always knew what I had to do.* (DT, P3, nº 2).

However, under the *Creative Inquiry Technique*, a decrease in perception of competence took place, which was also accompanied by a slight increase in frustration of competence:

> *When I felt the worst was when we had to create our own choreographies because I got stuck and couldn't do anything.* (CT, P3, nº 10)
>
> *I felt ridiculous when I saw that I was not doing it right, nothing occurred to me, I was nervous.* (CT, P3, nº 8)

In Table 2, the comparison between the 2 teaching techniques regarding the learners' type of motivation is presented. With respect to *Direct Instruction Technique*, the importance that learners attached to intrinsic motivation must be highlighted. It was the most important category during all the assessment sessions, with no substantial modification during the application of this technique, whilst amotivation was reduced:

> *I found the class entertaining because we did different exercises and they were not boring.* (DT, P3, nº 13)
>
> *I thought that I was going to be very bored, but I was quite surprised because I was able to participate in the activities.* (DT, P3, nº 10)

Table 2. **COMPARISON OF INSTRUCTION TECHNIQUES FOR LEVEL OF SELF-DETERMINATION: FREQUENCIES AND PERCENTAGES**

Motivation variables	Direct Instruction Technique			Creative Inquiry Technique		
	Phase 1 F (%)	Phase 2 F (%)	Phase 3 F (%)	Phase 1 F (%)	Phase 2 F (%)	Phase 3 F (%)
Intrinsic motivation	29 (61.70)	12 (75.00)	16 (88.88)	7 (77.77)	14 (66.66)	23 (50.00)
Identified regulation	2 (4.25)	0	0	2 (22.22)	1 (4.76)	11 (23.91)
Introjected regulation	2 (4.25)	0	0	0	0	0
External regulation	0	0	0	0	0	1 (2.17)
Amotivation	14 (29.79)	4 (25.00)	2 (11.11)	0	6 (28.57)	11 (23.91)

Phase=Assessment F=Frequency

In contrast, the *Creative Inquiry Technique* produced a decrease in intrinsic motivation, a slight increase in identified regulation, accompanied by an increase in amotivation:

> *The classes are fun but I don't like having to invent the choreographies, I prefer not to have to think.* (CT, P1, nº 2)
>
> *I believe that these classes have been very useful to us.* (CT, P3, nº 2)
>
> *I am not interested in this type of exercises where I have to engage so much, and on top of that, with dance things, I prefer to do a sport.* (CT, P3, nº 8)

Analysis according to gender

An analysis was conducted to compare the motivational processes for the 2 teaching methods for gender, given the cultural differences that have traditionally been expressed between both genders. The comparison by gender (B=Boy; G=Girl) appears in Table 3. According to the satisfaction/frustration of basic psychological needs, it can be seen that girls perceive more competence than boys under the *Direct Instruction Technique* whilst, in the case of boys, the opposite occurred, showing greater competence than girls under the *Creative Inquiry Technique*:

> *I feel that I can do everything. There are no limits or frontiers.* (DT, P1, nº 1, G)
>
> *I liked this class a lot. I knew the choreography better and it was easier for me to do it because we had created it ourselves.* (CT, P2, nº 15, B)

Immediately afterwards, on analysing the frustration of basic psychological needs, it can be observed how girls consider their competence to be more frustrated under the *Creative Inquiry Technique*, whilst boys find this need more frustrated with the *Direct Instruction Technique*:

> *I felt embarrassed when people were looking at me and I did not know what to do to be able to do it well.* (CT, P3, nº 2, G)
>
> *I did not manage to do the steps well and I looked really flat-footed.* (DT, P1, nº 11, B)

Table 3. **GENDER COMPARISON OF INSTRUCTION TECHNIQUES FOR SATISFACTION/FRUSTRATION: FREQUENCIES AND PERCENTAGES**

	Direct instruction technique		Creative inquiry technique	
	Girl	Boy	Girl	Boy
Variables	F (%)	F (%)	F (%)	F (%)
Satisfaction BPN				
Competence	9 (40.91)	14 (40.00)	10 (19.61)	7 (53.85)
Autonomy	0	3 (8.57)	0	0
Relatedness	12 (54.54)	6 (17.14)	26 (50.98)	4 (30.77)
Frustration BPN				
No competence	1 (4.54)	11 (31.43)	10 (19.61)	2 (15.38)
No autonomy	0	0	0	0
No relatedness	0	1 (2.86)	5 (9.80)	0

BPN=Basic Psychological Needs F=Frequency

Finally, Table 4 reflects the findings related to the level of self-determination, where it can be seen that girls generally show greater intrinsic motivation than boys with both teaching techniques, whilst with amotivation the opposite occurs, as boys are the ones who show greater amotivation than the girls under both teaching techniques:

> *Dancing is the means I have got to feel free, to be released, to escape from the world to enter into another different one to my own.* (DT, P1, nº 3, G)

> *Personally, the class has not been at all special but that is my opinion and I don't like corporal expression very much but maybe the others like it.* (DT, P1, nº 12, B)

Table 4. **GENDER COMPARISON OF INSTRUCTION TECHNIQUES FOR SELF-DETERMINATION LEVELS: FREQUENCIES AND PERCENTAGES**

	Direct instruction technique		Creative inquiry technique	
	Girl	Boy	Girl	Boy
Motivation variables	F (%)	F (%)	F (%)	F (%)
Intrinsic motivation	24 (92.31)	33 (60.00)	32 (71.11)	12 (38.71)
Identified regulation	2 (7.69)	0	11 (24.44)	3 (9.68)
Introjected regulation	0	2 (3.63)	0	0
External regulation	0	0	0	1 (3.22)
Amotivation	0	20 (36.36)	2 (4.44)	15 (48.39)

F=Frequency

DISCUSSION

The subject of PE has traditionally been linked to the prevailing movement culture, associated with paradigms that seek technical efficiency, the final product and competition (Kirk, 2010; Gard, 2011). Thus, artistic-expressive practices represent a conflict for the learners, as it affects the emotional dimension rather than technique. This negative attitude felt by the learners may be due to not being aware of the benefits it provides, as the teachers do not use the right method to teach this type of content (Pate & O'Neill, 2009; Sebire *et al*., 2013). However, the teacher is responsible to make sure the learners feel comfortable, not forgetting the clear gender differences in motivation towards artistic-expressive activities, as is the case of dance (O'Neill *et al*., 2011).

Thus, the intention with this study was to discover the most efficient teaching method, while considering the learners' gender, to increase their motivation during the teaching of the dance content during PE. To do this, 2 different teaching techniques were compared; the *Direct Instruction Technique* and the *Creative Inquiry Technique*, observing their effect on gender and the motivational processes that are triggered during the practise of the artistic-expressive content in PE. Following the analysis of the results, it is worth highlighting that in general, the application of the *Direct Instruction Technique* for teaching dance content in PE produces more adaptive consequences for students from the motivational viewpoint, with respect to the *Creative Inquiry Technique*.

The *Direct Instruction Technique* triggers a progressive increase in the perception of competence and relatedness and a decrease in amotivation in learners. Furthermore, it must be noted that intrinsic motivation remains high from the first moment this teaching technique is applied until the end. In this regard, after taking into consideration the learners testimonies, it was observed that the repetition of movements and the acquisition of a motor experience, which brings about a lot of satisfaction despite the difficulty that the execution may entail. It allows learners to feel more competent, more integrated with their classmates and more motivated towards dance. In fact, some studies indicate that if the learners have a prior model of reference, as it occurs in the case of the *Direct Instruction Technique*, they master a task more quickly and thus experience greater motor competence (Runco, 2008; Sanchez-Ruiz *et al*., 2011). It has been reported that competence is associated with fun and satisfaction in PE (Cairney *et al*., 2012).

On the other hand, the application of the *Creative Inquiry Technique* brought about a decrease in competence in intrinsic motivation and identified regulation and an increase in amotivation. By the end of the teaching sessions, competence and identified regulation increased slightly whilst amotivation decreased slightly (Table 2). Based on the testimonies of the learners, the problems that arise from the use of this type of teaching technique are related to insecurity and discomfort. They have to think, contribute ideas and create a sequence of movements. They have doubts about their own competence and believe they are going to be judged and ridiculed by the rest of their classmates. This may be associated with the fact that they lack a model to follow with which they can self-regulate and receive feedback (Sanchez-Ruiz *et al*., 2011). However, with time the learners in this study felt more competent and they made better use of their resources. From that moment on, they started understanding and evaluating the usefulness of this type of procedure. Perhaps, through

experiencing this creative method enabled the teacher to get closer to the students' preferences and connect them to their objectives, contents and procedures (Hong *et al*., 2009; Kousoulas & Mega, 2009).

When the data were analysed according to gender, the girls showed greater intrinsic motivation and the boys showed greater amotivation with both teaching techniques. This seemed to be related in all cases to the content. The girls usually expressed their interest, enthusiasm and satisfaction with participating in dancing, whilst the boys reported their lack of interest and dissatisfaction because they prefered to practise sport (Chalabaev *et al*., 2013). These findings are in line with similar research studies, which conveyed that the dance content is preferred to a greater extent by girls (Grieser *et al*., 2006; O'Neill *et al*., 2011), while generating greater amotivation in boys, because they consider they have less qualities to perform this type of activity for social and cultural reasons (Lyu & Gill, 2011; Chalabaev *et al*., 2013).

With reference to competence, there are also contrasts between genders. Girls perceive having greater competence under the *Direct Instruction Technique* and greater incompetence under the *Creative Inquiry Technique*, whilst exactly the opposite occurs with boys. More specifically, the testimonies revealed that girls felt more secure under the *Direct Instruction Technique* because they considered that they had the necessary resources to perform the movements successfully. On the other hand, under the *Creative Inquiry Technique*, they felt more ridiculous when they saw what they were doing and they believed that they were not doing it efficiently. In fact, there are studies reporting that some learners experienced less mastery of the task, when they had to choose the execution creatively (Lykesas *et al*., 2009).

However, the boys felt more secure under the *Creative Inquiry Technique* because they considered that they knew what they were doing and it was easier for them because they adapted the choreographies to their level of performance. Whilst with the *Direct Instruction Technique*, they felt incompetent because, despite knowing the movements and repeating them, they believed that they were not efficient in their execution. These findings could be explained by greater or less cognitive participation of learners in the teaching-learning process, as some studies suggest that in PE, boys are more attracted by activities with high cognitive participation than girls are (Halpern, 2000; Chen & Darst, 2001). Perhaps the sessions under the *Creative Inquiry Technique* could make boys feel more comfortable and more competent, as this method requires the production of new and adequate ideas, where a high degree of cognitive engagement is required (Ghayas *et al*., 2012).

CONCLUSIONS

The main conclusions to be highlighted are, firstly, the efficiency of the *Direct Instruction Technique* regarding the motivation of the learners. It is effective for the treatment of dance content in PE in the initial stages, as it permits them to show greater competence and security in executing the activities based on repetition and shadowing the model provided. However, when the *Creative Inquiry Technique* is applied in these stages, the consequences at motivational level are negative at the start, resulting in a decrease in competence and in intrinsic motivation. Nevertheless, it would be appropriate in future studies to conduct a more prolonged monitoring in order to observe the effect of this technique over time. There have

been signs that, the longer this technique is applied, the learners begin to increase their competence and to understand the usefulness of creative dance in different areas of their lives (which can be verified with the increase in identified regulation).

Secondly, dance content in PE requires differentiated treatment depending on the learners' gender. The use of the *Direct Instruction Technique* is more effective with girls. To this end, it is suggested that when learners acquire adequate motor experience, both techniques should be alternated during all the sessions to favour the satisfaction of both genders. Thus, the teacher will focus more on reinforcing the competence of boys under the *Direct Instruction Technique* and on fostering cognitive participation and creativity of girls under the *Creative Inquiry Technique*.

This research is one of the few qualitative studies carried out under the Self-determination Theory approach to analyse learners' motivation towards dance, depending on the teaching technique used and on the learners' gender. The results reported could be considered and applied by PE teachers. It would be interesting to replicate the research in future studies, incorporating a greater number of centres and learners and even comparing different ages and groups in dance teaching, so that the results can be extrapolated to other contexts.

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