ORIGINAL

GENERATED EMOTIONS BY VARIOUS TYPES OF GAMES IN PHYSICAL EDUCATION

EMOCIONES GENERADAS POR DISTINTOS TIPOS DE JUEGOS EN CLASE DE EDUCACIÓN FÍSICA

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ABSTRACT

The aim of this research has been to know which are the generated emotions through the practice of diverse kinds of games, through a proposal. Specifically, it is have been tried to know how cooperative and opposition games allow for the emotional development of the students with respect to traditional cooperative games and traditional opposition games. A total of 50 children of 6th grade took part in this work. The instrument used was the Gil-Madrona and Martinez's questionnaire (2016) about socio-emotional perceptions. The results indicate a similarity between using cooperative and traditional cooperative games. However, traditional opposition games produce greater positive emotions in students with respect to opposition games. Finally, it is concluded that the approach used is effective to produce emotions in the four motor domains studied.

KEY WORDS: emotions, civic education, educational games, teaching methods

RESUMEN

El objetivo del presente estudio ha sido ahondar en el conocimiento de las emociones generadas a través de la práctica de diversos tipos de juegos, mediante la puesta en práctica de una propuesta diseñada a tal efecto. Más concretamente se ha tratado de conocer en qué medida, los juegos cooperativos y de oposición permiten el desarrollo emocional del alumnado en comparación con los juegos populares cooperativos y de oposición. Los participantes han sido un total de 50 alumnos y alumnas de sexto curso de Educación Primaria. El instrumento empleado ha sido el cuestionario sobre las percepciones socio-emocionales de Gil-Madrona y Martínez (2016). Los resultados indican una gran similitud entre la utilización de los juegos cooperativos y juegos populares cooperativos. No obstante, los juegos populares de oposición producen mayores emociones positivas en el alumnado respecto a los juegos de oposición. El porcentaje de alumnado que se decanta por las emociones plancenteras es manifiestamente superior al de aquellos que se decantan por las displacenteras. Finalmente, se concluye que la propuesta utilizada es eficaz para producir emociones en los cuatro dominios de acción motriz objeto de estudio.

PALABRAS CLAVE: Afectividad, educación ciudadana, juego educativo, método de enseñanza

INTRODUCTION

Emotional learning is considered vital in today's society *Bisquerra (2003). Being able to know yourself, aware of your own emotions and the causes of your behaviour and of those around us are current topics. That is why, in a competence-based education the importance of the emotional competence — so as the group of knowledge, capacities, skills and aptitudes necessary to understand, express and regulate in an appropriate manner emotional phenomena (figure 1) —is so remarkable.
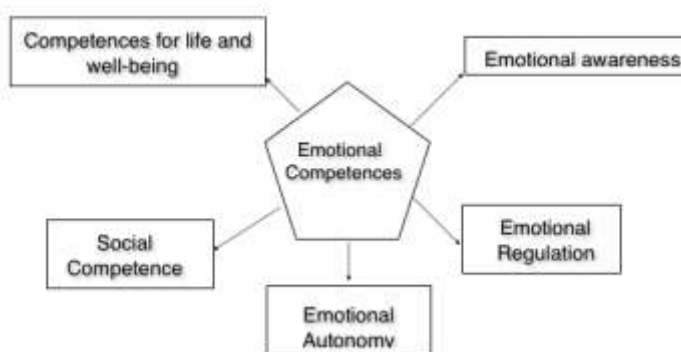

Figure 1. Emotional competences (Bisquerra & Pérez, 2007)

It has been demonstrated how academical knowledge is better learned when the student adequately controls their emotions (Bisquerra & Peréz, 2007). That is, when the learner knows how to deal with different emotions according to the context related to themselves and the environment (Bisquerra, 2003; Saami, 2000).

The Royal Decree 54/2014 by which it is established the Primary Education curricula in Castile-La Mancha autonomous region, assimilates what ruled by the Organic Law for the quality improvement in education —*Ley Orgánica de Mejora de la Calidad de Educacion, LOMCE*— and the Royal Decree 126/2014 by which the basic Primary Education curricula is established and shows a wide variety of references related to the scope of this study.

In this regard, we can highlight the article II of the General Principles in Decree 54/2014 where it is claimed that a comprehensive training which promotes the full development of personality shall be guarantee (p 18498). Furthermore, this same document stipulates in its introduction that every student shall count with the support of a guide in terms of perceptive, emotional and motor-decision-making aspects when adapting movements to the different complexities of physical, expressive and sporting contexts (p 18812). Regarding the emotional awareness contents, there exist references associated to expressive manifestations associated to movement, relaxation, emotional externalisation, ideas and feelings and the interpreting of what by others is expressed.

Taking into account previous studies related to Physical Education, we can find a wide variety of contributions focussed on the physical and emotional human aspects as an invisible whole (Damasio, 1994; Denzin, 1984; Dewey, 1938; Fernández-Berrocal & Ruiz; 2008; Lagardera, 2007; Lapierre & Aoucouturier, 1985; Parlebas, 2001; Pena & Repetto, 2008; Reich, 1978; Ruano, 2004; Tolle, 2004). A great diversity of authors manifests the influence of corporal expression related to the emotional experience (Glaría, 2002; Laban, 1993; Larraz, 2003; Montávez, 2003; Motos, 2003; Ortiz, 2002; Sierra, 2000; Villada, 2002; Vishnivetz, 2003).

Espada and Calero (2012) affirm that the subject of Physical Education has a very direct impact on the emotional intelligent elements, as the empathy, the control of emotions, self-motivation and social skills are key elements at sport, being at educational or competitive level.

Accordingly, Duán, Lavega, Salas, Tamarit & Invernó, 2015; Ferrer, 2013; Sáez de Ocáriz & Lavega, 2015; Yuste, Alonso, Gea & Ureña, 2014 link the area of Physical Education to the growing interest in teaching from an emotional point of view, being Romero-Martín, Gelpi, Mateu and Lavega (2017) who refer to Physical Education as a subject in which, given its idiosyncrasy, the learner has the opportunity to manifest an intense, rich and varied spectrum of emotions.

Ruiz, Lorenzo and García (2013) state that the Physical Education programmes can contribute in a firm manner to the development of the social and civic education of the learner, albeit we must consider that such development does not simply appear for the mere participation of the student but as the result of the practical implementation of the designed programmes.

González, Contreras and Gil-Madrona (2013) state that in Primary Education PE (Physical Education) classes, the measurements obtained in the different categories to assess the degree of interpersonal emotional competence shows a good level of the student's competence in the studied categories.

Lavega, Filella, Agulló, Soldevilla and March (2011) expose that the use of sport games in PE is an excellent way of fostering valuable school coexistence experiences among the learners, and it is even able to promote pro-social behaviours.

Having into consideration other studies (Gelpi, Romero-Martín, Mateu-Rovira & Lavega, 2014; Lagardera & Lavega, 2011; Lavega, Aráugo & Laqueira, 2013; Lavega, March & Filella, 2013; Rovira, López-Ros, Lagardera, Lavega & March, 2014; Sáez de Ocáriz, Lavega, Mateu & Rovira, 2014; Torrents & Mateu, 2015), we can refer to the fact that the emotional behaviour developed in PE has a bearing on the internal logics of the performed motor practice.

When using cooperative games for this purpose, it is confirmed that its usage fosters the social competence which improves school coexistence and mediates in conflict resolution (Fernández-Cabezas, Benítez, Fernández, Justicia &

Justicia-Arráez, 2011; García-Raga & López-Martín, 2011; Green & Rechis, 2006; León, Gozalo & Polo, 2012). All this, it is supported by Sáez de Ocáriz, Lavega, Mateu and Rovira (2014) when they point out that teaching PE by motor situations sets off motor relations among participants. This has a direct impact on the social-competences acquisition linked to coexistence improvement. Lavega *et al* (2011) affirms that motor situations encourage emotional experiences.

Notwithstanding, the subject matter of this research is focussed on the emotions powered by opposition and cooperative popular games and others and the internal logic of the before-mentioned games. In this regard, Parlebás (2001) elaborates a systematic classification of games and sports differentiating four different families named motor-action domains, and defined as the field in which all the corporal practices are considered homogeneous under precise criteria of motor action. By this way, all the motor situations under the same domain group have common characteristics of internal logic. These are:

- Psychomotor games without motor interaction among players.

- Cooperative games with mutual assistance interaction among players.

- Games of opposition in which participants establish adversarial motor interactions with the rest of the players.

- Games of cooperation vs opposition in which there exist colleagues and opponents.

According to these domains, there exist a great diversity of studies focused on the analysis of emotions due to the results of their implementation in the learner. Jaqueira, Lavega, Lagardera, Aráujo and Rodrigues (2014) highlight the use of cooperative games based on the pacific co-existence and the development of intense positive emotions (Lagardera & Lavega, 2011; Lavega, Filella, Agullo, Soldevila & March, 2011). In the internal logic of these games all participants must cooperate in order to achieve a common goal and develop the pro-social values —solidarity, respect for others, trust and empathic attitude— (Lagardera & Lavega, 2013). The same authors determine that when the PE teacher uses co-operative games, they are able to drive at their will interpersonal relations. According to this, some studies suggest that the personal behaviour and the reactions to emotions can be different depending on whether the games are or not competitive (Alonso, Gea & Yuste, 2013; Lavega y Gea, 2013; Gázquez, Pérez, Molero & Parra, 2013; Lavega, Filella, Lagardera, Mateu & Ochoa, 2013).

In connection with the possibility of playing alone or in company, Alonso, López de Sosoaga and Segado (2011), Broetto and Costa (2005), Lavega, Filella, Agulló, Soldevila and March (2011), Lavega,March and Filellas (2013) stress that participants in sport games have a more positive outlook when playing with others (sociomotor situations) than alone (psychomotor situations).

In this study, we took as a starting point the sociomotor situations framed in the motor action domain of cooperative and opposition games of Parlebás. Furthermore, another interesting and relevant measure for the purpose of this project is introduced: the popular nature of games. A popular game is that one born from folklore and popular culture, which has basic rules and allows the culture of a given community to survive. In this way, we will be able to acknowledge the level of emotions powered by tasks and which have been framed in the different motor domains —according to its popular nor non-popular nature.

In that way, in light of the above, and with the aim of deepening on the emotional development within a PE framework, the aim of this study is to measure the effectiveness of opposition and cooperative popular games in contrast to the cooperative and opposition games in PE classes of the 6th grade of Primary Education. We will also study how these opposition and cooperative games contribute to the emotional development of the learners taking into account the popular nature of the games.

MATERIAL AND METHODS

Participants

The sample is made up of 50 students of 6th grade of Primary Education —31 boys (62%) and 19 girls (38%) between 11 and 13 years old— of a preschool and primary public school in the provincial territory of Albacete.

Instruments and proceedings

For the purpose of this study, we used the questionnaire about the socio-emotional perceptions in PE classes of Gil-Madrona and Martínez (2016). This questionnaire lists a number of emotions divided on pleasant or positive emotions (16 adjectives) and unpleasant or negatives emotions (14 adjectives) in which the students must express their perceptions through the Likert scale, being: 1-Totally disagree, 2-Disagree, 3-Agree, 4-Totally agree (chart 1).

	1	2	3	4
1. Satisfaction				
2. Pleased				
3. Joy				
4. Happiness				
5. Affection				
6. Enthusiasm				

7. Trust				
8. Pride				
9. Comfortable				
10. Calmness				
11. Nonchanlance				
12. Glee				
13. Effectiveness				
14. Tranquility				
15. Motivated				
16. Relaxed				
17. Unhappiness				
18. Upset				
19. Fear				
20. Helplessness				
21. Outrage				
22. Ansiety				
23. Insecurity				
24. Confussion				
25. Despondency				
26. Bored				
27. Desinterested				
28. Frightened				
29. Worried				
30. Unmotivated, indifference				

Chart 1, Questionnaire about the socio-emotional perceptions experiments during PE classes (Gil-Madrona & Martínez, 2016).

Reliability analysis by Alfa of Cronbach revealed a high internal consistency: positive emotions questionnaire of students EMOC_POS students (α=0.937), negative emotions questionnaire of students EMOC_NEC students (α=0,921).

Firstly, the PE teacher who teaches both groups of 6th grade was informed about the aims and purposes of the research. Following their approval, the management board was called for an informative meeting. Then, the subject was brought to the attention of the School Board who also agreed.

Subsequently, tutors were asked for collaboration as extra time from other subjects needed to be taken in order to complete the questionnaire. This was just necessary in two groups. The rest of the classes counted with 90 minutes — two forty-five-minute consecutive classes— from the 135 minutes that establishes the current Spanish law.

With regard to the motor tasks, four PE sessions of forty-five minutes each were carried out. Each session dealt with a special motor domain, as well as with the presence or absence of popular games. In this way, organised sessions were obtained according to the following criteria: (1) cooperative games, (2) opposition games, (3) cooperative popular games, (4) opposition popular games.

Implementation of the sessions

Session 1	Cooperative Games
WARMING UP	
1. The spiral	The class is divided into two groups. Participants of each group go hand in hand forming a 'chain'. The last of the students in the chain turns on themselves, 'rolling' the group and creating a spiral of students. They must succeed in rolling up and down without falling down. Variant: competition is introduced. What team will succeed in rolling up and down the first one without falling down? Variant: we do it all of us at the same time
MAIN PART	
2. Cross the lake	Groups of 5 student are formed. They are told to imagine themselves in front of a lake full of piranhas, crocodiles and thousands of bugs who will eat them all if they touch the ground. They must cross the lake with the aid of five stones (pshychomotricity bricks) which can step over and move but not use for scrolling within. When a participant touches the lake with both feet, all the group must start again from the shore.

3. Don't fall off!	What balance structures can we make up so one of your group doesn't touch the ground nor any object?We can also perform other balance poses thought up by our colleagues.
4. Operatingbech	Gymnastic benches are placed in a row surrounded by fail-save mats. Then, the following activities are carried out: - All the class stands still on the benches. The group tries to coordinate their actions so that the greatest amount of people can stand still on top of the least possible number of benches. - The learners form a row at both ends of a bench.The two students placed at both sides try to walk along the other side of the bench cooperating so none of them fall off the bench when they meet in the middle. - The students climb on a bench. Once there, they determine an order criteria (high, month of birth…) Now they must cooperate so none of them falls over the bench while trying to organised themselves.
5. Some like it stilted	Stilts are distributed among the learners. Then, the following activities are carried out: - Walking along the court without touching the ground with the feet, the students try to swap stilts. - In pairs, the students choose a rhythm that they try to imitate wearing the stilts. - In a big group, they try to avoid that one or more balloons fall to the ground.
COOLING DOWN	
6. The Tower	Groups of five are formed. Pshychomotricity bricks are distributed. Each group must try to build a tower as high as possible avoiding to collapse. Variant: all the class must build a tower as high as possible avoiding to collapse.

Chart 2. Session 1: cooperative games

Session 2	Popular Cooperative Games

WARMING UP	
1.The *Marro*	One student starts catching. That one who has been caught hold hands with the one who catches. So every time somebody is caught, they hold hands with the last one of the human chain. They must try to catch everyone without breaking it.The last one who is still free wins the game. Variant: chains are formed by two people. When four people are part of the chain, this splits up into two different chains of two people each.

MAIN PART	
2. The Squad	In groups of five people, two participants turn the rope while the rest jump at the jump-rope rhyme (May the first squad come in, may the second squad come in…). Those who come out are now the turners, so everyone can jump while the rope keeps turning.
3. Turtles race.	In groups of five, every participant has a pad and finds themselves in one side of the gym. At the sign, everyone must lift the pad, go under it as they were turtles and the pad their shells and run along the return circuit. It is important that everybody finds themselves under the pad and participates in the circuit, as well as to arrive at the same time to the finish line.
4. Steal the flingsock	Two groups of 12 students place themselves opposite the other at 10 m. The components of each team make groups of 3 people numbering each group from 1 to 4. In the middle 'the mother', who holds the flingsock, will say a number. The groups with that number will run hand in hand in order to catch the flingsock first and run back to the starting point without being catch by the other group. To score the task should be done without letting go. Variants: several rounds can be done, giving a different number to all the members of a same team (2, 3, 4, 6, 12), as well as the contact point that joints one participant to the other (hands, arms, shoulders…).

5. Tug of war	Groups of 6 participants are formed. They play doubles. Every two couples have a rope, so they place one opposite the other holding both of them the rope. At the sign, all the components must pull the rope in opposite directions in order to drag the opponent. When the first participant of a group crosses the line, they lose and the game finishes.
COOLING DOWN	
6.The blanket toss	It is a modification of the traditional custom of tossing somebody related to a celebration.We make groups of 12 students. Every group has a parachute and a ball, which is placed in the middle of the parachute. The aim of the game is tossing the ball with the aid of the parachute and do not let it go out to the floor. Variants: a small ball as a tennis ball can be used instead. The aim now can be trying to make the ball pass through the hole placed in the middle of the parachute.

Chart 3. Session 2: cooperative popular games

Session 3	Opposition games
WARMING UP	
1. The finding	Two students are randomly selected. They are placed at both sides of the court. At the sign, they must meet as soon as possible. The rest of the players find themselves in the middle of these two players trying to avoid the finding by cutting their trajectory when possible but without bumping into each other. Variants: the players who must find each other will vary.
MAIN PART	
2. Switz fight	In pairs. The students hold from one hand and try to reach the back of the colleague. The first one who success wins the game. Of course, we must try to avoid our opponent to win. Variants: we form different pairs of players.

3. The 10 passes	Teams of 6 components are formed. One team plays against the other. The aim is passing the ball among the players of the same team. When reaching 10 passes, the team scores a point, serving the opponent. The team without the ball must try to wrest the ball from the opponent and try to score points by making 10 passes.
4. No-ball football	In groups of two teams, one group attacks and the other defends. The attacking team secretly choses the ball-player and informs the teacher. The aim of the game is that the ball-player can cross the goal line as soon as possible. When this happens, the timer stops and roles change in order to prevent the opponent to score a goal, the other team must grab and push the attacking team in order to prevent the ball-player to cross the goal line.
5. Sweeping the house	In two teams, each team posses half of the court. In each half, there are balls, *indiacas* and frisbees. At the sign, the player of each team must use the material—just one at a time— and throw (ball/frisbee) or hit (*indiaca*) it to the opposite half. At the sign, both teams must stop. The team having less objects in its half scores one point.
COOLING DOWN	
6. The gunman	The group is placed in a circle. The sheriff is in the middle of the circle and must point out and name one student. At this time, the student must bend over and those immediately at both sides of the student must "shot" their guns. The one who shots first keeps playing. The looser sits down in the circle. The survivor wins.

Chart 4. Session 3: opposition games

Session 4	Opposition popular games
WARMING UP	
1. Tag	In this case, there are three groups: ogres, fairies and kids. The ogres try to catch the kids, who become petrified. The fairies can set kids free, and must work against the ogres. Variants: change of roles among participants.

PARTE PRINCIPAL	
2.The Treasure Hunt	In two teams, the court is divided in two halves.There is a treasure —*indiacas*, balls, sand sacs, etc— in each half which is guarded by the teams. At the sign, both teams must cross to the other half in order to steal the other team's treasure and take it back to their area. If you are tagged in the attempt, you must go back to your half and try again. The group with the biggest treasure wins the game.
3. The blanket	Groups of 6 people. One team plays agains the other, so there are two simultaneous matches. The court is divided into two halves with a net. Each team has a blanket, duvet or parachute and a volleyball. The aim is tossing the ball to the opposite half so it hits the ground so your team scores one point. The team who accepts the ball must prevent it from falling to the ground with the aid of the blanket and must also score a point in the opponent's half.
4. Duel between knights	In pairs. Draw a chalk circle on the ground. Both participants get into the circle and hold a wooden pike with both hands. At the sign, they must try to push the opponent outside the circle without dropping the pike. That one who succeed, wins the game. Variants: swapping pairs.
5. Turkish fight	In pairs. Both opponents kneel down to avoid falls. Confrontations last less than a minute. Participants try to immobilise the opponent and make them touch the ground. Scoring: 3 points for gluteus contact with the floor. 5 points for lateral decubitus contact with the floor. 7 points for shoulder contact with the floor. 10 points for both shoulders contact with the floor.
COOLING DOWN	
6. The pursuer ball	Students sit in a circle. Inside, we find 2 balls of different colour with the maximum separation between them. At the sign, the students must pass both balls so one can catch the other at some point.

Chart 5. Session 4: opposition popular games

Data processing

The statistical analysis has been carried out using the Excel tool provided by Microsoft Office 2010. The statistical evidence appears in form of frequencies and percentages.

RESULTS

Firstly, we must point out that when stating positive results for pleasant emotions, we will refer to domains 3 and 4 of the Likert scale. On the contrary, when stating negative results, we will refer to domains 1 and 2 of this same scale. When talking about unpleasant emotions, we will take as positive domains 1 and 2 of the Likert scale, and domains 3 and 4 will be negatively associated.
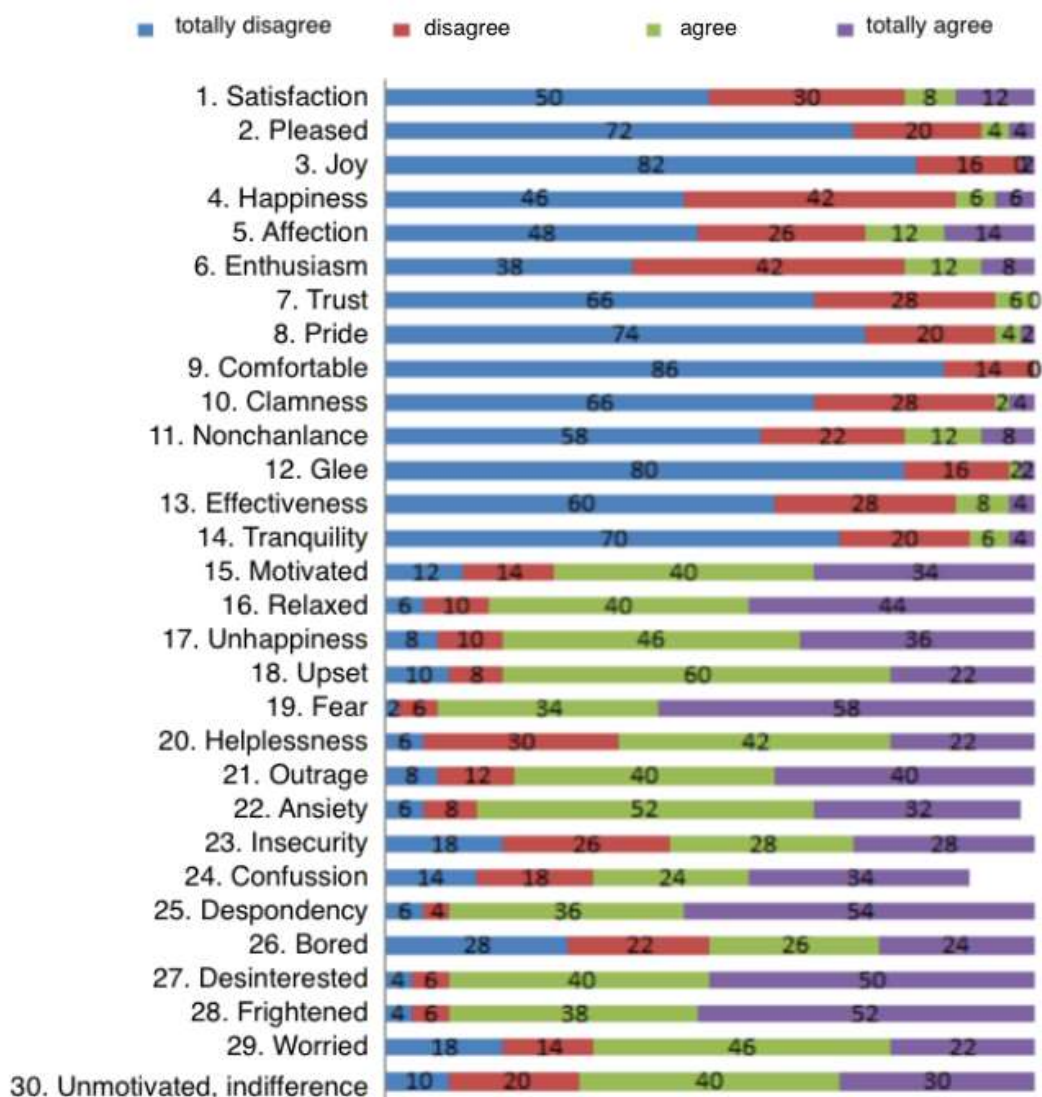
Cooperative games

Pleasant emotions show a very high positive intensity up to 76.4% in accordance to the slightly higher negative incidence, 23.6%. We also observe a very high positive effect by omission in unpleasant emotions. This is even higher than the positive incidence of pleasant emotions, exceeding the 89.1%, in line with a mere 10.9% negative incidence.

Regarding the most outstanding positive emotions —even if a high incidence of all of them has been monitored— we can highlight the existence of glee emotion with a 92% followed by joy (90%), happiness and enthusiasm. The pleasant emotions perceived with less positive intensity are : affection (50%), pride (56%) and trust (58%).

According to the negative emotions, those perceived with less intensity, and therefore, positively valued, are anxiety (0%), scared (2%), fear (4%), outrage, insecurity, confusion (6%) and worried (8%). Those with a higher intensity are bored (26%), helplessness, despondency and indifference (20%).

In graph 1 we can appreciate all the categories and their percentages.

Graph 1. Percentage of emotions in cooperative games
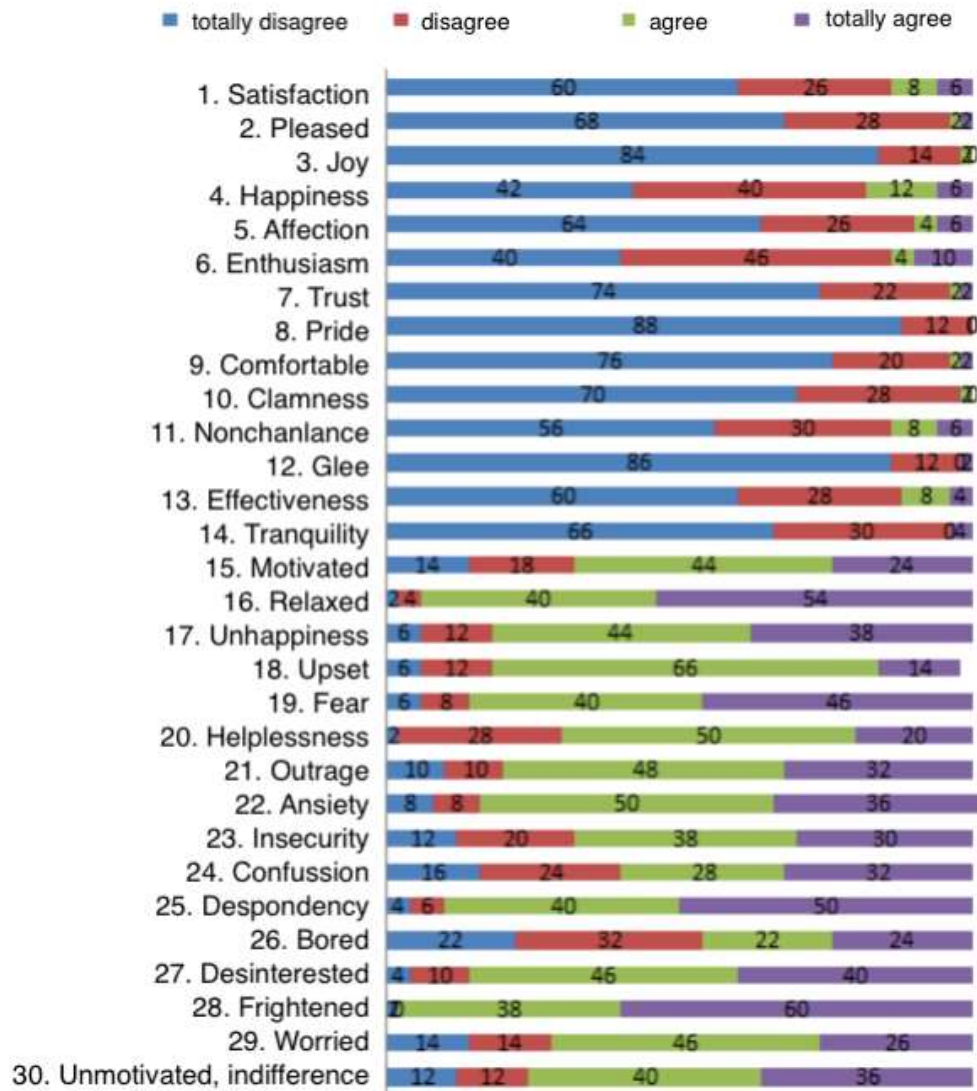
Popular cooperative games

The intensity of positive emotions reach the 77.6%, with a negative incidence superior to 22.4%. The unpleasant emotions positively valued by their absence reach an amazing intensity of 92.5% while the negative incidence remains at 7%.

In this case, the most intense positive emotions are joy, motivation and enthusiasm with 98%, 94% and 90% intensities respectively, followed by happiness (86%). Those of lower intensity are affection (46%), trust (60%), pride and relaxed (68%).

According to the negative emotions, we can appreciate a minor intensity in insecurity (0%), followed by fear, outrage and frightened (2%). The greatest

intensity has been found in disinterested, with a 18% and despondency, helplessness and unmotivated with a 14%.

Graph 2 shows all the categories and their percentages.

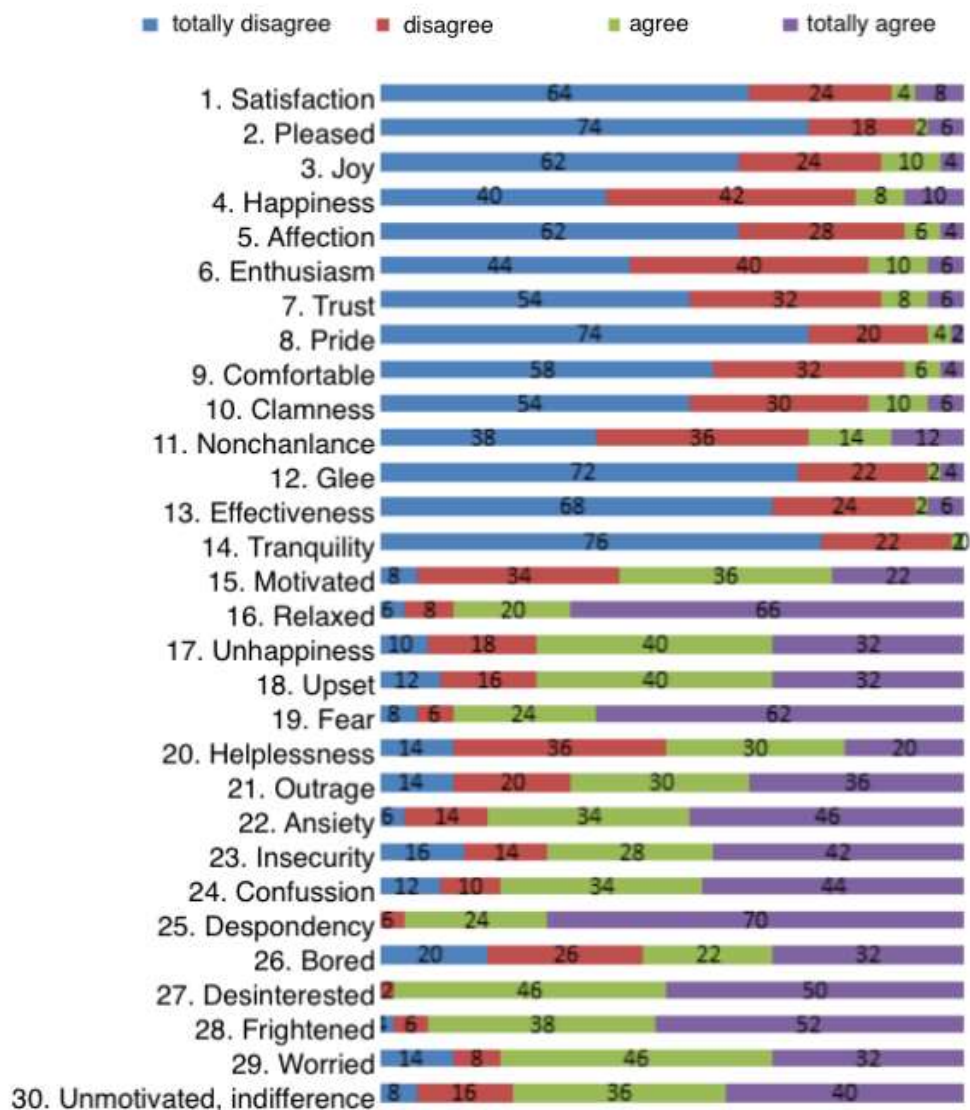**Graph 2.** Percentage of emotions in cooperative popular games

Oposition Games

Pleasant emotions show a very high positive intensity reaching the 75.4%, while the negative incidence is 24.6%. According to the intensity of unpleasant emotions, we can appreciate a positive intensity (by omission, as these do not appear) which can be considered to be very high exceeding the 88.1%. The negative incidence does not reach 12%.

Among the highly intense positive emotions we can find happiness, enthusiasm and joy with 96%, 94% and 90% respectively, followed by glee and motivated

with a 86%. In the other extreme, those perceived with less intensity are: nonchalance, affection and relaxed with 50%, 54% and 58% respectively. According to the less intense negative emotions we can highlight: unhappiness (2%), fear and insecurity (6%), upset and worried (8%) finding a higher intensity in despondency (26%), indifference (18%) and helplessness with a 16%.

In graph 3 we can appreciate all the categories and their percentage.

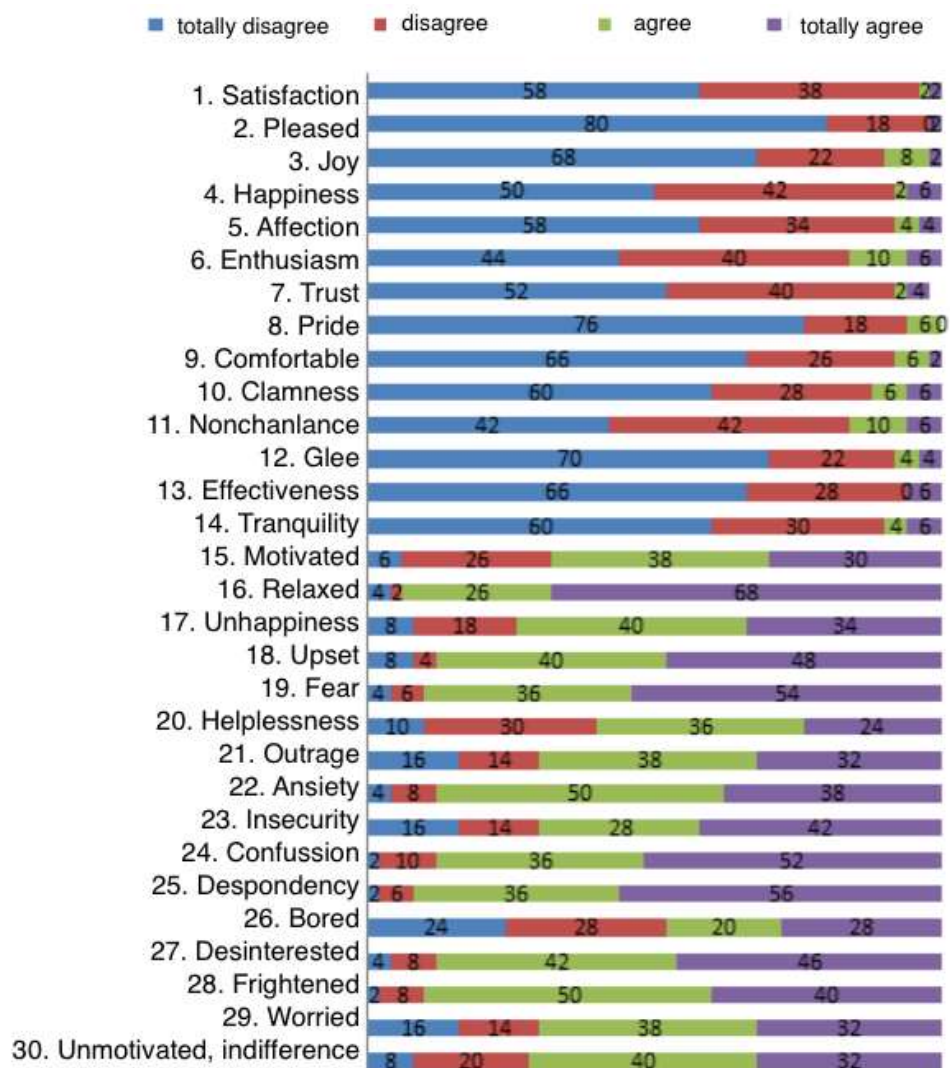**Graph 3.** Percentage of emotions in opposition games

Opposition popular games

The intensity of positive emotions exceeds the 78.1% with a negative intensity near the 22%. The unpleasant emotions represent a positive incidence (valued by its absence) superior to 91.2% with a negative incidence of 8.5%.

The most intense positive emotions are: motivation (94%), enthusiasm (92%), happiness and joy, (both with a 90%). Less intense and with a big difference from the rest, we find affection (48%) followed by nonchalance (60%) and relaxed (68%).

According to the intensity of the negative emotions and valuing their absence as a positive element, we must highlight a 2% in worried, 4% in unmotivated and 6% in upset, insecurity and helplessness, as well as 12% in outrage.

Graph 4 shows all the categories and their percentages.

Graph 4. Percentage of emotions in opposing popular games

Relation between cooperative and popular cooperative games

In connection to the motor action domain and the popular and non-popular character of the proposal, we can appreciate that there exists a minimum difference between the positive intensity of pleasant emotions (superior to 1%)

in favour of cooperative games of popular character. This is consistent with the negative perception of negative emotions with a minimum exiting difference.

Considering the unpleasant emotions, we can positively appreciate (less intensity on unpleasant emotions) a difference of a 3% in favour of popular games, also in line with the exiting difference from a negative point of view (higher intensity of unpleasant emotions).

Regarding the highly intense pleasant emotions, we find joy as a common emotion —more intense in the popular proposal—. In the cooperative games, we highlight emotions as glee, motivated and enthusiasm; while in the popular cooperative games motivation and enthusiasm gain importance (variable intensities). The following emotions are shown to be of less intense nature: affection, trust and pride. All these are favourable to the motor action domain of popular character, with the exception of affection.

From an unpleasant-emotion perspective and from a positive point of view, frightened, fear and outrage are those emotions of less intense nature and which are common to both proposals. Furthermore, anxiety, confusion and worried show a 0% in relation to cooperative games. According to cooperative popular games, we can highlight a 0% intensity in insecurity. Those more intense and common are: helplessness, despondency and indifference —a 6% (for the two former ones) and a 2% (for the latter) more than in cooperative games—. Furthermore, according to the cooperative games, we can highlight boredom and unmotivated with a 26% and a 14% in contrast to the popular option.

Generally, we appreciate that the most outstanding positive and negative emotions concur with both motor-action domains, although with different variable intensities and positions which also vary in favour of the popular proposal.

Relation between opposition and opposition popular games

In connection to the motor action domain and the popular and non-popular character of the proposal, we can appreciate that there exists a difference of pleasant emotions intensity of 2.7% in favour of popular opposition games. Therefore, this is consistent with the negative perception of pleasant emotions with a small difference in the same domain.

Considering the unpleasant emotions, we can positively appreciate (less intensity on unpleasant emotions) a difference of a 3% in favour of popular games, also in line with the exiting difference from a negative point of view (higher intensity of unpleasant emotions).

Regarding the highly intense pleasant emotions, we find enthusiasm, motivated, happiness and joy in different positions according to their intensity. We can also here include happiness, which appears to be the most intense emotion in

opposition games. We also find here less intense emotions as: nonchalance, relax and affection, being the last one more intense in opposition games.

From an unpleasant-emotions perspective and from a positive point of view, insecurity, upset and worried (6%) are those emotion of less intense nature and which are common to both proposals. Furthermore,unhappiness and fear are important emotions in opposition games. According to opposition popular games, we can highlight confusion and unmotivated. Those more intense and common are: helplessness, despondency and outrage (with a difference of 10% in the case of despondency, and 4% in the case of outrage). The same intensity is given to helplessness. Furthermore, it appears a 18% of unmotivated in opposition games.

Generally, we appreciate that the most outstanding positive and negative emotions concur in some way with both motor-action domains, although with different variable intensities and positions which also vary in favour of the popular proposal. This tendency in reversed with unpleasant emotions in popular cooperative games.

DISCUSSION

The learners that took part in this investigation highly experiment positive emotions. There also appear negative emotions with notable differences regarding to the positive ones. It seems interesting the fact that the most remarkable emotions —both pleasant and unpleasant— from a positive and negative point of view are consistent with the analysed motor domains.

No remarkable differences of the learners can be appreciated in cooperative and cooperative popular games. The same happens with opposition and popular opposition games. Furthermore, the research does not indicate significant differences between the motor-action domains.

It is also difficult to draw parallels based on similar studies as they are focused on different aspects, categories, skills, emotions and ages. As the instrument used here was that one developed by Gil-Madrona and Martínez (2016), we can draw some conclusions comparing both works, having into consideration that their proposal is based in general PE classes without focussing on games or tasks which have been framed in different motor-action domains as this was.

Therefore, we can determine that both works agree upon the fact that the percentage of students with pleasant emotions is highly superior to those with unpleasant emotions. Next, the coincidences of both proposals are listed:

- Pleasant emotions the learners identify with the most: there exist three coincidences —glee, happiness and joy— stated in the same order of importance.
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- Pleasant emotions the learners identify with the least: there exists a coincidence linked to the affection.

- Negative emotions the learners identify with the most: despondency is the only coincidence in both works.

- Negative emotions the learners identify with the least: there exists a coincidence related to frightened and fear.

- An important aspect is to highlight that anxiety and outrage are two of the negative emotions that the learners identify with the least in this research. This is also remarkable in Gil-Madrona and Martínez's work (2016).

CONCLUSIONS

According to the purposes previously outlined, we can draw the following conclusions:

From the comparative work between cooperative games and popular cooperatives games we can conclude that the use of both skills will achieve similar effects. From the comparative work between opposition and popular opposition games, we can conclude that popular opposition games are more effective for the development of these kind of emotions. Finally, we acknowledge the effectiveness of the implemented educational proposal, since the students experienced positive emotions throughout the sessions.

Finally, we must remark that this research can set the pace of new lines of investigation in other Final Degree and Master Projects or DhD thesis in different Spanish universities — as the investigation work opened by some teachers (Pedro Gil-Madrona), co-authors of this work from the Musical and Artistic Expression and Body Language Didactics Department of the university of Castile-la Mancha, Universidad de Castilla La Mancha, UCLM— upon which to lay future studies such as this presented.

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