

Improving student–student interactions in early childhood classrooms using inclusive dance activities

Juan Bautista Llorens Gómez,^a Dolores Madrid Vivar,^b and Ana María Díaz Olaya^c

^aSecondary Music Teacher, Valle del Henares Secondary School, Jadraque (Guadalajara), Spain, ^bDepartment of Didactics and School Planning, University of Malaga, Malaga, Spain; ^cDepartment of Didactics of Languages, Arts and Sports, University of Malaga, Malaga, Spain

Juan Bautista Llorens Gómez (jbllorens@hotmail.com), Dolores Madrid Vivar (lmadrid@uma.es), Ana María Díaz Olaya (anadiaola@uma.es)

Juan Bautista Llorens Gómez holds a PhD in Education and Social Communication, a postgraduate degree in Music and Dance in Education from the Mozarteum University of Salzburg, and a graduate degree in Ancient Musical Instruments (baroque violin) from the Royal Superior Conservatory of Madrid (*Real Conservatorio de Música de Madrid*). He currently teaches music in a secondary school.

Dolores Madrid Vivar holds a PhD in Psychopedagogy from the University of Malaga. She is academic secretary of the Faculty of Education Sciences of the University of Malaga and full professor at the Department of Didactics and School Planning. Principal investigator of the HUM-205 Research Group ‘Childhood Education and Teacher Training’ and member of the Board of Directors of the Association for Creativity (ASOCREA). Her research focuses on Childhood Education, teacher training, school planning and creativity.

Ana María Díaz Olaya holds a PhD in History and Music Sciences from the University of Malaga. She is a full professor at the Department of Didactics of Languages, Arts and Sports of the School of Education Sciences of the University of Malaga, and also an investigator from the Research and Innovation in Music and Music Education Group. Her research focuses on educational dance, historical dance, music history, and music teaching.

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The social and functional diversity of public educational centres requires continuous assessment of the school organisation and searching for effective methods that generate new forms of communication between students. This case study aimed to evaluate an inclusive dance programme involving group activities included four public early childhood education centres in Spain from the public network where the Barenboim-Said Public Foundation (BSPF) implemented the Children’s Musical Education Project. The methodology used was based on a group interview and the formation of four discussion groups of a total of 15 preschool teachers and four BSPF specialists. The results correspond to the analysis and categorisation of the data collected and recorded in notebooks by teachers during fieldwork. These provide information on external and internal factors that improve student–student interactions and cooperative skills in the classroom and establish an ideal framework for using approaches involving physical contact, movement, and music by preschool teachers.

Introduction

The question and the analysis of dance and music activities addressed in different educational laws in Spain indicate that movement and dance have been insufficiently explored both in the compulsory educational system (Lago and Espejo, 2007; Montoya, 2015; Ortiz, 2015). According to Sources (2006), ‘Since the beginning of humanity, dance has played a critical role in different teaching systems. However, this role was reduced in periods in which somatic education was replaced by intellectual education and group activities such as games and sports’ (p. 395).

Similarly, the research conducted in the Children’s Musical Education Program established by the Andalusian Barenboim-Said Public Foundation (*Fundación Pública Andaluza Barenboim-Said*) in public schools in Andalusia, Spain, indicates that

movement and dance are not practised in early childhood schools, in contrast to inclusive artistic practices (Fuentes, 2006).

This research aims to encourage teachers to use movement and dance in early childhood classrooms, by presenting the social and personal benefits that this implementation has on children, in particular when using specificities derived from inclusive dance (see next section). Research has been undertaken about the effectiveness of movement and dance in educational contexts in improving cognitive aspects (D'Souza and Wiseheart, 2018; Golding, Boes, and Nordin, 2016; Hamacher et al., 2015; Romero, 2012; Sevdalis and Keller, 2011), there's focus on the importance of space in early childhood classrooms (Heredero, 2005; Laorden y Pérez, 2002; Madrid y Mayorga, 2012), or the lack of teacher training in movement and dance (Lago and Espejo, 2007; Montoya, 2015; Ortiz, 2015). Moreover, some recent studies have revealed the social and personal benefits of dance for university/higher education students (Canales y Rovira, 2021), and for preschool children (Çetin & Cevikbas, 2020; Peña y Vicente, 2019), but no research has been found that analyses the use of activities derived from inclusive dance.

The objective of this study is, therefore, to implement inclusive dance and movement activities in early childhood classrooms as artistic and educational strategies to acquire cooperative and social skills, and consequently, improve student–student interactions and cooperative skills in the classroom and establish an ideal framework for using approaches involving physical contact, movement, and music by preschool teachers.

Integrated, inclusive, and educational dance

Integrated dance is an expression of performing arts that involves people with different functional capabilities. The specificities of this type of dance connect directly with the principles of cooperative learning, and serve as the foundation of the theoretical framework of this study. However, before describing these specificities, the differences between these activities will be clarified.

Brugarolas (2016) has shown that integrated dance is a variant of inclusive dance within inclusive performing arts, with the difference that the former is related to artistic experiences from mixed groups of people with different functional capabilities, whereas the latter may or may not involve mixed groups, and sometimes social and therapeutic activities predominate over artistic approaches.

Educational dance was developed together with modern dance in the first half of the twentieth century by Rudolf von Laban in response to the pedagogical practices of the time. This type of dance focuses on the individual and his potentials to develop himself and in group, at the same time distancing itself from the stereotypes of ballet dance that prevailed in this period, and includes ‘the natural and spontaneous motor activities of each person as a starting point for learning. Movements should not be difficult or complex or depend on specific artistic abilities, but should promote significant, high-quality, and individual learning’ (Pastor, 2012, p. 207).

Although the term *educational dance* is the most appropriate for the framework of this research, the term *inclusive dance* was used to emphasise its inclusive nature, promoting cooperative learning, namely involving ‘students working together to achieve common goals and complete group tasks’ (Gillies, 2016, p. 39).

Interactive and cooperative activities of inclusive dance

Interactive and cooperative approaches were investigated by social science studies and include communitarianism, exploration, and sense of touch. These three specificities are derived from the fields of anthropology/sociology, philosophy/sociology, and history of dance, respectively, and they were expanded and complemented by educational research to serve as the theoretical framework of this study.¹

Methods

The reported situations and the adopted theoretical framework, framed in the phenomenological or interpretive paradigm, allowed developing a case study to assess an intervention programme implemented in ten teaching units in early childhood classrooms. The goal was to discuss the content and objectives of inclusive dance as a pedagogical strategy in the teaching–learning process against the tendency to use visual and individual representations in educational and other contexts.

The main reason that has prompted this decision is that the subjective and social reality of the research that is taking place would be constructed more richly with individual and collective contributions from all the subjects involved in the situation. With this, Early Childhood Education teachers and specialist teachers (BSPF) would be actively involved in research, and in this way encourage and invite a rethinking of the way of teaching. The case study provides the opportunity to discover and identify the problems and their underlying causes, delve into the specific educational phenomenon from the perspective of those who participate in it, undertake what they are doing, why they are doing it or not, and what they think or how they do an interpretation of the

¹ Llorens and Díaz (2018) and Llorens (2019) provided additional information on these topics.

social and educational reality in which they are immersed (Stake, 2010; Vázquez and Angulo, 2003).

Case studies allow evaluating pedagogical practices from the perspective of the participants, including their engagement, rationale, opinions, and interpretation of social and learning outcomes (Stake, 1995; Vázquez and Angulo, 2003). The researcher should be immersed ‘in a specific context to acknowledge and accurately describe different aspects of the same phenomenon and develop theories that explain it’ (Gutiérrez, 2005, p. 3).

Methodology

To answer the second research question—‘What are the opinions of preschool teachers about the inclusion of dance in the classroom?’—group discussions were used as the primary analytical technique.² This technique has a clear phenomenological orientation, that is, it reflects experiences as they are perceived or understood by the participants: the phenomenology of sociality builds and rebuilds the collective self (Suárez, 2005, p.33).

Group discussions included the following steps (Suárez, 2005):

(1) *Selection of educational centres and participants.* Four centres from the public network where the Barenboim-Said Public Foundation (BSPF) implemented the Children’s Musical Education Project were chosen: North, South, East, and West (fictitious names were used to preserve their identities). After an appointment with school managers, the four schools accepted to participate in the study, including 15 preschool teachers (15 classrooms) and four BSPF specialists. The data related to the socio economic status of families of the participating schools has been extracted from own data and statistics that are collected in each educational project/programme, as well

²These data complement the results of a previous study (Llorens and Díaz, 2018).

as the results of the diagnostic tests of the family questionnaire of the Educational Centres of Andalusia.

(2) *Study period and area.* Four group discussions were conducted (one per centre) in the afternoon between 23 April and 15 May 2018. An equalitarian position was maintained among all participants, and an informal, friendly, and helpful approach provided an adequate environment for discussion.

(3) *Recording media.* The data from the group discussions were recorded with a video camera and audio recorder for later transcription, with the permission of all participants.

(4) *Study design.* The participants were informed about the main objectives of the study and the confidentiality and privacy of the information. The following question was asked: ‘What is the effect of the implementation of the teaching units on students?’

The group discussions allowed the participation of teachers, thus improving educational and pedagogical work. Complementing this technique, observation and group interviews were also used, in order to enrich the subsequent data analysis as much as possible. This analysis was based on the transcription, categorization, coding and triangulation of the significant data from the chosen techniques. In this case, dependability is achieved by using different sources at the same time of field work. On the other hand, credibility tells us the degree to which the results of an investigation correspond to reality. As in qualitative investigation, the “reality” is not objective, and, therefore, it is not stable, we can speak about credibility, since what is sought is the confirmability and consensus of the people involved. Regarding transferability, it is the degree to which the results can be generalized; This is the reason why the criterion of external validity is transformed into transferability. In this way, the results and conclusions obtained can be extrapolated to other social “realities”. Meaning that the

results, being unique and singular phenomena, are not generalizable, but transferable, according to the context in which they are applied.

Results

The results correspond to the analysis and categorisation of the data from the second research question, collected and recorded in notebooks by teachers during fieldwork in the four group discussions (4 to 7). The study categories and codes, classification into three thematic groups, and subclassification into topics to contextualise the categories are presented in Table 1. The following acronyms were used: GD, group discussion; NB, notebook (data record); T, teacher; N, S, E, and W (location of each centre [north, south, east, and west]); S, session.

Thematic groups	Theme	Category	Code
External categories (EXT)	Families (F)	Parent-child relationship (PCR)	EXT-F-PCR
		Socio-economic status (SES)	EXT-F-SES
	Educational Centres (EC)	Number of students per classroom (NSC)	EXT-EC-NSC
		Educational System (ES)	EXT-EC-ES
		Classroom space (CS)	EXT-EC-CS
Internal categories (INT)	General resources (GR)	Exploration (E)	INT-GR-E
		Surprise (S)	INT-GR-S
		Attitudes of teachers (AT)	INT-GR-AT
		Making connections between disciplines (CD)	INT-GR-CD
Field work (FW)	Students (S)	Reaction (R)	FW-S-R
		Student-student interactions (SSI)	FW-S-SSI
		Coeducation (CE)	FW-S-CE
	Teachers (T)	Assessment of movement and dance activities (AMDA)	FW-T-AMDA
		Assessment of activities involving body contact (ABC)	FW-T-ABC
		Assessment of music activities (AMA)	FW-T-AMA
	Teacher units (TUs)	1 (TU1)	FW-TU1
		2 (TU2)	FW-TU2
		3 (TU3)	FW-TU3
		4 (TU4)	FW-TU4
		5 (TU5)	FW-TU5
		6 (TU6)	FW-TU6
		7 (TU7)	FW-TU7
		8 (TU8)	FW-TU8
		9 (TU9)	FW-TU9
10 (TU10)		FW-TU10	

Table 1. Categories and respective codes

(1) *External categories.* Among the external categories related to families, parent-child relationship (PCR) and socio economic status (SES) affected student behaviour.

These behaviours are related to family interactions. The child wants to be the first and starts to cry when she is not the first, and pairs with a student with limited learning ability. (GD: P2, E, G5, 11'37")

Teachers from one centre reported that the number of students per classroom (NSC) affected student-student interaction (SSI) and that SSI worsened as the NSC increased.

Interactions are weaker as the number of students per classroom increases. (GD: P2, S, G4, 0'51")

This problem is noticeable. These students are much more uncontrollable, impatient, and aggressive when waiting their turn to participate. (NB: P2, S, S13)

Another external category was educational system (ES). Data from one centre revealed the gap between the planning and the reality of teaching. That means political decisions regarding education, and their continuous modifications of the Educational System, do not reflect or take into consideration the real needs of teachers and students, but rather the ideological differences between political parties.

Let us see if anybody in the classroom has a good idea since daily actions have nothing to do with classroom activities. (GD: P2, S, G4, 2'12").

Classroom space (CS) was discussed in all centres, being one of the most relevant external categories in this study. This category is taken as the set of social and individual dispositions, an intermediate territory between material structures and subjective patterns that constitutes the material and symbolic atmosphere surrounding the growth of each person (Bourdieu, 2008). All teachers agreed that classroom space (CS) was small because of the layout and number of objects and pieces of furniture. The

possibility of working barefoot was also addressed, and although appreciated by students, the execution would be time-consuming.

Students enjoy movement activities, but classroom space was limited. Sometimes students stumble on furniture. (GD: P4, N, S3)

(2) *Internal categories.* One of the internal categories discussed was exploration (E), its personal benefits and its pedagogical importance. During the visit to the centres, the researcher observed that the specialists devoted more time to executive activities scheduled in teaching units and less time to exploration activities. However, students tended to explore the classroom space as soon as they were given the opportunity.

I missed having more time to explore and a larger classroom space. (GD: N, E, G7, 27'45")

Another category discussed in three centres was surprise (S). The participants stressed the fact that surprise was a practical and useful tool to catch students' attention.

Surprise motivates students and captures their attention. (GD: P2, S, G4, 30'13")

The discussion of attitude of teachers (AT) by one centre highlighted the importance of being flexible in the classroom, and the debate about making connections between disciplines (CD) by another centre revealed that reading and writing and logical-mathematical concepts could be taught through movement and music.

(3) *Fieldwork.* These tasks were performed by both students and teachers and were significant for this study because of the amount and relevance of data showing students' responses to the proposed actions and their assessment by teachers and the engagement of centres.

(a) *Students.* Two categories were addressed by all centres: reaction (R) and student-student interactions (SSI). Coeducation (C) was mentioned in only one centre,

despite the high interest in the topic. With regard to reaction (R), students enjoyed all the proposed actions, and teachers reported that movement activities were the most difficult to teach.

I am surprised because they respected the rhythm of the partner and danced very slowly and softly. (GD: P2, N, G7, 2'57")

Student-student interactions (SSI) varied depending on the proposed action and was closely related to coeducation (CE). Special mention was made about working in circles to prevent creating hierarchies in the classroom, as well as the importance of using this strategy from the age of 3 years to help students know each other and reduce the level of stress due to their recent enrolment into the educational system.

There are fights in the classroom, and four aggressive children always want to be the first in line and the first to wash their hands. Given that most activities are conducted in circles, on many occasions, you need to emphasise that there is no first or last, that we are all equal, and that all students have to perform the same tasks. So, I think that, in the last sessions, they understood that no matter how much they ran, they would never arrive before their classmates. (GD: P5, N, G7, 17'40")

However, pair work created conflicts because students preferred specific partners, especially in the first classes. However, these conflicts decreased over time when students understood the dynamics of the game, that is, the need to repeatedly change partners.

In two cases, the students insisted on choosing a partner who had already paired with another student, but the problem was solved. (NB: P2, N, S1)

They accepted the rules of the game and enjoyed it. (NB: P4, N, S4)

The problem was closely related to gender, given that girls preferred to pair with girls, and boys preferred to pair with boys, although this preference disappeared over time.

In fact, many activities were performed (P6), and it did not matter who paired with who ... they needed to pair with different students. (GD: P3, N, G7, 12'22")

All students were able to find a pair. (NB: P4, N, S8)

Student reactions and social interactions were analysed in each teaching unit (TU). TU1 was the only unit in which a problem occurred (broken shoe) because of the classroom setting. Furthermore, two students from distinct groups in one centre cried when they had to report whether their shoes were dirty or clean. Nonetheless, in the other units, student reactions and social interactions were good. In TU2, 'cobbler's round' worked very well, especially the activity related to individual, paired, and group hugs.

(b) *Teacher units*. In TU3, 'sew and sing' was performed quietly and slowly. The massage performed in pairs combined with singing 'Gallina Fina', as well as individual activities adopted to improve fine motor skills and rhythm with hand games, pleased all groups.

Students were attentive and participatory and liked the hand games both individually and in pairs. The relaxation technique was a bit challenging for them to learn. (NB: P3, O, S5)

In TU4, the 'Amina Kadala' activity was one of the most praised by teachers and students. The use of the Amina doll from Africa pleased them very much, especially the hiding game: Amina was hidden under the arm or leg of a student lying on the floor, and a small group was assigned to look for her.

Students sang with pleasure and enjoyed the game of looking for Amina. Many of them volunteered to become 'explorers' but waited for their turn. They also enjoyed the improvisation game in pairs. (NB: P3, O, S8)

In TU5, 'Dance to Yer Daddie' (a Scottish folk song) was well received. Students were motivated to participate in the game involving guessing professions through gestures as an introduction to describing the profession (fisherman) of the protagonist's father.

In TU6, students liked 'Pera stous pera kambous' (a Greek song) and the game of the tree, in which part of the class was a tree, and the other part played against them. All groups enjoyed the game, and student-student interaction was good.

In TU7, 'Samba Lelé' (a Brazilian song) was highly praised. It consisted of adapting the story 'What Does the Moon Taste Like' to animals or classroom objects, and the Brazilian song was accompanied by the balance dance with cardboard sticks in pairs.

In TU8 'Nabe nabe sokonuke' (a Japanese song) was performed quietly. The balancing game where children put rice bags on different parts of the body and performed the Japanese dance in pairs caught the attention of all groups.

In TU9, 'The River Is Flowing' (a native American Indian folk song) involved spontaneous movements either individually or in pairs. Students spent a lot of energy playing the game but enjoyed it and did not fight.

In TU10, 'Machaca Algarroba' (a song from South America) was liked by all groups. The main action was massage performed in pairs while singing, and the hand movement of making carob bread was used to massage the partner's back.

(c) *Teachers.* Educators assessed strategies involving movement and dance, physical contact, and music. Assessment of movement and dance activities (AMDA) was favourable among all centres, but showing some contradiction as well. Teachers believed that movement was necessary and beneficial to students, but they highlighted the difficulty in the performance because of the limited classroom space and changes in group dynamics. Moreover, some teachers emphasised the need to make the group feel relaxed at the end of each session.

The assessment of activities involving body contact (ABC) was very favourable. Two centres reported that physical contact helped students know each other and have affectionate and non-violent contact experiences to prevent violent behaviour.

One of the things I liked the most was the activities where children had to touch each other: they had to raise their heads. They needed to have a lot of control of how they did it so as not to harm the partner. (GD: P3, N, G7, 1'10").

I believe that all group activities involving physical contact should be encouraged. (GD: P3, N, G7, 2'17")

Assessment of music activities (AMA) was highly praised by the teaching staff because it relaxed students and captured their attention. This practice was discussed by two centres, and recorded in the group discussion and notebook, respectively.

Discussion

The term grade should be clarified before discussing the analysed categories. In each category, one or two letters will appear in parentheses, the first and second letter corresponding to the group discussion and notebook, respectively. The categories mentioned by four, three, two, or one centre were classified as grades A, B, C, or D, respectively.

External categories included the parent child relationship (D) and the socio economic status of families (D). Both categories focused on student behaviour and how these factors affected teaching-learning process. The worse the family problems, the lower the socio economic status, and the weaker student-student interaction. In this framework, the educational system (D) was blamed for not taking the necessary measures, such as decreasing the number of student per classroom (DD). Therefore, the engagement of families in the educational system is fundamental for student-student interactions, as demonstrated in several studies (Bolívar, 2006; Comellas, 2009; García-Bacete, 2003; Fernández-Batanero, 2014, Moreno, Ramos and Rivera, et al., 2018).

Considering the external categories, all teachers reported that classroom space (AD) was very small. Given that they agreed that the classrooms were full of furniture and objects that prevented free movement, why was the classroom space not organised to improve these conditions? Why were new spaces not created to execute these activities? Despite the requests for designing classrooms for movement activities, problems such as the difficulty to speak in larger spaces and working barefoot might occur. Several studies stressed the importance of a classroom layout in preschools to achieve cooperative and pedagogical objectives (Armstrong, 2009; Darder, 1995; Domènech and Viñas, 2007; Heredero, 2005; McClintic & Petty, 2015; Madrid and Mayorga, 2012; Uría, 2001).

Of the internal categories, exploration (D), attitude of teachers (D), making connections between disciplines (D), and surprise (B) were adopted by education specialists during the implementation of the teachers units. Surprise was valued as a resource to capture attention, exploration was essential for psychomotor development and for compensating for more executive activities, attitude of teachers was a way to adapt to the needs of students, and the analysis of making connections between

disciplines showed that disciplines could be taught using unconventional approaches, including movement and music education. The history of education has demonstrated the personal and social benefits of using exploration in early childhood education (Britton, 1998; Froebel, 2005; Key, 1909; Montessori, 2015). Therefore, why do teachers design more executive activities than exploratory methods? During the visit to the centres, the researcher observed that the time devoted by specialists to exploratory activities was nil or insufficient. In contrast, a previous study reported the benefits of surprise (e.g. emotion) in the teaching-learning process (Bueno, 2013).

The fieldwork of students and teachers was also investigated. Reactions (AA) by the study groups from all centres were favourable, and students were considered participatory, collaborative, motivated, happy, and fun. In contrast, although serious social interaction problems (AA) were not observed, three critical aspects can be highlighted:

(1) Student-student interaction improved when seats were arranged in circles because the hierarchy established in traditional classrooms disappeared.

(2) There was the difficulty in forming pairs or small groups between genders—coeducation (DB).

(3) Two students felt uncomfortable when describing the characteristics of their clothes in the classroom.

These results were corroborated by studies on cooperative learning (Adamson et al., 2020; Hurst et al. 2013; Johnson and Johnson, 1994; Leatherman & Niemeyer, 2005; Pujelàs, 2008, 2012; Uría, 2001), wherein student-student interaction was improved. On the other hand, Steinberg & Steinberg (2016) recommend free partner choices in creative movement processes for preventing difficulties in forming pairs and students' feelings of a threat to their self-esteem or negative emotions

Teachers assessed movement/dance (AC), touch/contact (DC), and music (CD). Movement and dance activities were well accepted. Nonetheless, there were complaints about the limited classroom space, as well as doubts about the pedagogical benefits of these approaches. Movement education is not commonly used by teachers in the classroom, although training in this area is limited (Lago and Espejo, 2007; Montoya, 2015; Ortiz, 2015), and data on the benefits of movement and dance are lacking (Bermell, 2003; D'Souza and Wiseheart, 2018; Golding, Boes and Nordin, 2016; Hamacher et al., 2015; Herman, 2009; Rajan and Aker, 2020; Romero, 2012; Sevdalis and Keller, 2011).

Activities involving physical contact were positive because they promoted awareness among students and non-violent communication, compensating for the group's aggressive behaviour.

Music was well accepted by teachers. Although they used it to capture attention and make the group feel relaxed, several studies found that music also improves cognitive and social functioning (Barret et al., 2013; Bugos, 2010; Cabedo-Mas and Díaz-Gómez, 2016; Crncec, Wilson, and Prior, 2006; D'Souza and Wiseheart, 2018; Hallam, 2010; Neville et al., 2008).

Conclusion

Considering external and internal categories, the resources used by families and teachers are shown in Figure 1. Teachers evaluated how social economic status and parent-child relationship affected student behaviour and found that the coordination between family and school and greater public engagement were essential to reduce the number of students per classroom. These external categories encourage a classroom atmosphere where cooperative and inclusive activities can be implemented and developed.

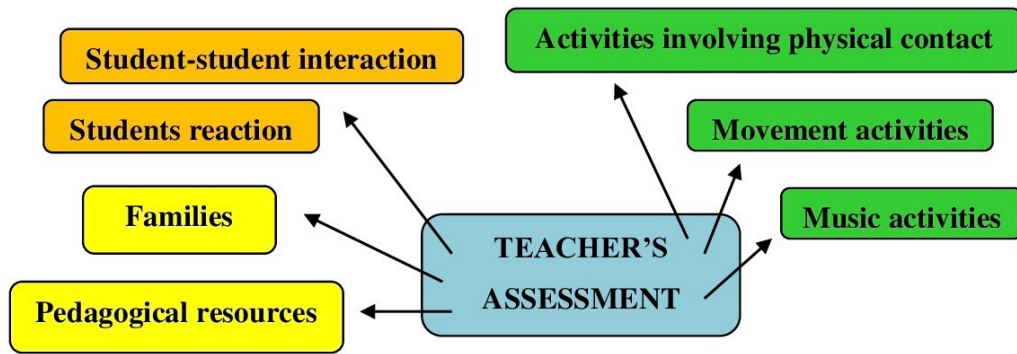


Figure 1. Teacher assessment of each study category

Teachers rediscovered tools that could improve pedagogical practice, including better managing the classroom space or the proper use of specific spaces in schools reserved for physical activities, using surprise to capture attention, having a more flexible attitude, using movements and music education to teach literacy and mathematics, and increasing the use of exploration.

Students are represented on the upper left. The positive reactions of teachers toward the proposed inclusive dance activities included in the teaching units indicate that factors such as making circles, hand games, massages in pairs, hiding games, spontaneous movements or choreographies improve long-term student-student interaction, as well as personal and social benefits for students, because of egalitarianism and absence of hierarchies in the classroom. Considering the case of the two students who felt uneasy in the classroom in teaching unit 1, it is critical to design activities that do not disclose personal information.

The opinions of teachers on movement/dance, touch/contact, and music are shown on the right. Although teachers recognised the effectiveness of movement and dance, training and engagement in this area are lacking. Similarly, approaches involving physical contact were preferred since they compensated for the groups' aggressive

behaviour. Music activities were also valued by teachers. These internal and fieldwork categories guarantee the implementation and development of cooperative and inclusive activities.

In conclusion, the arguments, observations, and categories presented above highlight the importance of inclusive education and cooperative learning in the teaching-learning process. While external categories encourage proper atmospheres, internal and fieldwork categories guarantee their implementation. Moreover, the focus on activities based on the three interactive and cooperative approaches of inclusive dance (communitarianism, exploration, and sense of touch) improves student-student interactions, such as less aggressive behaviour and progressive improvement of pairwork, and demonstrates the personal and social benefits of inclusive dance, and therefore can be used in cooperative learning. On the contrary, in normal dance mediations, the focus on individualist, visual and teacher-directed activities, emphasizes the egocentric and less collaborative behaviour.

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