

## Article

# A Rationale for Teacher Change from a Bodyfulness Paradigm: An Experience in Higher Education

Rosa-María Rodríguez-Jiménez <sup>1</sup>  and Manuel Carmona <sup>2,\*</sup> 

<sup>1</sup> Department of Science, Technology and Design, Universidad Europea de Madrid, Villaviciosa de Odón, 28670 Madrid, Spain; rosadmt1@gmail.com

<sup>2</sup> Institute for Regional Development (IDR), Universidad Castilla la Mancha, 02001 Albacete, Spain

\* Correspondence: manuel.carmona@uclm.es

**Abstract:** This article presents an exploratory and interpretative study on the development of self-reflection and self-knowledge in university teachers by an embodied experience. Dance Movement Therapy and Body–Mind Centering share the fundamentals of the paradigm of embodied cognition through a first-person full-body experience. Using these principles, a training program was designed and implemented in a cohort of 22 university teachers. The article offers details of the program and the adaptations necessary to carry it out in a higher-education context. The results of the qualitative analysis that was conducted suggested that the transformative learning paradigm could be useful to explain the process carried out by the participants. With the necessary limitations, the incorporation of awareness and attentive participation in bodily states and actions manifests as a transformative element in the teacher. The participants, despite initial resistance, see possibilities for applying this knowledge in their teaching practice.



**Citation:** Rodríguez-Jiménez, R.-M.; Carmona, M. A Rationale for Teacher Change from a Bodyfulness Paradigm: An Experience in Higher Education. *Educ. Sci.* **2021**, *11*, 460. <https://doi.org/10.3390/educsci11090460>

Academic Editors: Sarah Prestridge and Eleanor Dommett

Received: 23 July 2021

Accepted: 19 August 2021

Published: 24 August 2021

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

**Keywords:** self-reflection; higher education; embodiment; teachers; bodyfulness; creative movement; transformative learning

## 1. Introduction

This article aims to incorporate the concept of transformative learning initiated by Mezirow in the United States [1,2] into an educational context that, following the Bologna process, has promoted structural changes in higher education throughout Europe. The theory of transformative education places the focus on how the learners are able to change their beliefs, attitudes and emotional reactions through a critical reflection process, which leads to a transformation [3].

The Bologna process was created to ensure comparability in the standards and quality of higher-education qualifications across the different European countries. It involved promoting an inclusive and innovative approach to learning and teaching, introducing in the different curricula not only technical content but also training in soft skills. These skills should allow new graduates to adapt to a dynamic work environment and contribute to social development. The process inevitably brought changes for both students and teachers, who have had to incorporate not only new teaching methods but also cultivate their own interpersonal skills to increase psychological closeness [4,5] and effective communication [6]. It is well known that greater teacher immediacy equates to higher credibility and deeper student motivation [7], and determines the achievement of learning objectives [8,9]. Despite the new channels of communication that have arisen in recent years, improving the actual degree of communication with students remains challenging [10,11]. This is a concern that many teachers have regarding their own abilities to manage and interact with students [12]. According to the theory of transformative learning, communication refers to understanding the message of the other—including awareness of the intentions, thoughts, and feelings that the other may have [13]. This ability to communicate effectively with

others cannot be considered innate but instead is something to be developed in a process of continuous transformation and learning [3].

### 1.1. Embodied Learning

Although, as already mentioned, the non-verbal capacities of teachers are related to positive instructional and emotional outcomes, the influence of non-verbal aspects in communicative learning is not sufficiently taken into account [14–16]. Some non-verbal elements can be easily learned, such as eye contact or vocal inflections, but other aspects can only be trained through active experience that requires a certain amount of time [17,18]. Embodied learning could offer an interesting approach, emphasizing the lived experience of the body to increase nonverbal skills in teachers. In this regard, there is a paucity of studies in higher-education environments, but some work has been carried out in schools through, for example, mindfulness, tai chi, qi gong or yoga [19,20]. These interventions are becoming more and more common and are valued by teachers and students [21]. Slowly but progressively, the space dedicated to learning processes that integrate the relationship between bodily sensations, thoughts and emotions is increasing in the educational field [22–25]. However, there are far fewer initiatives in higher education, where Cartesian dualism is deeply ingrained [24,26–29].

The acquisition of body awareness allows the identification of one's perceptive, cognitive, and expressive patterns, and contributes to self-reflection and self-knowledge [30,31]. This could improve communication by helping teachers to identify their automatic reactions and attain greater self-confidence and control over the impact of their message. Embodied learning incorporates embodied cognition into educational research [32]. The original embodied cognition paradigm described how our body and our environment are connected by cognitive processes. Later, the concept of embodied enactive cognition was added, underlining the idea that the experienced world is determined by mutual interactions between the physiology of the organism, its sensorimotor circuit, and the environment [33]. Knowledge emerges through the primary agent's bodily engagement with the environment, giving meaning to the concept of embodiment [34]. Caldwell defines embodiment as the awareness and attentive participation of the body's states and actions, and introduces a wider concept, "bodyfulness", that "begins when the embodied self is held in a conscious, contemplative environment. It's then coupled with non-judgmental engagement with bodily processes, an acceptance and appreciation of one's bodily nature" [35] (p. 13). She highlighted: "The body isn't a thing we have but an experience we are. We exist, not just think, but we move and attune to others" [35] (p. 25).

### 1.2. Body Movement Approach

In order for the embodied experience to generate significant learning, it is necessary to follow successive stages of reflection and integration. Experiential learning programs should be able to improve: (i) the anatomical and physiological knowledge of the body; (ii) the capability to identify one's own and others' movement patterns, and their relationship with sensory and emotional responses; (iii) the ability to progressively approach the other through shared movement and play; and (iv) the connection among thoughts, emotions and the bodily responses offered to students. That means acquiring a level of self-awareness that allows the understanding of non-verbal signals and modulating them for clearer communication.

Several body–mind approaches are available to achieve these goals, although not all of them may be suitable for introduction into a non-specific teaching environment, such as dance, movement, or psychotherapy. Most mind–body approaches began their development in the late 19th and early 20th centuries, drawing on Eastern traditions (martial arts and yoga, for instance) and integrating new knowledge from the fields of biology, anatomy, physiology and psychology [36]. Since Darwin, numerous researchers in the field of psychology have shown the relationship among non-verbal behavior, emotions, needs and impulses [37–41]. As Mazer and Graham [42] suggest, it is time for interaction

with new disciplines that can enrich and invigorate traditionally established approaches and knowledge about communication in teaching and learning [42].

All of the above justifies carrying out a proposal where learning is offered from the experience of the body itself. An exploratory and interpretative case study regarding the introduction of an embodied learning program for teachers is presented. The main objective was to explore if body awareness training could be something that is transformative for teachers. The hypothesis is that the transformation generated by embodied learning could improve self-knowledge in relation to non-verbal patterns, awaken awareness to the existence of “another type of knowledge and communication”, and acquire tools for better emotional regulation.

## 2. Materials and Methods

The methodology followed a qualitative approach since it allowed us to deepen our understanding of the human experience, in particular, the learning process and the awareness of the group of participants [43].

### 2.1. Participants

Twenty-two teachers (14 females and 8 males) from a variety of departments at the Universidad Europea de Madrid (School of Engineering [8], School of Art and Communication [2], Faculty of Social Science [4]) School of Biomedical Science [6] and School of Sports Science [2]), participated voluntarily. Most were experienced university lecturers. Only 4 participants were junior lecturers, with less than 5 years of university teaching experience. All of them signed informed consent forms in accordance with ethical requirements.

The Prevention Service of the Human Resources Department of the Universidad Europea de Madrid collaborated with the research study, sending the information about the program to the teachers by e-mail. The inclusion criterion for participation in the program was the number of teaching lessons/week, such that only teachers with contracts of more than 30 h per week could participate. Exclusion criteria included medical contraindications for gentle physical exercise. All teachers who enrolled met the inclusion and exclusion criteria participated in the study.

### 2.2. Procedure

The training program was implemented through 12 weekly sessions in a large room. Dance Movement Therapy (DMT) and Body-Mind Centering (BMC) were the approaches used to organize the different sessions, based on previous experience [28,44,45]. DMT was developed from creative and expressive dance into a form of psychotherapy where spontaneous and free movements are seen as inner and unconscious processes [46]. Whatever the motor actions are, whether functional or not, the way that they are performed gives information about the particular person. As an interdisciplinary profession, DMT has traditionally been applied in clinical contexts, but it is gaining popularity in social and educational contexts as a tool for personal growth and wellbeing [47–51]. Besides, BMC is the study of living in the body through conscious experience, employing anatomical, physiological, psychophysical and developmental principles [52].

The program consisted of 3 phases of 4 sessions each. Each session lasted 2 h. The first phase had a special focus at the intra-personal level, developing sensory, motor and kinesthetic potential in close relation to one's own body. In the second phase, the work progressed to opening consciousness about how previous learning echoes affect and lead to improved interpersonal skills. The third phase integrated previous learning, developing movement observation and evaluation skills. Each session followed the same structure:

- Check-in (10 min): participants entered the space and were asked about their attitude and expectations regarding the session.
- Warm-up (20 min): preparing the body for the work using different proposals based on body anatomy and physiology.

- Theme development (40 min): a deeper exploration of feelings, thoughts, and the movement patterns of the participants.
- Closure (20 min): supportive closure to provide a sense of release and satisfaction.
- Reflective practice (30 min): individual reflection and verbal group-sharing of feelings, ideas and thoughts regarding the previous movement experience.

Both closure and reflective practices followed certain guidelines to help the participants reflect about the different contents, in particular, about self-knowledge and its applications in the teaching activity.

The following tables show the sequence of the 12 sessions, with the requisite tools and some details about dynamics during each session. Tables 1–3, respectively, correspond to the different work phases described in the procedure. A detailed dossier about the dynamics explored during the sessions is offered in Supplementary Materials.

Only information about warm-ups and theme development is detailed. We do not recommend using these tables as a list of instructions for use, without previous knowledge of the group and its needs. The proposal should be adapted according to the level of confidence among the participants, their needs as they emerge during the program, and their capacity to connect and integrate non-verbal information.

**Table 1.** Tools and characteristics of warm-ups and themes for sessions 1–4 (Phase 1).

<b>Session 1. Generating Confidence in Oneself and the Group</b>	
Tools	Anatomic concepts. Play dynamics
Warm-up	Structured exercises to warm up the different muscle-skeletal structures
Theme	Structured and unstructured play dynamics to interrelate with others
<b>Session 2. Knowing One's Own Body</b>	
Tools	Body-Mind Centering principles [52]. Dance and creative movement [46]
Warm-up	Structured exercises to differentiate among anatomic structures, the ranges of joint movement, tension zones and breathing patterns
Theme	Creative movement proposals working with limits (in space, in touch, in number of supports)
<b>Session 3. Exploring the Kinesphere, Levels and Space</b>	
Tools	Anatomical concepts. Play dynamics. Dance and creative movement
Warm-up	Guided breathing exercises and perception of the reactions in one's own body. Exercises for understanding condensation/expansion in different parts of the body, and levels. Using one's own kinesphere
Theme	Exploring the space, moving to a place, and observing one's own breathing. Initiating free movement from one's own breathing
<b>Session 4. Exploring Contact and Physical Support</b>	
Tools	Body-Mind Centering principles. Creative dance. Improvisation tools.
Warm-up	Guided exercises on support, vertical axes and self-contact. Exploring in pairs the different qualities of touch in bones and muscles
Theme	Free movement with and without companion's support

**Table 2.** Tools and characteristics of warm-ups and themes for sessions 5–8 (Phase 2).

<b>Session 5. The Cycle of Perception and Answer</b>	
Tools	Body-Mind Centering principles. Dance and creative movement. Play dynamics
Warm-up	Guided exercises focused on different senses
Theme	Movement improvisation about perception/answering versus reaction
<b>Session 6. Tonic States and Emotion Expression</b>	
Tools	Body-Mind principles. Improvisation. Play dynamics
Warm-up	Guided exercises: breathing, body scan and joint mobilization. Exploring in pairs the differences among skin, muscles and bones. Analyzing different tonic states in muscles
Theme	Working in pairs with tonic states. Free improvisation with tonic states and relating to emotional content
<b>Session 7. Information Processing</b>	
Tools	Dance and creative movement
Warm-up	Free warm-up using different exercises learned during previous sessions. Sign-in movement in a circle: each participant makes a movement that represents him/her, and the rest repeat it
Theme	Role-play in pairs of a communicative situation
<b>Session 8. Motion Factors (Efforts)</b>	
Tools	Laban Movement Analysis [54]. Dance and creative movement
Warm-up	Guided exercises for stretching and activating the different anatomical structures. Explanation and exploration of Laban effort taxonomy
Theme	Creating a free sequence and exploring it in the space with different motion factors

**Table 3.** Tools and characteristics of warm-ups and themes for sessions 9–12 (Phase 3).

<b>Session 9. Actions (Incomplete Efforts)</b>	
Tools	Laban Movement Analysis [54]. Dance and creative movement
Warm-up	Guided exercises with efforts. Exploring the actions in pairs, combinations of the different efforts, play-in, using one's voice with these actions
Theme	Creating a free choreography with motion factors and actions chosen. Observe and analyze in pairs the motion factors and actions used
<b>Session 10. Connecting with the Unconscious</b>	
Tools	Kinesthetic empathy. Authentic movement [49]
Warm-up	Working in pairs: one leads the movement, the other one observes and follows it. Doing this when walking. Opening the space, following the movement of whomever you want. Mirroring exercises
Theme	Introducing the concept of authentic movement and working in pairs
<b>Session 11. Relating with Others</b>	
Tools	Body-Mind Centering principles. Improvisation
Warm-up	Working in pairs: free warm-up. Observing the posture of the companion, offering what is needed. Movement in a swarm, changing leader
Theme	Working in threes with one's weight and support. Leaving the weight to the floor, having confidence in peers who help in the fall. Observing own behavior patterns, offering and asking for support
<b>Session 12. Integration (Modulation of Behaviors)</b>	
Tools	Kinesthetic empathy [46]
Warm-up	Free individual warm-up. Working in pairs through mirroring. Amplifying and modulating the proposals given to the partner
Theme	Free exploration in a space of emotional connection with the partner through the tonic states, efforts and actions and rhythm. Opening up to other companions, integrating new information, moving between

### 2.3. Materials

A daily diary was completed by the participants to provide an ongoing reflective account of the impact of the intervention. Participants were free to choose the content on which they reflected but were encouraged to include personal observations and insights into their behaviors, interactions, thoughts, feelings, beliefs, fears, obstacles, failures and successes. The session closure included a verbal discussion to help participants develop self-awareness and achieve deeper levels of critical reflection.

Three meetings were also held with the participants during the process, to elaborate on deeper reflections, obtain feedback about satisfaction with the sessions, and look for connections with the teaching practice. The session discussions and meetings were recorded digitally. A structured interview was implemented, six months after finishing the training, to assess the permanence in time of these learning outcomes. The interviews assessed how much knowledge had been transferred to the participants' quotidian life and to the classroom. Participants gave feedback on the perceived appropriateness of the workshop content, types of dynamics, length, and applicability to classroom situations. They were also invited to identify topics they would like to develop further in future training programs, and any additional comments or suggestions relating to the workshop format and duration were encouraged and welcomed. Personal notes and written memos were also completed by the two movement psychotherapists who led the sessions.

The different methods—daily reflections, researchers' memos, regular joint meetings, and closure meeting comments—allowed us to triangulate the data. All information was transcribed and codified (Table 4). The first readings of the data seemed to suggest an adjustment to the transformative learning paradigm. Therefore, we decided to use Hoggan's typology to verify this hypothesis, following a deductive qualitative analysis [54]. NVivo 12 software was chosen for the analysis. The extracts presented in the current research were translated to English by one of the authors.

**Table 4.** Codes for data evidence.

Data Source	Code
Diaries of participants	DS + session number–reference number
Audio-registers	TAS + session number–r + reference number
Final interviews	ET + participant's number–p + paragraph number

### 3. Results

In a review of 206 papers on transformative education, Hoggan found six primary themes and 28 learning outcomes [54]. In our case, 10 learning outcomes were detected, corresponding to 5 of the 6 themes identified by Hoggan (Table 5). Some evidence is presented below according to this structure (learning outcomes are emphasized by italics in the text).

#### 3.1. Worldview

This category includes the *assumptions, beliefs and expectations* that influence the meaning of experience. Although teachers performed the training program voluntarily, there were initial resistance and difficulties: "I am not sure if this training is going to help me in my job" (DS3-1). Most of them related to not considering the body and its manifestations as relevant in the educational context. As time progressed, these initial resistances and beliefs were transformed into acceptance of new values and points of view, arriving to a *more complex worldview*: "I still don't know whether this program will help me in my work. I was a bit sceptical, perhaps I still am. However, I am sure that it will help me as a person. Isn't the last thing more important than the first? Can anyone carry out his work properly if they are not comfortable with their body?" (DS8-12).

**Table 5.** Hoggan’s themes, as described in transformative learning literature, and learning outcomes emerging from the qualitative analysis [55].

Hoggan’s Themes	Learning Outcomes
Worldview	Assumptions, beliefs, expectations More comprehensive or complex worldview
Self	Self-knowledge Self-in-relation
Epistemology	Utilizing extra-rational ways of knowing
Ontology	Affective experience of life Ways of being Attributes
Behavior	Professional practices Skills

### 3.2. Self

Working with the body revealed two aspects about the self: knowledge about the own person (self-knowledge) and new information about their relationships and engagement with their peers (self-in-relation). A relevant number of participants highlighted the deeper knowledge about themselves that the sessions provided: “In each session I have learned something new about myself” (ET4-p2); or “It is curious how this course has provided me with a more complete perception about how we move” (DS9-8). They are conscious about the relationship between movement patterns and personality: “I find quite interesting to link your movement pattern to your way of being” (DS9-1); “Defining the factors that characterize our movement helps us to know how the others view us. Also, it brings us close to our real way of being” (DS9-3); “If I walk like I’m going into battle, I will transmit anxiety or even distance to others (including my students)” (DS4-15). Participants also learn through the direct experience the relationship between sensation, perception and attention: “The session has shown me that the whole body is a perceptive organ, and how I am more sensitive to the perceptions according to my previous physical state. There are states of tension and alertness and others of relaxation. Under the alert states, some perceptive nuances are lost. Under the relaxed states, more perceptive nuances can be noticed” (DS7-5).

Regarding inputs about the self-in relation, participants introduce the possibility to be relaxed in the workplace: “I’m at my workplace and I have the chance to relax with my workmates” (ET3-p22). The dynamics introduced help them to connect with others in a different way; participants said: “It has helped me to relate intimately, something that would not have happened if I had not done the training program” (ET5-p10), “I behave more naturally dealing with people. I’m a little bit more open” (ET10-p15).

### 3.3. Epistemology

The participants began to use what might be called “other forms of knowledge” that are not strictly guided by thought. They began to use somatic terminology and a specific vocabulary of movement patterns. This could be considered to be an *extrarational way of knowing*. In fact, they realized that there is a knowledge that arises through the direct experience of the body: “It is as if our bodies speak without words and show affection, tenderness, happiness and many more feelings. I have felt more connection with my students, from a physical point of view, but without any corporal contact. It is a weird feeling, but it is like . . . I could predict their questions, their movements, and we are all in perfect harmony” (TAS9-r8). Some participants pointed out the improvement of relationships between peers: “I believe that the confidence emerging during the training program has also improved the mood of the department. In my opinion, it has been pretty good” (ET9-p11); “In this session, it is clear how the mood can change the behavior of the others and dispose people to cooperate or not in a proposal” (DS7-5).

### 3.4. Ontology

As mentioned above, working with body awareness could have a major impact on learners, producing relevant changes in the way that a person exists in the world. This is the category with the highest number of outcomes for the themes established by Hoggan: the affective experience of life, ways of being, and attributes [54]. Under the category *affective experience of life*, Hoggan includes those transformative learning outcomes that affect emotions, feelings, the quality of life, and learning to live with joy [55]. Our work suggests that the program had two relevant impacts within this category: on the one hand, an improvement in the management and regulation of emotions, and on the other hand, an improvement in quality of life and personal wellbeing. With activities based on movement qualities, participants see opportunities for better emotional regulation: “Perhaps, we can find several mechanisms to regulate emotions, and to release us when we feel too tense or stressed” (DS8-5) [53]. Additional results were identified in the teaching context: “Not reacting instantly to any stimulus coming from students” (E03-p4); “I’m able to better manage my emotions and therefore I’m also able to manage everyday conflict” (ET3-p3); “We have realized how emotions and intentions are involved in movements. The gestures and the movements express the intentions of someone approaching you and give us information before starting the verbal communication.” (DS8-7). Regarding personal wellbeing, the acquisition of equilibrium among the psychological, physical and emotional aspects was reflected in the following evidence: “During the session, I was able to connect the physical and the emotional parts, so I was able to relax my emotions because of my own physical relaxation” (DS1-5). They also appreciate this time as a benefit: “Indeed, I take the course and it’s a delightful time for me” (DS1-2). Participants observed a positive impact over the remainder of the day: “I feel that I can connect my body and my mind, and I reach a harmony that allows me to go ahead and to finish the day, enjoying it more” (DS4-11).

It seems there was a different *way of being* when participants were surprised by the increase in their body awareness. That means being able to see and recognize oneself at a bodily level; this emerges when participants differentiate the body structures: “The experience of feeling our skin, our muscles, and our bones has made me think and made me conscious of our bodies” (DS5-4). Participants also identified relationships between the bodily aspects (tone, gesture, posture) and non-verbal language: “How stiff I walk, how I hold myself. The tone I use, the posture, the gesture” (ET6-p4); or “I’m more conscious of how I use non-verbal language and how to use it better” (ET3-p4).

They also recognized the development of particular *attributes*, such as trust and complicity: “In the imitation sessions, the laughs appeared easily. Complicity was evident and patent. Writing these words, I feel good, I have a smile on my face, remembering the session” (DS2-1). Empathy also grew—a very useful attribute in the context of teaching–learning: “The fact that you receive training on tools for knowing your mood, understanding your students’ moods . . . placing yourself in other’s shoes . . . all of this is very useful.” (DS10-14).

### 3.5. Behavior

Learning about the body and its expressive manifestations produces changes in the person and therefore affects their *professional practice*. Some teachers agreed with the idea that the training has helped them to manage the classroom: “I believe an implementation of these methodologies could be transferable to the classroom” (DS8-7); or: “My classes are more corporal, I try to speak with my body” (ET1-p4). They also recognize they have developed new *skills* connected with a better perception of the classroom atmosphere. On the one hand, teachers are more conscious about the non-verbal information that their students relay: “I’m more conscious about what students transmit through their style of sitting, talking and walking” (ET7-p5). On the other hand, they mentioned the usefulness regarding the adaptation of communication through the body: “This is what I take with

me: the way in which each person adapts and manifests, through bodily expression, their previous experiences. To me that has been very valuable.” (DS11-9).

In summary, teachers reported an improvement in self-awareness through contact with their own movement patterns (*Worldwide* and *Self* themes), suggesting that this could lead to a more fluid relationship with both students and colleagues, improving the work environment by reducing stress and anxiety. These changes as experienced seem to awaken in the participants the awareness of new forms of knowledge not known until now (*Epistemology* theme), and of new forms of communication to be exploited within the classroom (*Behavior* theme). All this, a better knowledge, a better relationship with the environment, and new ways of communicating with it, could be responsible for facilitating the management of emotions by the teachers, who experienced greater emotional balance and an improvement in the quality of life and personal wellbeing (*Ontology* theme).

#### 4. Discussion

The body–mind approach is not commonly used in higher education as a way to develop self-knowledge and self-reflection. It requires professionals trained in experiential and embodiment tools that could promote critical self-reflection as a key factor in transformation [2]. Despite the intrinsic difficulty of introducing it into academia, our experience shows that the body–mind approach could be a powerful tool for transformation, as Mezirow suggests [56]. The originality of the study lies in transferring movement tools that have been shown to improve relational and non-verbal communication skills in university students to the teachers themselves, as they have been shown to increase the quality of life and interpersonal and cognitive skills [57,58]. Teacher efficacy and teachers’ work engagement at higher-education level seem to be related to their wellbeing which, in turn, is related to the availability of resources and support for teaching, the recognition of the teacher’s work, and the existence of tools to maintain good interpersonal relations with students [59].

The teachers, overcoming their initial reticence, opened up to the proposed experience and were guided through the process of increasing their self-knowledge through their own bodies (self-outcomes). The experience started with the discovery of the physical structures of the body and the increase of body awareness (epistemology outcomes category). Their surprise and a certain amount of discomfort caused by the discovery produced a substantial change regarding assumptions and beliefs and increased self-awareness [54,60,61]. This generated the “disorienting dilemma” necessary for transformative learning [56].

The evidence shows that there was a considerable improvement in the teachers’ awareness of their own feelings and the symbolism that emerged in movement, by bringing to light some of the unconscious material [62,63]. The attention paid to these aspects modulated the way in which they perceived themselves: (a) physically, in a deeper and richer way (ways of being outcomes); (b) psychologically, with a greater balance and wellbeing, and therefore reacting in a less automatic and instantaneous way (affective experience of live outcomes); (c) increasing the perception of complicity and empathy with their students (attributes outcomes).

Our results are in good agreement with those published previously. According to Caldwell et al., specific training focused on non-verbal aspects and somatic work benefits general well-being [27]. The impact of what we call the intrapersonal sphere affects the way a person manages their behavior and attitude in relation to others (what we call the interpersonal sphere) [27,62]. The individuals who increase their body consciousness can better understand the body’s reaction to an emotionally complex event or situation, improving their self-esteem [64]. This could allow them to accept the situation, modulating their response in a more adaptive way in relation to the classroom environment. In the case of teachers, this improvement has been shown to be relevant to prevent teachers from falling prey to burnout when they are overworked [65].

The most important practical implications are that the company should provide an open, private space, free of noise and interference. It is around midday, when the lunch

break usually takes place, that the most appropriate time to establish the sessions has been established. In addition, it would be advisable for the company to incorporate this proposal into the annual training plans that all universities generally offer their professors. This could encourage participation.

In addition to the practical considerations outlined above, there are certain considerations that require a long-term organizational commitment. Our experience of different projects shows the difficulty of introducing embodied learning in an academic context where the Cartesian paradigm is still the dominant one. Long-term planning would be appropriate, so that it could be tested in small groups and adapted to the specific needs of teachers, before being adopted on a larger scale. This would make it possible to evaluate the results for continuous improvement, to measure their impact on the quality of teaching and the relationship with students, and to determine its usefulness for the institution. Furthermore, training should be provided by professionals specialized in body psychotherapy and higher education at the same time. A large part of the success of training programs such as the one presented here lies in the trust generated between the participants and the facilitator, as well as in the time required for the awareness process. This would require a commitment by the institution itself to financially support resources for implementation over a period of several years.

Other recommendations on the characteristics of the implemented program and their limitations might be also considered. The initial warm-up is a crucial phase. Participants value this time, as they experience a break from the frenzied weekly rhythm. This phase contributes to establishing self-confidence, body receptiveness, the ability to commit to the training, and overall satisfaction in the group [62]. It also allows each participant to step out of their comfort zone to explore different aspects of their own personality, for example, different ways of relating or listening to others, without fear of being judged or evaluated negatively.

During the phase identified as theme development, different play dynamics, improvisation tools and physical contact exercises were used. These should be introduced carefully in practice, as participants show sufficient confidence and responsiveness. This form of experience through body dynamics can bring out feelings of vulnerability and difficulties in relation to one's limits, beliefs, or assumptions [62]. The facilitator should pay special attention to the needs of the group and their learning time, to make the necessary adaptations to the movement proposals. The number and length of the sessions should also be sufficient to be able to have a thorough warm-up and transition from the daily routine, develop the themes, reflect, and share what has moved and emerged.

The closure procedure is a core aspect to grounding the emerged knowledge. The incorporation of reflection guides has been shown to be useful in achieving transformative learning [66]. Both verbal discussion and reflective diaries helped participants to express their findings on body awareness and emotional states. Critical reflection on a process is a distinguishing characteristic of adult learning, which refers to questioning the learner's own assumptions and beliefs [54]. In this case, most of the participants had no previous experience of acquiring direct knowledge from their own body, and for some of them, contradictions among their thoughts and their feelings and sensations appeared. The guidelines for reflection helped them to think about the application and impact of their new knowledge on their teaching activity.

The fundamental limitations in the study refer to the predisposition of the participants, who took part in the training on a voluntary basis. This implies a clear bias in their involvement with the training program, and therefore in the results and its validity. A larger sample would reinforce the results obtained. Another limitation concerns whether this training really had an impact on their daily teaching tasks. We have understood in greater depth how the training proposal can actually result in a transforming experience for the teacher. However, we cannot conclude whether this change would have a positive effect on a particular teacher's relationship with their students, given that their students' voices have not been heard. The challenge now should be to transfer the positive experience

honestly to their students, employing more flexible schemes and paying attention to their non-verbal communication.

## 5. Conclusions

Under the paradigm of transformative education, the inclusion of body-awareness training programs could improve teacher–student communication when the teacher is aware of the information that non-verbal language transmits. This awareness is gained through truly experiential training that allows teachers to know their motor and relational patterns, and to understand how connected they are to what happens in a classroom. In our opinion, these training programs should have the requisite length to promote sufficient integration and reflection of the contents. They should also be led by people with experience in the educational field, who have specialized in non-directive body-work approaches based on dance and creative movement. These two elements are necessary, in our experience, so that the training that is provided can be truly transformative for the teacher and not be merely anecdotal. All the above is especially important when the participants do not have previous experience with body–mind tools and body awareness because the emotions and resistance that emerge can interfere with the success of the work. In our experience, a total number of sessions between 8 and 12, each lasting 90 min, would be advisable. This allows a smooth transition from daily work to the experience, a good preparatory warm-up, and enough time to work on the issues raised and for reflection. The reflection time is necessary to put words and, therefore, meaning into what has changed during the session. Leaving enough space and time for teachers to connect with their own bodies, their needs, their movement patterns, and relationships with thoughts and emotions is the only way to make them conscious of the importance of non-verbal issues.

The participants showed in their reflective diaries the personal and professional benefits that this training has brought them. Afterward, they were more aware of their movement profile and its relationship with their feelings and emotional states. They engaged in self-reflection on their own communicative styles and discovered new tools to improve their teaching. They claimed that the experience contributed to their personal growth, as well as improving the working atmosphere. Most of the teachers (20) emphasized the applicability of this training in their daily teaching: they feel more comfortable with their bodies and the way in which they communicate with students. Two of them did not see the transfer of their own knowledge to the classroom. Nevertheless, for all participants, their observation skills improved; therefore, they feel they can understand students' attitudes better than before the training. We hope this translates to a greater capacity to respond to them in a more efficient and healthy way.

We believe that more interest in the non-verbal aspects of communication in the university community could facilitate the teaching–learning processes. Clearly, academic institutions could benefit from this, when the advantages of embodied experience in non-educational settings are well known. Further research with a larger sample size is warranted to investigate the relationship between embodiment and teaching–learning processes, for both students and teachers. The inclusion of students' voices would be useful to evaluate the effect on the whole teaching–learning process, but this would require a more ambitious project. Mixed methods that use quantitative and qualitative data sources could shed more light on these studies.

**Supplementary Materials:** A detailed dossier about sessions dynamics is available online at <https://www.mdpi.com/article/10.3390/educsci11090460/s1>.

**Author Contributions:** Conceptualization, supervision and project administration R.-M.R.-J.; methodology, formal analysis, investigation and writing—review and editing, R.-M.R.-J. and M.C.; funding acquisition, M.C. Both authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by Universidad Europea de Madrid, grant number UEM27.

**Institutional Review Board Statement:** Ethical review and approval were waived for this study due to the training program was promoted and financed by the University itself (program UEM 27), which considered that it was not necessary to submit it to the Institutional Review Board, as it was part of the annual training program for teachers. Besides, non-sensitive data were collected, data were properly anonymized and informed consent was obtained from all subjects involved in the study.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data presented in this study are available on request from the authors.

**Acknowledgments:** The authors wish to thank to Kenneth McCreath for proofreading the manuscript. Carmona wants to thank to the Spanish Ministry of Science and Innovation for the Ramón y Cajal Fellowships RyC-2014-16307.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. Kitchenham, A. The evolution of John Mezirow's transformative learning theory. *J. Transform. Educ.* **2008**, *6*, 104–123. [[CrossRef](#)]
2. Mezirow, J. Understanding Transformation Theory. *Adult Educ. Q.* **1994**, *44*, 222–232. [[CrossRef](#)]
3. Cranton, P. *Understanding and Promoting Transformative Learning: A Guide to Theory and Practice*; Stylus Publishing, LLC: Sterling, VA, USA, 2016; ISBN 162036414X.
4. Bunney, D.; Sharplin, E.; Howitt, C. Generic skills for graduate accountants: The bigger picture, a social and economic imperative in the new knowledge economy. *High. Educ. Res. Dev.* **2015**, *34*, 256–269. [[CrossRef](#)]
5. White, P.J.; Larson, I.; Styles, K.; Yuriev, E.; Evans, D.R.; Rangachari, P.K.; Short, J.L.; Exintaris, B.; Malone, D.T.; Davie, B.; et al. Adopting an active learning approach to teaching in a research-intensive higher education context transformed staff teaching attitudes and behaviours. *High. Educ. Res. Dev.* **2016**, *35*, 619–633. [[CrossRef](#)]
6. Witt, P.L.; Wheelless, L.R.; Allen, M. A meta-analytical review of the relationship between teacher immediacy and student learning. *Commun. Monogr.* **2004**, *71*, 184–207. [[CrossRef](#)]
7. Pogue, L.L.; AhYun, K. The effect of teacher nonverbal immediacy and credibility on student motivation and affective learning. *Commun. Educ.* **2006**, *55*, 331–344. [[CrossRef](#)]
8. Davis, H.A. Conceptualizing the Role and Influence of Student- Teacher Relationships on Children's Social and Cognitive Development. *Educ. Psychol.* **2003**, *38*, 207–234. [[CrossRef](#)]
9. Wubbels, T.; Brekelmans, M. Two decades of research on teacher-student relationships in class. *Int. J. Educ. Res.* **2005**, *43*, 6–24. [[CrossRef](#)]
10. Chromey, K.J.; Duchsherer, A.; Pruett, J.; Vareberg, K. Double-edged sword: Social media use in the classroom. *EMI Educ. Media Int.* **2016**, *53*, 1–12. [[CrossRef](#)]
11. Symonds, M.R.E. Lecturing and other face-to-face teaching—Too much or too little? An assessment based on student feedback and fail rates. *High. Educ. Res. Dev.* **2014**, *33*, 1221–1231. [[CrossRef](#)]
12. Silver, R.E.; Kogut, G.; Huynh, T.C.D. Learning “New” Instructional Strategies: Pedagogical Innovation, Teacher Professional Development, Understanding and Concerns. *J. Teach. Educ.* **2019**, *70*, 552–566. [[CrossRef](#)]
13. Mezirow, J. Transformative learning as discourse. *J. Transform. Educ.* **2003**, *1*, 58–63. [[CrossRef](#)]
14. Houser, M.L.; Waldbuesser, C. Emotional contagion in the classroom: The impact of teacher satisfaction and confirmation on perceptions of student nonverbal classroom behavior. *Coll. Teach.* **2017**, *65*, 1–8. [[CrossRef](#)]
15. Miller, A.N.; Katt, J.A.; Brown, T.; Sivo, S.A. The Relationship of Instructor Self-Disclosure, Nonverbal Immediacy, and Credibility to Student Incivility in the College Classroom. *Commun. Educ.* **2014**, *63*, 1–16. [[CrossRef](#)]
16. Leopold, K. Nonverbal Communication in Lecturing: A Constructivist Perspective. *High. Educ. Res. Dev.* **1986**, *5*, 15–29. [[CrossRef](#)]
17. Mehrabian, A.; Ferris, S.R. Inference of attitudes from nonverbal communication in two channels. *J. Consult. Psychol.* **1967**, *31*, 248–252. [[CrossRef](#)] [[PubMed](#)]
18. Anderson, L. *Schooling and Citizenship in a Global Age: An Exploration of the Meaning and Significance of Global Education*; Indiana University: Bloomington, IN, USA, 1979.
19. Bauer, S. *The Embodied Teen: A Somatic Curriculum for Teaching Body-Mind Awareness*; North Atlantic Books: Berkeley, CA, USA, 2018.
20. Morrison, A.B.; Jha, A.P. Mindfulness, attention, and working memory. In *Handbook of Mindfulness and Self-Regulation*; Springer: New York, NY, USA, 2015; pp. 33–46, ISBN 9781493922635.
21. McCabe, M.; Costello, S.; Roodenburg, J. The Child's Voice in Determining Program Acceptability for a School-Based Mindfulness Intervention. *Soc. Sci.* **2017**, *6*, 155. [[CrossRef](#)]
22. Bresler, L. *Knowing Bodies, Moving Minds*; Kluwer Academic Publishers: Dordrecht, The Netherlands, 2004; Volume 3, ISBN 978-1-4020-2022-3.

23. Crossman, J. The role of relationships and emotions in student perceptions of learning and assessment. *High. Educ. Res. Dev.* **2007**, *26*, 313–327. [[CrossRef](#)]
24. Pentassuglia, M. Inside the ‘body box’: Exploring feedback in higher education. *Assess. Eval. High. Educ.* **2018**, *43*, 683–696. [[CrossRef](#)]
25. Rigg, C. Somatic learning: Bringing the body into critical reflection. *Manag. Learn.* **2018**, *49*, 150–167. [[CrossRef](#)]
26. Bush, M. Mindfulness in Higher Education. *Contemp. Buddhism* **2011**, *12*, 37–41. [[CrossRef](#)]
27. Caldwell, K.; Emery, L.; Harrison, M.; Greeson, J. Changes in mindfulness, well-being, and sleep quality in college students through taijiquan courses: A cohort control study. *J. Altern. Complement. Med.* **2011**, *17*, 931–938. [[CrossRef](#)]
28. Rodríguez-Jiménez, R.M.; Caja-López, M.d.M.; Gracia-Parra, P.; Velasco-Quintana, P.; Terrón-López, M.J. Inteligencia Emocional y Comunicación: La conciencia corporal como recurso. *REDU Rev. Docencia Univ.* **2013**, *11*, 213. [[CrossRef](#)]
29. Johnson, D.H. Body Practices and Consciousness: A Neglected Link. *Anthropol. Conscious.* **2000**, *11*, 40–53. [[CrossRef](#)]
30. Mehling, W.E.; Wrubel, J.; Daubenmier, J.J.; Price, C.J.; Kerr, C.E.; Silow, T.; Gopisetty, V.; Stewart, A.L. Body Awareness: A phenomenological inquiry into the common ground of mind-body therapies. *Philos. Ethics Humanit. Med.* **2011**, *6*, 1–12. [[CrossRef](#)] [[PubMed](#)]
31. Ardel, M.; Grunwald, S. The Importance of Self-Reflection and Awareness for Human Development in Hard Times. *Res. Hum. Dev.* **2018**, *15*, 187–199. [[CrossRef](#)]
32. Lindgren, R.; Johnson-Glenberg, M. Emboldened by Embodiment: Six Precepts for Research on Embodied Learning and Mixed Reality. *Educ. Res.* **2013**, *42*, 445–452. [[CrossRef](#)]
33. Varela, F.J.; Thompson, E.; Rosch, E.; Kabat-Zinn, J. *The Embodied Mind: Cognitive Science and Human Experience*; MIT Press: Cambridge, MA, USA, 2016; ISBN 9780262335492.
34. Koch, S.; Fuchs, T. Embodied arts therapies. *Arts Psychother.* **2011**, *38*, 276–280. [[CrossRef](#)]
35. Caldwell, C. *Bodyfulness: Somatic Practices for Presence, Empowerment, and Waking Up in This Life*; Shambhala Publications: Boulder, CO, USA, 2018.
36. Eddy, M. A brief history of somatic practices and dance. *J. Danc. Somat. Pract.* **2018**, *21*, 25–61. [[CrossRef](#)]
37. Darwin, C. *The Expression of Emotions in Animals and Man*; John Murray: London, UK, 1872.
38. Ekman, P.; Friesen, W.V. The repertoire of nonverbal behavior: Categories, origins, usage, and coding. In *Nonverbal Communication, Interaction, and Gesture*; De Gruyter Mouton: Berlin, Germany, 1969; pp. 57–106.
39. Knapp, M.L. *Essentials of Nonverbal Communication*; Holt, Rinehart & Winston: New York, NY, USA, 1980.
40. Siegman, A.; Feldstein, S. *Nonverbal Behavior and Communication*; Lawrence Erlbaum Associates, Inc.: Broadway, NJ, USA, 1987.
41. Lowen, A. *Depression and the Body: The Biological Basis of Faith and Reality*; Penguin Books: London, UK, 1972.
42. Mazer, J.P.; Graham, E.E. Measurement in Instructional Communication Research: A Decade in Review. *Commun. Educ.* **2015**, *64*, 208–240. [[CrossRef](#)]
43. Rodríguez-Jiménez, R.M.; Carmona, M. Mixed methods for evaluating embodied processes in higher education. In *The Art and Science of Embodied Research Design: Concepts, Methods and Cases*; Tántia, J., Ed.; Routledge Press: New York, NY, USA, 2020; pp. 229–241.
44. Rodríguez-Jiménez, R.M.; García-Merino, S. Enactive and Embodied Learning In Higher Education. *J. Funct. Neurol. Rehabil. Ergon.* **2017**, *4*, 5–9.
45. Rodríguez-Jiménez, R.-M.; Velasco-Quintana, P.J.; Terrón-López, M.J. Construyendo universidades saludables: Conciencia corporal y bienestar personal. *Rev. Iberoam. Educ.* **2014**, *66*, 207–224. [[CrossRef](#)]
46. Payne, H. *Dance Movement Therapy: Theory and Practice*; Routledge: London, UK, 2003; ISBN 9781134934263.
47. Ren, J.; Xia, J. Dance therapy for schizophrenia. *Cochrane Database Syst. Rev.* **2013**, *10*. [[CrossRef](#)]
48. Strassel, J.K.; Cherkin, D.C.; Steuten, L.; Sherman, K.J.; Vrijhoef, M.; Hubertus, J. A Systematic Review of the Evidence for the Effectiveness of Dance Therapy. *Altern. Ther. Health Med.* **2011**, *2017*, 50–59.
49. Adler, J. *Offering from the Conscious Body: The Discipline of Authentic Movement*; Simon and Schuster: New York, NY, USA, 2002; ISBN 1594776237.
50. Karkou, V.; Oliver, S.; Lycouris, S.; MacDonald, R.A.R.; Chaiklin, S. *The Oxford Handbook of Dance and Wellbeing*; Oxford University Press: Oxford, UK, 2017; ISBN 9780199949298.
51. Schwender, T.M.; Spengler, S.; Oedl, C.; Mess, F. Effects of Dance Interventions on Aspects of the Participants’ Self: A Systematic Review. *Front. Psychol.* **2018**, *9*, 1130. [[CrossRef](#)] [[PubMed](#)]
52. Bainbridge, B. *Sensing, Feeling, and Action: The Experiential Anatomy of Body-Mind Centering*; Contact Editions: Northampton, MA, USA, 1993.
53. Laban, R.; Ullmann, L. *The Mastery of Movement*; Northcote House Publishers Ltd.: London, UK, 1971.
54. Hoggan, C.D. Transformative Learning as a Metatheory: Definition, Criteria, and Typology. *Adult Educ. Q.* **2015**, *66*, 57–75. [[CrossRef](#)]
55. Hoggan, C.D. A typology of transformation: Reviewing the transformative learning literature. *Stud. Educ. Adults* **2016**, *48*, 65–82. [[CrossRef](#)]
56. Mezirow, J. Learning to Think Like an Adult Core Concepts of Transformation Theory. In *Learning as Transformation: Critical Perspectives on a Theory in Process*; Mezirow, J., Ed.; Jossey-Bass: San Francisco, CA, USA, 2000; pp. 3–34.

57. Dimonte, V.; Luciani, M.; Conti, A.; Malinverni, E.; Clari, M.; Campagna, S.; Garrino, L. Nursing students' perspectives of dance movement therapy to learn relational skills: A qualitative description study. *Nurse Educ. Today* **2021**, *97*, 104697. [[CrossRef](#)] [[PubMed](#)]
58. Koch, S.C.; Riege, R.F.F.; Tisborn, K.; Biondo, J.; Martin, L.; Beelmann, A. Effects of dance movement therapy and dance on health-related psychological outcomes. A meta-analysis update. *Front. Psychol.* **2019**, *10*, 1806. [[CrossRef](#)] [[PubMed](#)]
59. Han, J.; Yin, H.; Wang, J.; Bai, Y. Challenge job demands and job resources to university teacher well-being: The mediation of teacher efficacy. *Stud. High. Educ.* **2020**, *45*, 1771–1785. [[CrossRef](#)]
60. Kottler, J.A. Transformative travel: International counselling in action. *Int. J. Adv. Couns.* **2002**, *24*, 207–210. [[CrossRef](#)]
61. Wang, M.; Yorks, L. Behind the Resume: A Holistic Approach to Deepen Self-Awareness. *J. Transform. Educ.* **2012**, *10*, 157–176. [[CrossRef](#)]
62. Bat-Sheva, K. A concept of body knowledge and an evolving model of movement experience: Implications and application for curriculum and teacher education. *Am. J. Dance Ther.* **1994**, *16*, 21–48. [[CrossRef](#)]
63. Dirkx, J.M. Self-Formation and Transformative Learning. *Adult Educ. Q.* **2012**, *62*, 399–405. [[CrossRef](#)]
64. Sundgot-Borgen, C.; Stenling, A.; Rosenvinge, J.H.; Pettersen, G.; Friborg, O.; Sundgot-Borgen, J.; Kolle, E.; Torstveit, M.K.; Svantorp-Tveiten, K.M.E.; Bratland-Sanda, S. The Norwegian healthy body image intervention promotes positive embodiment through improved self-esteem. *Body Image* **2020**, *35*, 84–95. [[CrossRef](#)]
65. Rosa, R.; Madonna, G. Teachers and burnout: Biodanza SRT as embodiment training in the development of emotional skills and soft skills. *J. Hum. Sport Exerc.* **2020**, *15*, S575–S585. [[CrossRef](#)]
66. Flierl, M.; Hamer, R. Designing Student Reflections to Enable Transformative Learning Experiences. *Teach. Philos.* **2019**, *42*, 87–106. [[CrossRef](#)]