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Can We Use Creativity to Improve Generic Skills in our Higher Education Students? A Proposal Based on Non-Verbal Communication and Creative Movement

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Traditionally, general skills and personal growth have been developed through cognitive processes within academic contexts. Development based on experience may be an alternative route to achieve cognitive knowledge. Enact-learning is based on the biunivocal relationship between knowledge and action. Action is movement. Participants interact with their environment through movement. When participants are aware of this interaction, knowledge is created.

First interactions in personal development with the environment are non-verbal. Returning to this concept, we propose work based on creative movement and non-verbal communication. This approach takes into account the multiple intelligences paradigm in order to generate knowledge.

This paper seeks to explain a movement development program that has been applied to freshman students studying in different academic areas. The program design is explained in detail. The article demonstrates how the program has helped to develop the participants' body consciousness. The students' reflections are analyzed using a qualitative methodology. A questionnaire focused on the students' perceptions of the connections between general skills and the program rounds out the research results.

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Can we use creativity to improve generic skills in our higher education students? A proposal based on non-verbal communication and creative movement

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Abstract

Traditionally general skills and personal growth have been developed through cognitive processes inside an academic context. A development based on experience, may be an alternative route to achieve cognitive knowledge. Enact-learning is based on the biunivocal relationship between knowledge and action. Action is movement. Participants interact with their environment through movement. When participants are aware of this interaction, knowledge is created.

First interactions in the personal development with the environment are non-verbal. Returning to this concept, we propose a work based on creative movement and non-verbal communication. This approach takes into account the multiple intelligences paradigm in order to generate knowledge.

This paper seeks to explain a movement development program which has been applied to freshman students from different university degrees. The program design is widely explained. It also will present how it has helped to develop its participant's body conscience. The students' reflections are analyzed through a qualitative methodology. A questionnaire on the students' perception on the connections between general skills and the program allows to complete the results.

Keywords: general skills, non-verbal communication, creative movement, body-work.

Can we use creativity to improve generic skills in our higher education students? A proposal based on non-verbal communication and creative movement

Traditionally general skills and personal growth have been developed through cognitive processes within an academic context. Although problem and project based learning are ever more present, they still have a cognitive base, making it difficult to transfer knowledge towards a more practical focus.

A development based on experience may be an alternative route to achieve cognitive knowledge. The path that goes from cognitive to experiential is unnatural, because it parts from a point outside the individual and points towards him, whilst an experiential route parts from inside the individual and creates cognitive knowledge from his own expertise. This is the keystone of enact-learning (Varela, 1988). Enact-learning is based on the biunivocal relationship between knowledge and action. Action is movement. Participants interact with their environment through movement. When participants are aware of this interaction, knowledge is created.

In academia, knowledge is directly related to verbal aspects. Non-verbal aspects, despite their proven importance in communication, tend to take a second (and distant) place. By returning importance to movement, we open new ways to achieve knowledge, allowing a complete development. This way we can focus on how we really interact with the environment.

From birth, first interactions with the world are non-verbal, and throughout academic development, they lose their formal importance until they are almost discarded at graduate levels. The moment verbal skills are acquired, non-verbal skills lose part of their importance to the latter, but their decline is far less than what academia imposes. This leads to an imbalanced personal development that will go unchanged unless the individual takes consciousness of these non-verbal aspects.

This paper seeks to explain a movement development program. It will also present how it has helped to develop its participants' body conscience, assessing achievements in the fields of general skills and personal growth.

Theoretical Framework: Creativity and Movement

It is widely accepted that those processes linked with personality, emotions and cultural environment are as important as the cognitive ones (Alles, 2005) for the development of intelligence (Guilford, 1971; Spencer & Spencer, 1995). Gardner's (2003) term "multiple intelligences" includes both *interpersonal intelligence* (the capacity to understand the intentions, motivations and desires of other people) and *intrapersonal intelligence* (the capacity to understand oneself, to appreciate one's feelings, fears and motivations). It takes into account spatial, linguistic, logical-mathematical, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalistic abilities. Salovey and Mayer (1990) clarify the term emotional intelligence and its relationship with the other "intelligences". Finally, Goleman (1995) connects the intrapersonal and interpersonal spheres with the acquisition of general skills.

An interesting approach for the development of general skills in the multiple intelligences' context is using creative processes (Capacchione, 2001). Those try to develop creative thinking through several aspects as fluency, flexibility, originality and production (Guilford, 1971). Previous experiences, using creative methods, existing in both primary and secondary schools can be found in literature (Alexander, 1992; Craft, 2009; Jeffrey, 2001; Beetlestone, 1998). In higher education, in spite of some existing studies (Blanco, 2009; DeSeCo Project, 2005; Martínez & González, 2009; Jackson et

al., 2006; Villa et al., 2008), the presence of the creativity in this particular curriculum is not so relevant.

Dance and creative movement offer a creative way to develop general skills and to generate new knowledge (Wengrower, 2008). Movement is a dynamic process in which the person can express emotions, perceptions, motivations and relationships through the body (Aucoutourier & Lapiere, 1983). Movement also makes it possible to learn based on enact knowledge: the person can reflect on his actions in an experiential way (through non verbal dynamics).

The latest research in neuroscience and the development of a set of disciplines under the name Somatic Movement Sciences (ISMETA) have supported, especially from the 70's on, the impact of an appropriate motor and bodywork development on the functioning of different brain functions (Rizzolatti & Sinigaglia, 2006; Ramachandran, 2008). Human condition integrates two aspects closely related (mind and body), as it was shown by Ratey (2001). Body and mind are together: changes in movement repertory can produce changes at mind levels (Payne, 1990). The embodiment theories assume a "perceptual, modality-specific way of knowledge representation, a way that leads via de sensory-motor system and uses this system for thinking through embodied simulations" (Koch, 2006).

Although the main application of this knowledge has been applied to a clinical context, it can be extended to educational and social ones, as Puxeddu (2007) and Cappello (2008), respectively, suggest.

In fact, professional and personal skills development through movement and non-verbal language is not new (Boyatzis, Mckee & Johnston, 2008; Galloway, 1977). For quite some time, the world's leading companies have integrated coaching programs that involve not only intellectual, but also physical and emotional levels to promote efficient, productive and healthy work environments (Boas, 2011). In the United Kingdom and Belgium, groups, such as Boas and LifeDance, are coaching leaders on projects for companies. These projects include working with movement analysis and observation and non-verbal language. Companies like Walt Disney Company, Heineken, Nokia, British Council, General Motors, IBM and many others have reaped the benefits of programs that incorporate the body and conscious experience as a tool for efficient and motivational transformation in competitive environments. In the United States, companies like Limseonline, DynamicVoice or Move & Change have spent years advising executives and companies using programs designed by therapists and educators specialized in Laban Movement Analysis (Thornton, 1971), body therapies such as Dance Movement Therapy (Fiasca, 1993) and techniques for Somatic Movement Education (SME). Specifically, this includes Body Mind Centering, Feldenkrais or Alexander techniques, among others (Fast, 1971).

It can be seen, through previous research, that the incorporation of non-verbal and creative movement elements into the teaching-learning process has proven to be a powerful tool for the acquisition of general skills. This is particularly true in primary and secondary studies (Coates, 2002). In fact, authors such as Alles (2005) incorporated in the literature other methods based on physical activity to acquire or to assess skills focused on professional development. Authors such as Kasch (2004), and Sternberg and Williams (2010) have worked on some implemented programs in higher education centers in the U.S. and Europe, which promote meaningful learning of a subject or specific skill through creative movement programs. The advantages that creative movement and dance present for the general population, specifically for the student population, by supporting personal development, acquisition skill, and performance, are also studied by psychology specialists (Fischman, 2005).

Goals

The general goal of this work is to implement a movement development program for the improvement of general skills and personal growth inside a university context.

The specific goals are:

1. To design a movement program focused toward the acquisition of general skills.
2. To increase body awareness of the participants.
3. To improve general skills through the program, especially self-awareness and interpersonal relationships.

Methods

The following is a brief table with concepts/explanations of those terms that might seem awkward to those outside the field of dance research:

Table 1

Concepts and explanations related to the field of dance research

Table 1

Concepts	Explanations
Somatic Movement Education	A field that seeks “to enhance human processes of psychophysical awareness and functioning through movement learning”. (ismet.org)
Embodiment	Embodiment refers to the biological and physical presence of our bodies, which are a necessary precondition for subjectivity, emotion, language, thought and social interaction (MacDonald, Hargreaves and Miell, 2001).
Dance Movement Therapy	“The psychotherapeutic use of movement to further the emotional, cognitive, physical and social integration of the individual”. (adta.org)
Body-work	A body-work program is a movement program based on non – verbal communication and body awareness

This project follows a qualitative research [paradigm](#). Despite this fact, a questionnaire to assess students’ satisfaction with the program was also applied. The results of the questionnaire provided additional information to be taken into account.

Phases of work

The work was structured in the following way:

Phase 1. Planning the Action. The action hypothesis was: Could we improve our students’ general skills (that is, intra and inter personal)? We considered that an answer could be implementing an experiential learning program focused on body awareness and non-verbal communication.

Creating the group of participants. First, we invited those students interested

in the body-work program to participate in the sessions. The activity was introduced in the subject "Communication Skills". This subject is compulsory for every freshman in all the available degrees at the Universidad Europea. But the activity was voluntary; the students were informed by teachers during said lessons of the possibility of participating in the movement program (or else they could maintain the traditional approach of the subject). Finally, two student groups were organized (22 and 17 students, respectively). Students belonged to the faculties of Social Sciences, Art and Communication, Physical Activity and Sports, Health Sciences, and Polytechnic and Architecture Schools. Only one of the groups finished the entire program.

Program design. Secondly, we designed a specific body-work program (a movement program based on non-verbal communication and body awareness) program oriented to the improvement of students' competencies. At this stage, we also established the movement sessions calendar as well as the researchers' meetings.

Data collection. Finally we designed the data collection. We mainly used reflexive diaries and questionnaires. Specifically, data was collected from the daily reflections of the participants in the program, specific questionnaires and the researcher's log. After each specific session, the comments made by the participants were recorded during the session's final closure in order to be able to analyze them later on. Though the results for these have not yet been conclusive, we hope to be able to expand on them in future publications.

Phase 2. Action and Observation. Acting and observing was done in tandem. The proposal was implemented through 15 movement sessions. The movement sessions were made weekly, in a spacious room, with natural light and some elements (balloons, music, percussion instruments, paper, paints, materials...). Each session lasted two hours.

Phase 3. Reflection.

Data collection. Researchers collected the students' reflexive diaries searching for evidences of:

- Comments related to explicit learning from new acquisition of body awareness.
- Comments related to self-knowledge
- Comments related to the influence of the knowledge on the relationships in the academic context
- Other comments related to generic competencies

Reduction, Representation and Validation. Comments and units of meaning, which were independent and recurrent, were selected. Through an inductive categorization process, these were taken as representative of the students' reflections. We analyzed data until we reached a point of data saturation which occurred when we did no longer hearing or seeing new information. In order to validate them, data saturation was observed related to the next themes:

- Evidence of acquisition of greater body awareness.
- Evidence of improvement in self-knowledge, self-confidence and self-esteem.
- Evidence of impact of previous aspects on other skills.
- Evidence of greater awareness of the practice related the intra and intercommunicative skills.
- Evidence of change related values and beliefs related to the body and its expressive potential.
- Evidence of changes in students' perceptions related to the education, the body

and the communication.

Concentration on the previous items was used to give interpretation to the impact of the action. After analyzing the results, the research team gathered information in order to improve the actions.

Movement program

The movement program was designed to use different techniques that consider the body experience as the key aspect. Dance Movement Therapy (DMT) and Body Mind Centering are the approaches used. Both of them share the concept of enactive learning (Varela, 1988).

As we mentioned before, enactive learning promotes the generation of knowledge that emerges from the experience, the observation and modulation of the individual introspection and interaction abilities of the participants. New information is gained through perception-action interaction in the environment. It is multimodal, because it requires coordination of the various senses.

There are different approaches for practicing the enactive-learning process. Two of them are Dance Movement Therapy and Somatic Education Movement. Dance Movement Therapy (See Table 1), as the American Dance Therapy Association (ADTA) defines it, uses movement to "further the emotional, cognitive, physical and social integration of the individual". It is considered a psychotherapeutic intervention, so its application field is mainly in a clinical context. However, more and more, as its principles are applied in social and educational contexts, it provides an experiential frame for the students who, as reflective participants, will explore, observe and assess their own experiences and learning practices.

This approach requires knowledge of different body techniques as well as movement analysis and observation tools. In particular, Laban Movement Analysis (Laban, 1987) and dance techniques as Contact Improvisation and Release.

The second approach is Somatic Movement Education. The field of somatics has developed over the last century through a process of inquiry into how consciousness inhabits the living body (shared by dance therapy). According to Thomas Hanna, who first coined the term, "somatics" is the study of self from the perspective of lived experience, encompassing the dimensions of body, psyche, and spirit. The participants practice through touch and words, experiential anatomy and imagery, and movement patterning. Some of the objectives of this approach are:

- "Refine perceptual, kinesthetic, proprioceptive, and interoceptive sensitivity that supports homeostasis and self-regulation
- Recognize habitual patterns of perceptual, postural and movement interaction with one's environment
- Improve movement coordination that supports structural, functional and expressive integration
- Experience an embodied sense of vitality and extended capacities for living" (ismeta.org).

By somatic movement education, human experience can be observed, experimented on, shared and investigated, promoting presence-awareness and, therefore, the reorganization and changes of our behavioral patterns. In particular, we have followed the work of the BMC School funded in 1973 by Bonnie Bainbridge Cohen.

The program was performed during 15 two-hour sessions. We tried to involve students in a self-discovery process, developing body awareness and exploring the links between body experience and personal knowledge practice. This process goes to a

deeper knowledge about communicative skills. Through their individual reflections, the participants became conscious about the relationships between verbal and non-verbal experiences.

In designing the movement program we had to take the following into account:

- To ensure the creation of a working environment in which participants feel safe and comfortable to explore their physicality, both autonomously and as part of the group.
- To facilitate work structures where bodily experience can be verbalized, shared and provided with meaning.
- To develop a continuity of theme sessions, ensuring the coherence between the needs and expectations of the group and the goals of the work.

Movement program structure. The 15 sessions were organized with 12 were dedicated to the body-work and 3 focused on the follow-up and integration of the contents.

In order to achieve the goals, three consecutive work levels were developed related to the skills development (Cappello, 2008):

Level 1. Intra-personal area (or inner world). Four sessions were devoted to developing work skills related to the intrapersonal area: self-knowledge, self-esteem, self-motivation, leadership and creativity. In this phase of work, these skills established the basis of subsequent work. The participants also learned how to modulate their abilities to take responsibility of the learning process.

Level 2. Interpersonal area (or outer world). While encouraging the development of skills of the previous level, four sessions were occupied with developing communication skills, empathy and decision making. At this level, participants began to have confidence in the process. They were able to verbalize the emergence of knowledge from individual and group experience with greater confidence. Moreover, confidence in the process allowed participants to modulate the work according to their own needs and expectations.

Level 3. Integration. Four sessions were devoted to the development of skills of observation and analysis of movement. These tools are useful for making objective observation of intra and inter personal processes. We applied Laban Movement Analysis to deepen self-observation of movement patterns. Levels 1 and 2 provided the basis for ensuring the internalization of this resource and to facilitate effective communication and active listening when sharing with the group.

In Figure 1, a schematic representation of the “inner world” and “outer world” related to some generic skills can be found. The inner world refers to oneself; the outer world means the way in which people relate to life in the world. Self-knowledge (also named self-understanding) is in the center of the circle. In order to work at self-knowledge, the first step is to focus on body image, kinesthetic and spatial awareness. This can be done through breathing exercises, being aware of body limits, having contact experiences or by making baby movements (See Table 2). Once self-understanding has been worked through, other skills, such as self-motivation and leadership or creativity, closely related to the “inner world”, can be worked through by new dynamics (See Table 3).

The outer world refers to the way people establish relationships with others and with the world. Some of the generic skills that can be considered here are initiative, teamwork, communication and social skills and, decision making. Although both “worlds” are interrelated, the skills of the “inner world” are necessary in order to understand the “outer world” (Level 2). Moving toward the “outer world,” we used body resources as role playing, team building activities, contact exercises, body problem resolution (such as realizing movement with certain limits), and creative ways to tell

stories. It is important to be able to involve the entire group in the activities; in this way each person can find out his/her own role and place in the proposal (and try to change that role in a secure and confident space). Some creative examples used during the movement sessions to develop these skills are listed in Table 4.

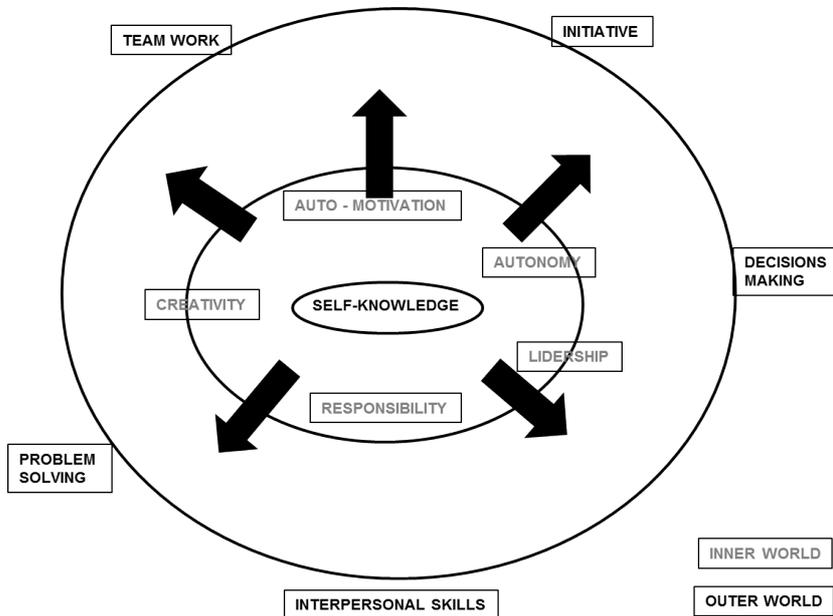


Figure 1. Schematic representation of the “inner world” and “outer world” related to some generic skills.

Table 2. Examples of movement dynamics oriented to work on self-knowledge that can be achieved through body image, kinesthetic and spatial awareness

Body attitude	Movement dynamics
Body image	Breathing exercises; identification of the different parts of the body; integration of them; experiences of physical contact through a variety of rhythms; body limits
Kinesthetic awareness	Body sensations: verbal description of the use of space and joint movements; Kinesphera exploration: high, medium and low levels; weight
Spatial awareness	Places in which each participant feels more comfortable; construction of a personal house; child movements

Table 3. Movement proposals oriented to develop self-knowledge and various skills belonging to the “inner world”.

Skills	Movement proposals
Self-knowledge	Breathing, body segments and limits, contact experiences, body sense and perception, baby movements
Self-motivation / Self-esteem / Self-confidence	Energetic movements; construction of body images; rhythm patterns
Leadership	Copying movements in turns; choice of music for warming phase; presentation movements

Creativity	Movements with limits (spatial, body parts, ...); building different figures with body parts; creating new movements with different body parts
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Table 4. Movement proposals oriented to develop some skills belonging to the “outer world”.

Skills	Movement proposals
Initiative	Each person makes a movement proposal (square/circle; big/little; one hand /entire body ...). The others repeat it until someone else wishes to create something new.
Decision making	Using rhythms to express emotions, to create individual movement sequences selecting movements
Communication& social skills / Empathy	Non-verbal dialogues about oneself; play them in little groups; work in pairs; learn movements characterized for each person
Teamwork	Build a story or a figure working together; create a complete dance using a image, sound, word, etc.

The three follow-up integration sessions are carried out at the beginning of the program (Session 1) and at the end of Level 2 (Session 10) and Level 3 (Session 15). Special emphasis on verbalization processes and observation of intra- and inter-personal dynamics was made. This helps participants to integrate and internalize the content viewed at each level. In the first and last sessions, participants are motivated to express expectations and level of satisfaction with the program.

Participants were blind to the levels of work and distribution of skills in order to guarantee the independence of knowledge gained based on the individual and group experience.

In this way, the participants’ reflections manifest the evidence of the degree of effectiveness of the work. This makes possible the identification of improvement areas and the subsequent remodel of the program and contents.

Discussion

Two groups began the program, but only one of them finished it entirely. Only 22 students participated in the complete program, that is, they attended more than 80% of the sessions. Most of them (20 students out of 22) had no previous education in dancing or movement techniques. In this group, 3 people left the program, leaving a total of 19 students.

Qualitative Analysis

A qualitative analysis of the written reflections was made. From the participants’ comments, we observe, that despite initial resistance, the sessions gave participants a feeling of relaxation, peace, well-being and optimism. Students perceived their participation in the sessions as a personal benefit. They gradually began to connect appearance with emotional aspects. They also added new vocabulary in their reflections to describe their physical status.

Evidences of these results are shown below. They are direct quotations from written reflections (S means student, following by the number assigned to each diary).

The three students who left the program lacked awareness of the importance of non-verbal aspects and didn't understand the goal of this work:

I disagree with the importance of body expression; the oral expression transmits much more. (S-15).

I don't understand the connection between tonic states and communication. (S-12).

The analysis of the reflections expressed after each session, and according to the students' perceptions of the program, shows a clear relation between body work and general skills development. Categorization has brought out the following themes for the intra and interpersonal spheres:

Intrapersonal sphere. Looking for evidence related to the general skills, there is agreement about new knowledge gained. The following are some of the students' reflections about the general skills:

Self-knowledge. The participants emphasize the new knowledge that has emerged during the process:

I've learned that my body image speaks a lot in every situation I can find in my diary life. (S-1).

The program has helped me to know myself a bit more. (S-5).

I realized that I need to change some habits that make me bad. (S-2).

I have been more conscious about which are my difficulties and resistances in front of something new. (S-11).

The mirroring exercises have given a lot of information about me that I didn't know. (S-20).

Auto-motivation.

I would like to repeat the experience. (S-18).

I usually reflect on how to improve, if I could do more, if I have made errors, to improve myself next day. (S-9).

Responsibility.

What we think, feel and do is going to affect the others; we have the responsibility of it. Now, after some of the dynamics I am more conscious about it. (S-2)

Creativity.

These sessions have helped me to be quicker when I have to improvise, and especially to be imaginative. (S-18).

Looking for new ways to do movements and to resolve the proposals, I think than I have more ideas than I thought. (S-17).

Leadership.

It has been a nice surprise to realize that non verbal communication can affect the capacity of leadership. (S-13).

I felt really bad when nobody followed my proposal. It was the same feeling when I am participating in a team work. (S-19).

Self-esteem and Self-confidence.

It has promoted the acquisition of self-confidence. I have seen this in my companions, not only on me. (S-8).

I had the conviction that my other companions were to support me, and in this way I could take new risks. (S-7).

Autonomy.

To distinguish where the borders between the others and me are important so I don't lose my own identity. (S-4).

Interpersonal sphere. In this general category, we include the analysis of the reflections related to the intrapersonal area, in particular, evidence related to some of the interpersonal skills.

Teamwork.

It is worth noting the teamwork we have developed during the sessions. (S-3).

We did excellent team work in a new and interesting way. (S-7).

Communication & Social Skills.

I made new friends with people that I didn't know before. (S-11).

This work helps to know yourself, your colleagues and how we interact with the environment. (S-2).

It is clear the connection between the program and life outside: the image we present to the others is really important. (S-4).

Empathy.

Now, I am able to better understand the others. I have improved my capacity to heed people. (S-1).

Quantitative analysis

In order to evaluate both the satisfaction and success level of the program, we developed a questionnaire. The questionnaire was structured in three parts. In the first part, consisting of 13 questions, we asked the participants about their perception of improvement in some of the general skills. The second part (5 questions) was specifically focused on body and non-verbal aspects. The third part (6 questions) contained questions on the work environment (room, duration of the sessions, teacher...). A 5 point scale was used (0 at the lower valuation; 5 at the maximum valuation). Finally, we included some open questions in order to obtain more information about the level of satisfaction with the program.

In Figure 2, the participants' perceptions of improvement in some of the general skills are shown. Self-knowledge and self-esteem are the most improved, according to the students' perceptions in the intrapersonal sphere. Social and communicative skills and empathy received the highest valuation in the interpersonal sphere. Students indicated that the program is especially useful more for personal development than for professional development.

Figure 2. Participants' perceptions about improvement of some of the general skills.

In Figure 3, some perceptions related to body knowledge and non-verbal aspects are shown. It is valuable to remark that students appeared to have been more conscious about the non-verbal information coming from other people. They said that they had acquired new awareness of the body and its expressive qualities.

Figure 3. Participants' perceptions about changes related to body knowledge.

Finally, Figure 4 shows the results for the questions related to general aspects of the program. The session space is the most highly valued by the students. The great satisfaction shown toward the entire program and its teacher is also significant. More than 95% of the students would like to work further in this area. They are also willing to do more training through this methodology.

Figure 4. Participants' opinions on some general aspects of the program.

The results from our data are consistent with what can be found in existing literature. Furthermore, they are similar to those found in previous studies made with university teachers (Rodríguez et al, 2011). Self-knowledge and social skills are particularly benefitted through this creative approach.

The data analysis allows the following summary:

- A movement program was designed (and applied to freshman) for the acquisition of general skills (as set in Goal 1).
- According to the participants' reflections and answers to the questionnaires (Figure 3), body awareness was improved thanks to the program (Goal 2). After the movement program, students confirmed that they are more conscious about non-verbal aspects of their lives.
- Qualitative data underscores the connection between the movement program and the acquisition of some general skills (Goal 3). The students consider that both intra and inter personal skills have been improved, especially the self-knowledge, self-esteem, self-confidence and interpersonal relationships (social and communicative and empathy skills).
- Students are willing to do more training through this methodology. They denote a high level of satisfaction with the methodology used.
- Further studies must be conducted in order to refine the proven connections between body awareness and general skills. Quantitative instruments may be helpful when generating future knowledge in this area.

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