

# Aesthetic Learning: Art as an Integrating Element in the Teaching-Learning Process in the Superior Education

Anna Karenina Azevedo-Martins<sup>1</sup>, Graziela Rodrigues Silva<sup>1</sup>, Tássia Monique Chiarelli<sup>1</sup>, Evany Bettine de Almeida<sup>1</sup>, João Valentin Neto<sup>1</sup>, Viviane Abreu Nunes<sup>1</sup>

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## ABSTRACT

The educational process is considered a mean for the empowerment of the individual contributing to enlarge perspectives in the professional practice. Being consistent with this construction is that, in many areas, traditional teaching methodologies have been combined and/or replaced by strategies based on the interdisciplinarity and the recognition of students as main agents in the teaching-learning process. Among the available teaching-learning resources, we have proposed the use of dramatic performances to explore distinct aspects of the Endocrine System, where students are invited to act as molecules. This aesthetic experience inspired the preparation of the event “Dom Quixote Meeting: a trip to re(learn) diabetes, whose idea was to discuss and (re)build knowledge and practices concerning this disease. In this scenario, we find out that the art, through the corporeity, was an integrative experience for the knowledge construction, development of skills and humanistic learning.

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## 1. Introduction

### 1.1. First act: Art and the playfulness in the teaching-learning process

Contemporary society is marked by political, economic and cultural changes that directly influence the lives of the persons. In this context, it has been crucial to develop an autonomous and inquiring attitude, which includes the reflection on the educational process. Also, it is essential to think about an education that contributes for the integral formation of the human being considering the development of the cognitive and instrumental apparatus, intuition, creativity and social responsibility, in combination with the ethics, affective, physical and spiritual components that enables the individuals to live in a plural society in constantly changing (Moraes, 1999). Thus, teaching and learning should be seen as a dynamic and continuous process of knowledge construction, in order to contribute to the interdisciplinary formation and the transformation of the realities (Paschoal, Mantovani, & Méier, 2007).

The formation process is considered a mean to empower the student to exercise citizenship (Fórum de Pró-Reitorias de Graduação das Universidades Brasileiras, 1999), as well as to enlarge perspectives about professional practice (Beane, 2003). To be consistent with this formation is that, in many areas, the traditional teaching methodologies have been combined and/or replaced by strategies based on the interdisciplinarity and the recognition of students as main agents in the process. Through these strategies, collectively known as active methodologies, it is possible to ensure a more interesting and dialogical teaching and learning process (Mitre, Siqueira-Batista, Girar-de-Mendonça, Morais-Pinto, Meirelles, Pinto-Porto, Moreira, & Hoffmann, 2008).

Frequently, the use of active methodologies also reveals a pedagogical approach that explores socio-cultural situations of the individuals (Fernandes, Xavier, Ceribelli, Bianco, Maeda, & Rodrigues, 2005). Furthermore, once students have identified themselves with different forms of learning, it is possible that they can attribute, more autonomously, meaning to the knowledge.

Reflection on teaching practice still requires considering the full participation and involvement of students, using a more creative approach (Almeida, 2011, p. 159)( Freire, 2001). In this respect, the art has been considered as a modifier and critical element for the individual construction. For Lévy (1996), through the

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<sup>1</sup> School of Arts, Sciences and Humanities (EACH) of University of Sao Paulo (USP), Av. Arlindo Bettio, 1000 – Ermelino Matarazzo – CEP: 03828-000, São Paulo, SP - Brazil

art, individuals can express emotions, represent subjective concepts and facilitate the understanding for those with whom we want to establish a relationship. The art was, therefore, considered as an important component in the educational work, contributing for the construction of the aesthetic sense, intelligence, opening space for the creation of new possibilities of being and feeling (Júnior, 1991).

Among the artistic modalities available for work in the classroom, theater (drama) appears as a possibility to live our academic reality from a more humanistic perspective. We consider that the practice of drama may stimulate intellectual abilities, spontaneity, imagination, creativity, perception, observation and social interaction. Furthermore, it can help the learning and the development of skills such as gestures, movement and verbal expression.

Educational proposals of this nature have, in general, the challenge of overcoming technicist conceptions, consisting itself as a mean to access abstract dimensions (Júnior, 1991). In addition, these proposals collaborate for interdisciplinary and cooperative work, for the research, as well as for the capacity to consider our own problems, a key aspect to consolidate the educational work (Peixoto, 1983; Iavelberg, 2003).

One possible scenario and favorable environment to live active methodologies is the School of Arts, Sciences and Humanities of the University of São Paulo (EACH-USP), whose political-pedagogical project is thought to stimulate the articulation of the various areas of knowledge, at the same time that allows the training of the students in an interdisciplinary atmosphere. This direction has been incorporated into the disciplines of Biological Basis, which are part of the curriculum of undergraduate courses in the Health area, such as Gerontology and Midwifery. The educational model assumed in those disciplines opens possibilities for a more active and cooperative teaching and learning process (Viel, Nunes, Azevedo-Martins, Lima, Siqueira, & Menna-Barreto, 2007; Azevedo-Martins & Nunes, 2011, p. 115).

Among the teaching resources in these disciplines, we have proposed and accompanied the implementation of dramatic performances about the Endocrine System, where students have to act as molecules. In this activity, they produce and perform plays that involve the action of hormones such as glucose regulation, activation of the hypothalamic pituitary adrenal axis in a situation of stress, regulation of body temperature by thyroid hormones, menstrual cycle and fertilization. The evaluation of this activity, of course in the context of the disciplines, has shown that it is possible to learn about the human Endocrine System using playful approaches. Besides, most of the students recognized that their active participation was an enjoyable and significant moment of the teaching and learning process (Almeida, 2011, p. 165).

This aesthetic learning, born in the classroom, inspired the preparation of the event "Dom Quixote Meeting: a trip to re(learn) diabetes (DQM)", whose purpose was to discuss and (re)build with participants (external audience), knowledge and practices concerning this disease. But how could we (re)construct meaning about processes that take place in the human body? This was, by the way, one of the challenges of the event, but even there, it was first necessary to recognize that the art could represent an integrative experience for the knowledge construction.

Thus, DQM was opened with the play "*The adventures of a fiber dreamer ... or would it be a boy?*", which was planned and developed by students who attended the disciplines of Biological Basis and participated in the performances of molecular events. They were responsible for drafting the script, costumes, scenery, sound effects, in addition to conceive the play in the event context. Accordingly, the aims of this study were to evaluate the potential of the use of theater as a pedagogical resource to introduce the physiopathology of diabetes (or other subject), and the implications of this strategy for the teaching-learning process of the students and audience.

## **2. Material and Methods**

### **2.1. Second act: The play and its context - experiencing our pedagogical assumptions**

The whole process of the play creating occurred in extracurricular time. The meetings for the tests consisted of activities for group integration, text recognition, improvisation and intent strategies, scenic posture, body consciousness work and vocal exercises. During the process, there was also the development of the biographies, which gave higher consistency to the construction of the characters. This moment also allowed students to get in touch with the language and the theater making aspect.

After the preparation period, there was the presentation of the play in the context of the DQM, where it presented, specifically, two main goals: to explain the pathophysiology of type II diabetes and to integrate all activities in the event.

The script of the play was constructed in three dimensions, where actions could be done: 1) the human dimension, where Juca, the main character and his grandmother interact, 2) the food dimension (carrots, potatoes, meat and others), in which Juca runs through the gastrointestinal tract of his grandmother and 3) the dimension of molecular events, where Juca attends biochemical and physiological changes that occur during the digestive process and uptake of nutrients from diet. Each dimension could be presented alone or superimposed to the other, according to storytelling.

The play told the story of Juca, a curious and impatient boy, who went through, with his inseparable friend the horse Rocinante, the most exciting adventures in all three dimensions of the play. One evening, after dinner with his grandmother Mrs. Ana, who has type II diabetes, Juca slept on the book of Biological Basis of his sister and woke up within the soup of his grandmother. Juca was swallowed along with the food and, since he was confused with a fiber, accompanied the digestive process. For some unknown error, Juca was absorbed into the bloodstream of Mrs. Ana, who forgot to take insulin. In the absence of insulin, the molecules of glucose began to accumulate in the bloodstream and, in that moment, Juca observed "*El baile del azucar*". After talking with some glucoses, Juca found his old friend Rocinante, who explained to him what was happening. To facilitate the understanding, Rocinante took him to Mrs. Ana pancreas to show one of the few beta cells that remained. Juca then began to understand the illness of his grandmother. Rocinante left Juca and went through one more mission: to check what was happening to Mrs. Ana, while Juca followed his journey. Outside, in the human world, Mrs. Ana woke up from a snooze and remembered that she did not take insulin. From that moment, Juca watched the work of insulin on glucose uptake by cells. Glucose molecules were grateful and said goodbye to Juca that woke up in the human world.

During the preparation of the play, several pedagogical statements, which have grounded in our work and interaction in the classrooms, were experienced. Thus, thinking the play in the context of DQM was not only important to explain the pathophysiology of diabetes, but allowed us to understand and appreciate the creative process of our students, emphasizing the corporeity as a significant dimension for the teaching and learning.

### **3. Results and Discussion**

#### **3.1. Third act: Evaluating and sharing experiences**

Considering the objectives of the play, it is essential to understand the evaluation as part of the process, which also includes reflecting on their consequences and outlining prospects for future activities. We are talking about the evaluation that allows us to assess the choreography of learning, the individual and collective commitment and engagement, and the potential of the use of theater as a pedagogical resource. In other words, this assessment has been considered one of the working tools and cannot be simply measured and expressed by numbers.

First, we evaluated the participants' (external audience) perceptions about DQM, using an inquiry that was available online after the event. Most individuals who responded to the inquiry reported that, among the various strategies used in DQM, such as workshops, round tables and conferences, the play was the favorite activity, being considered an excellent method for scientific communication. Still, the theater was indicated as the second moment of greatest learning, being preceded only by the workshops.

In order to assess the experience of the students involved in the play, another questionnaire was designed consisting of queries to investigate the learning, integration of the group and development of skills. Answers were analyzed according to the Analysis of Collective Subject Discourse (CSD) accordingly to Lefèvre & Lefèvre (2003).

It was interesting to identify that most of students realized that their participation in the play was a moment of active learning, and an opportunity to autonomously (re)construct their knowledge about the disease. Still, most students said that the discussions contributed to the articulation of the biological content developed during under graduation studies with practical situations. This articulation was associated, for

example, with the ability to adapt the language to a target audience, which is especially relevant in the context of the professional practice of the students, as extracted from the testimony presented below:

*"... In addition, I also developed communication abilities and could talk with people from different social backgrounds and educational levels about this important disease".*

The play was also considered a helpful scenario for teamwork. We already know that working in groups is an exercise of patience and permission. Permission to allow people to propose and test new ideas, and patience to feel confident to deal with the differences. These components were related in the activities, alternating or coexisting, which was essential for the growth of the persons as a group. The engagement of students in the group activities supports the understanding of the importance of each one in the process of building of citizenship and professional training. The speech who exemplifies this idea is described.

*"I think that the main skill that I could develop, or better, improve/strengthen was to work in group in a collaborative, being more flexible. I think I will use this ability in many areas of my life, but specifically in my carrier".*

Students also reported that it was possible to learn, develop skills and acquire self-awareness from the experienced activities, being the exercise of creativity one of the most crucial aspects for the training and development of the symbolic capacity of the individual.

In fact, considering learning as a continuous and dynamic process, and that skills development occurs once there is a living space that allows experiences and reflection (Maturana, 1998; Maroni, 2008), it is possible to understand some of the implications of this activity in the daily of the students, as reported:

*"The transformation process was intense... I can talk about my lifestyle and social relationships. I experienced changes in my daily including diet and availability to learn without preconceptions. It was also helpful to learn academic concepts. I could incorporate these values into my practice, attitudes and examples. There was also the development and improvement of professional skills, which help in my daily work."*

Furthermore, all students reported that the participation in the project was very pleasant. Reflections include student's perception about the importance of the body language and the possibility of knowledge building revealed in the movement, showing the relationship between corporeity and learning.

To invest in experiences in higher education from the perspective of corporeity and playfulness seems an epistemological and methodological adventure. However, when we talk about corporeity and learning we refer to important factors that consider the context, the complexity of learning, the body and the subject individuality. Moreover, the discussion about the relationship between corporeity and learning provide elements and clues to approach different areas of knowledge and to think in an Education that offers new possibilities of being, of living and moving.

In summary, we can say that the whole project involved challenges and active learning. It asked us to leave the place of spectators and invited to experience different unknown scenarios. The process emphasized the corporeity, one aspect that is commonly reduced in traditional educational practices. It seems clear that it is essential that students have opportunities to engage fully in the teaching-learning process, allowing up to get in touch with aesthetic values, feelings and meanings.

Particularly, the art appears as a mediator and integrator in this process, contributing to a more consciousness perception that enables the transformation and intervention in the world, which is essential for the construction of individuals. Choosing for active methodologies in the mediation of teaching and learning is not an easy task. It means breaking with the current model in many aspects regarding to the teacher-student relationship and between students themselves, the agenda for learning, the official space of the classrooms and its instrumental. When this option is assumed by an artistic approach, the challenge is even greater; however, the experience of an alive and humanistic teaching-learning process has helped us to transform the formal and practical problems in results of the learning of students and teachers.

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