

leaving me on my own. I wanted to be reminded of what I had already been told while I reflected on it and experimented with the concepts in my body. I was left alone too soon.

I certainly responded to the feedback and felt I better understood the concepts that Emio deals with; concepts that were now at least to some extent a part of me. For me, however, there was more to the experience than my time in the machine alone. I am an observer and I take with me all the information that I gathered while others were in the installation. This repetition and pre-reflection on my process within the installation allowed me to free myself from my dependence on the master/teacher. He was always with me offering examples and information but I was able to more fully concentrate on my experiences and reflect on my feeling of how successfully and completely I was understanding/ embodying the concepts with which I was being confronted. Though my focus was largely internal to sense within my body I was open to Emio's voice and the ambient sound which were my guides and aware of images and movement around me which stimulated me to continue my movement research.

I was excited. I am excited. Here is an interesting new tool in its birth stage. I am intrigued in how we can bring this to full growth and value as an educational tool.

John Taylor

Interactivity in Dance Education: Thoughts During the IMK Labs

A specific body defined by its inhabitant, a body that remembers past experiences and provides the potential of future ones. A body that has developed a way of moving over the years in response to artistic questions, those of specific artists. This specific body is central to this installation. The body of Emio Greco | PC in the workshop of *Double Skin/Double Mind*.

Background

While I describe the educational situation in the context of my own teaching, it can be said that the educational structures described by Howard Gardner can be used to analyse any teacher's class situation. That is not to say that there are no other methods of analysing learning situations. There most certainly are, but I find the system of multiple intelligences useful in my analysis and it has a relationship to current trends in 'student-centered' education.

As a dance teacher I have many tools at my disposal not the least of which are my own body, my voice, hands and the training and social traditions by which I have been formed. I may try to inspire and direct the development of the next generation but the work is in the hands of that new generation to

emerge from cocooned safety of the accumulation of information during their training to the assimilation and transformation of that information through their bodies and minds into a butterfly-bright assertion of creativity, freedom and individualism. The contemporary dancer of today is a freelancer moving from situation to situation in a wonderful cross-pollination of influences. Today's dancers must work as equals together with their choreographers to make new work and as such are as much responsible for the development of new trends in the dance. It is not enough to brilliantly execute the steps one has been taught.

So what are we looking for in a learning situation? Working together with a teacher is an intrinsically interactive situation at least in a Socratic sense. It is a dialogue where we share the space and information in a process of discovery, and this requires activity on the part of the student. The teacher leads the student to make these discoveries through his own mind and body at which point it is immediately owned by the student to do with as he or she sees fit (within the context of the training program). It is not given to him or her but is formed by active dialogue between student

For Emilio Greco and Pieter C. Scholten the body is a "total proposal" where mind and body are in constant dialogue without a hierarchical relation of mind above body. To make the physical action not just a reaction of previous thoughts but also a provider of causes, this total body must be curious and aware of

itself as well as of the space around it. In the interactive installation, four words define the main actions and behaviours of this body: breathing, jumping, expanding and reducing. These words have been used to transmit and define physical experiences acquired through the years, by different bodies in different places. They contain a codified message where dynamics, body parts, intentions, qualities and their relations are summarized through the known experience of those

participating in the workshop. In the interactive installation these experiences aim to be transmitted through different channels, those of new media and motion tracking, translating and recreating an embodied experience through numbers.

and teacher. A classically passive learning structure where the teacher talks and the student files away the information to be regurgitated at a later date is simply not possible in a contemporary dance class. Dance students have to dance. So as a teacher I move and the students respond. This begins the dialogue. How do I communicate? I give information visually through my body. Orally I pass information both musical and cognitive through my voice. Tactile information passes through my hands. This passage of information helps to create a specific sense of place and passes on the generational aspect of dance through who I am as a dancer/teacher.

If we look at the work of Howard Gardner with regard to multiple intelligences we see that individuals may approach learning tasks in very different ways depending on where their natural inclinations lie. The same is true for expressions of creativity. A student may learn and develop best in alignment with one or more of Gardner's categories of intelligence. Each individual will respond most effectively to a specific learning style. While it may be true that all dance students have similarities such as an affinity for the bodily-kinesthetic (physical experience) and the musical (music) for instance. It need not be true that these are their only or primary learning abilities/styles. By approaching the transfer of information through a varied learning experience I have the best chance to reach the most students successfully.

Multiple Intelligences as Described by Howard Gardner

Learning Ability:

- Bodily-Kinesthetic
- Interpersonal
- Verbal-Linguistic
- Logical-Mathematical
- Naturalistic
- Intrapersonal
- Visual-Spatial
- Musical

Learning Style:

- Physical Experience
- Social Experience
- Words
- Numbers/Logic
- Natural World Experience
- Self-Reflection
- Pictures
- Music

As a dance instructor I work within a frame which employs several of these categories and may adjust the balance as an active student responds and enters into a dialogue with me as teacher. This

relationship is interactive in that I the teacher and the student make constant adjustments based on the relationship built up in the previous moments of the dialogue. It is a relationship in flux. I must always maintain my awareness of the learning goals of my class in order to lead the student through his or her own actions to the discovery of those learning goals. Additionally I find it interesting and important in relation to the work field to attend to and reflect upon new information which may arise from the actions of the students so that I can adjust the learning goals of the class in a developing generational dance context.

The Installation

As members of the AHK team within the IMK labs we have been brought into contact with the interactive installation Double Skin/Double Mind and the question whether the installation can have meaning within the context of dance education.

The installation provides a physical experience which is enhanced by words and pictures. It can be a social experience or a self reflective experience. Experiencing the installation is not interactive in the same way as a teacher-student dialogue can be. The installation is only reactive and cannot yet learn or adjust to the sort of feedback it gives or its teaching style based on the responses of the student. The student can develop intrapersonally through self-reflection or interpersonally through observation of the installation in use by other students and by trying to understand why and how those others are responding in the way they do to the installation. These two elements are strong benefits of the installation. In a normal class situation a dance student is focused on the physical experience (doing) enhanced by verbal, musical and visual information. Alone in the installation there is much less stimulation from outside. The installation, while interactive cannot enter into a true dialog with the student since there has been no application of artificial intelligence in the programming. The feedback is simply a measurement and reflection of the student and what he or she does. This feedback, however, creates an opportunity for valuable analysis of one's own process. Students observing the installation in use by others have the opportunity to be much less physically involved than in a normal dance class. The opportunity to observe and to transport oneself into the

perspective of another as he or she engages in the physical experience offered by the installation is increased by opening avenues for learning through a more interpersonal learning style.

In the future it might be possible through the application of artificial intelligence or clever programming to create an installation which could learn and adapt in response to the individual student. The installation might be able to address the idea of multiple intelligence and analyse the process of the individual adapting feedback to what is most effective for that individual (aural, visual cognitive?). The installation might even be able to analyse the new input of the student in order to create whole new classifications of parameters in order to give feedback for ideas that were not the original purpose of the installation. We're not there yet, but it is interesting to consider the possibilities.

Looking Forward

The installation is a representation of the artistic process of Emilio Greco and the work preparation that is necessary before beginning the creative process. The creative process is central to being able to function in the contemporary dance profession whether as a dancer or a choreographer. In modern contemporary dance education the focus is no longer on the preservation and continuance of tradition in the form of specific codified techniques. Each teacher is expected to bring his/her individuality to the education and a strong connection with the contemporary workplace is necessary to allow the new generation to ride the ground swell of developing trends in contemporary dance.

To facilitate that as educators we provide a basis of experience as a foundation for the development of a student's creative process. The student enters a process of dialogue, reflection and individuation which allows him or her to develop from that common educational foundation their own artistic personality and creativity.

Because of its specific function with regard to the artistic process of EG|PC and its dual nature as an intrapersonal reflective experience and as an interpersonal observational experience, the installation is eminently usable in a structured dance education alongside guided class work and free individual studio time.

Since we are dealing with multiple media (the dance class and the installation) and their

application, speaking to multiple intelligences as possible aspects of dance education, it is a logical leap to search for other media which could speak to further intelligences in the educational experience. The labs and our discussions have suggested that CD-ROM, DVD and internet materials could be added to this developing recipe for a learning soup. In our discussions and brief experiences with the DVD *Double Skin/Double Mind* we see that this sort of material allows the student to leave the realm of physical experience and move into that of the word/logical experience also supported by visual and musical and fine motor (physical) information. This helps the student to reflect on and analyse the physical experience in both intrapersonal and interpersonal aspects and verify the cognitive understanding and growth. The mind can catch up with the body.

The varying emphases of these differing media would suggest that they could work together as a broad multi-media experience enhancing the development and deepening the understanding of dance students. Each media having its own emphasis on a differing mix of learning styles as put forward by Howard Gardner. The student is then addressed in the complexity of his or her individual web of learning abilities. In a way this would be a more complete range of learning tools allowing for a more holistic approach to learning. How to incorporate these varying approaches into the daily work of a dance education is now the question to be addressed.

References

- Gardner, Howard (1983) *Frames of Mind: The Theory of Multiple Intelligences*, New York: Basic Books.
- Gardner, Howard (1993) *Multiple Intelligences: the theory in practice*, New York: Basic Books.

Vivianne Rodrigues

Drawings and Icons

Two sets of diagrams or drawings were made at the end of the second lab. One is a set of icons by *Chris Ziegler* (see pp8–9). The other was a set of drawings by *Christoffer Schieche, Michael Waelti, Sandrina Lindgren and Evelyne Rossie*. Maria Ines Villasmil reported at the summary session in April that having to visualise the verbal information was useful for enhancing the learning process. Here they are reproduced with an explanation by *Vivianne Rodrigues*. The first two sets include an explanation of the motivation or inspiration which led them to this particular drawing.

1.1



Drawing number 1.1 refers to the growing in the breathing section. (Gradual vertical increase in length and extension of the whole body). Since Emilio keeps mentioning that

the breathing comes from the feet, the students had an image of a tree and its roots taking energy from earth.

1.2



Drawing 1.2 refers to the ramification in the breathing section. (Splitting of the vertical path into different directions in the space with the arms). They kept the image of a tree, but this time with the branches going into space. The arrows going down indicate that the energy comes back to earth again as the body releases it and returns to the starting position.

1.3

