

**“Interdisciplinary  
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in Arts Education”**

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**Fulková, Marie & Tipton, Teresa** (Czech Republic)*Strategies for Inclusion: Bringing New Discourse into Programs for Gallery and Museum Education***Date:** 2006-03-01**Hour:** 12:15-12:40**Room:** S2**Abstract:**

Establishing links between cultural and educational institutions must be based on a new quality of understanding that culture, arts, and education are interconnected domains. Culture in the broadest sense of the term includes popular culture - a synaesthetic, polysemic environment where visual competencies are created; the Arts - especially contemporary art - is the domain of an experiential and experimental symbolic field where new kind of signs and symbols, including meanings, are invented and tested; and Education - a domain of critical thinking and constructed knowledge within a dialogic of diverse kinds of literacies, including visual literacy. Here, the interrelationships and connections between the three domains are developed, revealed, and transgressed. At best, we can offer a learning and teaching process which spirals with constantly changing information and contexts, attempting to be integrated with that which is previously known. In the context of developing interpretive gallery experiences with diverse audiences and viewers, we must also include the domain of social sensitivities and responsibility from the material of their interactions. All of these domains interact through a process of dialogic communication we refer to as "discourse". For educators, experiential learning and discourse must be intentionally designed to decode the symbolic language of the museum experience. "Strategies for Inclusion" presents a new model for discursive practice for museums and galleries collaborating with educational institutions and programs on behalf of cultural education. Highlights from programs with handicapped students, cross-cultural teenagers, and student educators will be presented.

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**Furniss, Gillian** (USA)*The Art Process of Children with Autism as Visual Communication***Date:** 2006-03-04**Hour:** 16:00-16:25**Room:** A4**Abstract:**

There are a growing number of children being diagnosed with autism world-wide. Autism is a pervasive developmental disorder in which individuals display impairments in social communication, interpersonal relationships, and imaginative play. Many children with autism find the art process to be meaningful and pleasurable. The art process of children with autism is significantly different than that of typical children. These children with autism often demonstrate exceptional artistic abilities in terms of visuo-spatial and visual memory skills. Many children with autism demonstrate in their artwork a tendency toward repetitive behavior, a preference for a particular art medium, and a preoccupation or obsession with a narrow interest. Some experts argue that the primary function of artmaking for children with autism is to record a visual thought, although the result is a unique form of visual communication. The artwork of individuals with autism demonstrates that their view of the world is markedly different than that of typical individuals. Some of these artists with autism are now adult professional artists who exhibit their art at art galleries and museums. The early artwork of celebrated autistic savants such as Jessy Park (U.S.A.), Stephen Wiltshire (U.K.), and Nadia (U.K.) will be viewed and discussed. Research and literature on the artwork of children with autism from various fields such as behavior psychology, cognitive psychology, art education, and art therapy will be discussed. Opening the academic conversation to include the art process of children with autism can contribute to our overall understanding of what it means to have autism, as well as to our overall understanding of the function of artmaking for humans.

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**Galea, Jose Antonio Aguilar** (Spain)*Art, Education And New Technologies. Ceramic Shell Casting***Date:** 2006-03-04**Hour:** 11:45-12:10**Room:** S3**Abstract:**

If historically for other fields of visual arts technical resources have not been decisive for the artistic and creative development for, sculpture technological innovation has redefined the way of thinking creating and performing a 3D sculptural project. These circumstance conditioned at given period the way arts were taught, for production and learning of sculpture meet at the same environment, the studio. And this paper we deal with the relationship between education and new technology from a contemporary point of view, stressing the contribution not only of the digital technologies, but also the influence of other kind of technological innovations on the educational enrichment of arts. Specifically we focus on the repercussions of the irruption, to the Spanish Fine Art Universities of the foundry technique so called Ceramic Shell casting, a technique that in addition of helping mankind to reach the outer space, has also its use for teaching sculpture. This reflexions comes from research, practice and teaching at the Fine Art Faculty, University of Seville (Spain).

# ART, EDUCATION AND NEW TECHNOLOGIES. CERAMIC SHELL CASTING.

Jose Antonio Aguilar Galea  
Department of Sculpture and History of the Visual Arts  
Fine Arts Faculty , University of Seville, (Spain)  
jantonio@us.es

## ABSTRACT

The technological evolution has been determinant in the way of thinking, creating and implementing a three dimensional project, although historically, the resources have not been so important for the artistic-creative process in other plastic arts. The technological evolution has conditioned also its educational methods during certain periods of time given that the workshop, the production and the learning of the sculpture take place in the same context. In this communication we will talk about the relation between art, education and new technologies from a contemporary perspective and accounting not only for the digital technologies but also for the contribution of other technological innovations to the development of the art education. We will focus in the consequences of the irruption of the artistic foundry technique known as *Ceramic Shell Casting* in the Fine Art Spanish Faculties. The Ceramic Shell casting, apart of taking men to the space, is used to teach Sculpture. This reflection borrows from the Art research, practice and teaching conducted in the Fine Arts Faculty at the University of Seville.

## 1. INTRODUCTION

At date when we talk about “New Technologies” in the field of the artistic education we tend to think in the innovations caused by the application of computing tools and digital images, although the true new technologies are those historically generated in the workshop - the place of education and artistic creation per excellence till the XIX century-. In this context the new technologies and the innovations were focused towards the development of procedures and work means that optimised the resources and personalised the techniques to each artist manners and customs.

However, nowadays this role is adopted by the applications offered by the computing tools for the presentation of the programmed contents, that is, more as a teaching resource than as a product of the image manipulation called “digital art”. The personal computer is more present in the visual arts centres classrooms as a tool to support the teacher presentations than as a students working instrument.

In this line, I would like to clarify that this work does not cover the possibilities and resources that the digital era offers to the artist and educators, I mean the third block covered by the congress and the main topic of many of the works that will be presented in it.

## 2. THE CERAMIC SHELL CASTING IN THE ART EDUCATIVE CONTEXT

If we recover the issue of the news technologies and the news materials in the way that was important in the old times for the workshop creations, nowadays the innovations of interest for the artist in the technological field would be those related to the new materials and new work proceedings. Regarding this fact, we point out the irruption of the artistic foundry, a content that is

not new at all, in the classrooms of the visual arts University centres in Spain. In comparison with other techniques as the wood carving, the modelling or the ceramic, the late incorporation to the schools of such a traditional language for the sculptural expression is mainly due to the characteristic infrastructures of this technique. Logically, the equipment needed to model or carving is not comparable to that traditionally needed by the foundry.

The lack of contents related to the foundry contrasts with the fact that this speciality is one of the most common tools for the sculptural production along the history. The lack of contents related to the foundry creates then an important educative deficit in those generations of artists trained in these centres during two decades of University development. This deficit is even older as we have to account for the time in which these centres were Fine Arts Superior Schools.

But, as we referred previously, the circumstance that dramatically changed this historic situation was caused by the new technologies, given that in 1992 the Fine Arts Faculty at the University of La Laguna (Tenerife) imparted a ceramic shell foundry seminar that years later lead to the incorporation of the foundry to most of the Spanish Universities Centres. The new technology was developed by the *NASA* during the aerospace race and it was a total technological revolution for the Fine Arts, rebounding mainly in the infrastructures area.

The irruption of this material in the European artistic teaching centres is debt to David Reid, a New Zealander researcher that adapted it to the artistic foundry and developed techniques as the Shell Microfusion which quickly spread around the Continent. The inclusion of a technology with an industrial origin occurs because it is a perfect technique for the foundry teaching. Among its procedural characteristics remarks a very important one that is central for our research, that is, the simplification of resources and wherewithals in order to face the complete process from a plastic and educative point of view. This wherewithals simplification becomes the ceramic shell into an excellent technical resource and also –and this is its truly importance- into an ideal pedagogic tool to the learning of this type of contents in the visual arts teaching centres.

Following the same idea, Valerie Thompson states that the ceramic shell technique is the reason why thousands of foundries can be found all over the United States in the present time. These centres were founded since the sixties, including, (...) “including a great number of colleges and Universities. Joel Meisner and Ronald Cavalier led the development of this process”.<sup>[1]</sup> Many educative organizations in Europe and North-America have embraced this technique and, in the present time, the Ceramic Shell Casting and the traditional Italian procedure have become the most spread out foundry techniques in this context.

It is striking to note that when analyzing this evolution in the Spanish context, since 1984 through 2000, that is, in less than fifteen years, the foundry which was formerly centralized in a single Faculty has reached a representation higher than 80%, specifically, nine University centres out of eleven include this activity (across their three formative cycles) and, only two centres lack of this activity or any similar.

### **3. EDUCATIVE ADVANTAGES, UTILITIES AND TECHNICAL QUALITIES**

The Ceramic Shell Casting is an accessible educative “tool” and requires very simple means and infrastructures with a very easy configuration and no need to acquire expensive equipments for the educative institutions. In fact, in the Spanish Fine Arts Faculties, this technique is understood in a way that has reoriented the foundry teaching powering those methodologies that conceive the artistic foundry as an open technique able to be modified and adapted to any proposal. The philosophy underlying this circumstance is the potentiality that the knowledge and the technological

and material experimentation have for the artists as the keys that will determine his/her personal creative development.

In relation with the technical aspects, the ceramic shell in comparison with other techniques allows us:

1. To simplify some of the steps.
2. To make easier to work the wax in a direct way without previous moulds.
3. To shorten dewax and sinterization processes promoting three direct consequences:
  - It needs less room.
  - It saves combustible
  - It needs simply infrastructures
4. The micro porosity of the shell facilitates the gases evacuation and simplifies the casting tree grate (vents). It reduces also the fettling time and it gets a better quality as a result.
5. In comparison with traditional techniques it reduces the expenditures in refractory materials to build the mould.
6. It makes easier and more secure to manipulate the moulds (or shells) once de-waxed. It adds the possibility to store the works until we have a bigger quantity of metal to melt in order to economize resources.
7. It can reproduce very thin metal sections with a great superficial quality.
8. It is possible to fix moulds broken after dewax.
9. Versatility to modify its composition according to the metal that we want to melt.
10. The shell also offers the possibility of being used, given that it is ceramic, as the work of art material helped by thermo degrading materials preforms as wax, paper or cardboard. This technique gets immediacy and improves the procedure with freshness and versatility.

#### 4. CONCLUSIONS

After the ceramic shell irruption into the Spanish Universities many teachers who were responsible of the subjects covering this content started researching the technique. The results and data were extrapolate to their own subjects promoting the evolution of the subject itself and a better teaching. We refer to the interaction of the binomial research/teaching and to its translation into the artistic education with the news technologies as background.

In the case of the ceramic shell the auto-building profile that is characteristic of its infrastructures allowed firstly its incorporation and later its growth, making easier at the same time the possibility to improve the wherewithals adapting the technology to each artist applications and needs. This improvement in the equipments and expression tools have generated, as the traditional workshops used to do, a development that is especially significative for the *Crisol fusible* technique. This technique plays perfectly a principal role in the adaptation of the news technologies to the art teaching and in the creation of new techniques and proceedings that make possible the alumni and artists in general plastic expression. In particular, regarding the artistic education, the alumni learn the basis of the artistic foundry from the new technologies, then the experimentation of traditional artistic foundry techniques, in contrast with the contemporaneous contents plays a key methodological role in the understanding of the sculptural techniques evolution.

In order to clarify the importance of this innovation, we would like to remark that the first shell technique introduced in the classrooms of the Spanish Fine Arts Faculties was the microfusion. It is a procedure that can reproduce almost any shape with a high fidelity but that limits the configuration of the sculpture to a one and a half kilogram of metal an to 20-25 cmts as maximum dimension. The *Crisol fusible*, a technique developed in the nineties by Juan Carlos Albaladejo

González –Full Professor of Sculpture at the University of La Laguna (Tenerife) and responsible of the Foundry subject- overcomes the weight and format limitations maintaining at the same time the superficial qualities of the shell sculptural microfusion. Using this technique, a single person can cast a work of art of about thirty-thirty five metal kilograms with an average format and with no risks in its manipulation.

The approach initiated aims to have the technologic means to empower the artist and to become the foundry into a more popular and accessible expression tool. We hope, that these contributions to the Art teaching could help to avoid that factors as the economic class and therefore the available means could produce a filter effect limitation allowing the use of the cast metal sculpture only to privileged persons. Our wish –and we work for that- is to change this dynamic disseminating the new techniques among the artistic educative centres.

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