

Interactive and Experiential Learning in the Collection of Historic Musical Instruments

Beatrix Darmstaedter
Collection of Historic Musical Instruments
Kunsthistorisches Museum Vienna

Abstract:

Under the title *Res Facta* the Collection of Historic Musical Instrument arranged an educational activity consisting of lectures and workshops addressed to music savvy museum visitors in 2012 for the first time. The aim was to establish a new format in art education and encourage the participants after they have learned the basics of acoustic and technological parameters in introductory talks, to construct and build their own musical instrument, a monochord, with guidance of professional instrument makers and restorers. In 2013 the manufacturing of a concert panpipe was achieved. The educational events have been well attended and all participants left with their own high-end instrument. The following lecture points out the museological background and the pedagogical fundamentals that led to the implementation of *Res Facta*. Moreover the benefits of the progressive and activating art mediation in the classic and elitist surroundings of the *Kunsthistorisches Museum Vienna* are discussed.

Keywords: museum education, collection of historic musical instruments, instrument making, *Kunsthistorisches Museum Vienna*

As a result of the rebranding process of the *Kunsthistorisches Museum Vienna* (KHM) in 2012 the fields of art mediation and museum education emerged stronger from the context of the institution's duties and responsibilities than they were before. The shifting of the assignments and their priorities can be linked to the recent education policy promoted by the Austrian Ministry for Education, Art and Culture, that places emphasis on extracurricular activities for children and adolescents as well as on lifelong learning for adults and elderly people.

In addition, the scientific work by the curatorial staff undergoes more and more complex international evaluation processes by peers and national appraisals by the Austrian public and the Austrian Ministry for Science and Research. Taxes are eventually channeled into the museum that has, in return, to explain their appropriate use by offering new exhibitions, interesting social programs and enthralling educational activities to the taxpayers. As far as the financial sourcing of scientific research is concerned the funder asks for media-suitable stories and academic achievements intelligible to all. So the Collection of Historic Musical Instruments (SAM) of the *Kunsthistorisches Museum Vienna* is in particular challenged to develop contemporary programs to mediate exceptional art historic and organological contents, intricate scientific surveys and technological projects with regard to restoration and conservation to a very wide audience. Irrespective of the coercive external demands, the scientists themselves, who work for the museum, are highly interested and motivated in passing their knowledge and research results down to the audience – a job that is often delegated to museum educators and art mediators.

The recent version of the Federal Museums Act 2009 lists the duty of art mediation in the first place¹, followed by the tasks collecting, conservation, documentation, research and exhibition. In comparison to the law, research holds the most important place in the brand book of the KHM² because without the fundament of scientific research the art mediation lacks newsworthy topics and therefore it would become irrelevant – only a substantiated state of knowledge enables high quality art mediation. However, a target group orientated, modern and innovative museum education, as it is statutory, implicates new formats of museum education including interactive and experiential learning.

The idea to implement *Res Facta* as a new format was quite simple though revolutionary for the SAM. What does *Res Facta* mean and what is behind this format? The name *Res Facta* originally comes from the music theory of the Renaissance and thus it is – in broad terms -strongly connected to the most important parts of the collection that are rooted in the *Kunst- and Wunderkammer* of Archduke Ferdinand II. (1529-1595). In the 3rd chapter of his *Terminorum musicae diffinitorium* (c. 1472) Johannes Tinctoris mentions the term *re[s]facta* as a synonym for *cantus compositus*, that is written music, composed on the basis of the counterpoint-rules of measured music³. In the figurative sense *Res Facta* stands for “a thing that was made” and therefore it describes the matter of the program perfectly: The participants manufacture their musical instruments. As far as the framework requirements are concerned, the whole workshop takes place in the rooms of the museum to tie the visitors directly to the location of the collection and exhibition – this is a very important strategy in audience development. The host calls for material costs and symbolic attendance fees for the lectures. To allow all visitors to work efficiently in the workshop of the museum restoration the attendance is limited to between seven and 10 active participants. As a side-effect, prospective participants tend to a more rapid registration and they are given the impression of an exclusive event. According to our experiences a particular target group exists, that is indeed interested to learn about instrument making, acoustic and organology but it has reservations to work manually. For this group there is the possibility to join the workshop as passive participants. So they are amidst the event, get all information, can take part in the knowledge transfer and in all discussions but they do not have to prove any craftsmanship. In our announcements we note that a certain practice in handling the classic hand tools of cabinetmakers is necessary to succeed in manufacturing a musical instrument – and this requirement is the only restriction on admission we have, but even if the participants overestimate their skills or underestimate the work that has to be done in the workshop, there usually are many helping hands and subtle fingers that support the participants and encourage them to finish the instrument.

The basic aim that led to the implementation of *Res Facta* was to enable an impartation of knowledge directly from the scientists to the audience on a very high academic level transferred to a generally understandable language in a non-academic setting. An

¹Federal Law Gazette, Republic of Austria, 1st December 2009, part II, Regulation No. 395: „*Vermitteln § 2. (1) Zur größtmöglichen Teilhabe der Bevölkerung in ihrer kulturellen und sozialen Vielfalt an der kunst- und kulturgeschichtlichen sowie naturwissenschaftlichen Sammlung des Bundes kommt der Vermittlungsarbeit zentrale Bedeutung zu. [...] (3) Die zielgruppenspezifische, zeitgemäße und innovative Vermittlungsarbeit geht auf aktuelle künstlerische, wissenschaftliche und gesellschaftliche Entwicklungen ein und ist bestrebt, insbesondere die Teilhabe von Kindern und Jugendlichen gezielt zu erweitern sowie den barrierefreien Zugang für Menschen mit Behinderungen zu verbessern.*“

² Strategic brand positioning KHM (“Markenfibelf KHM”), ed. by Brains [agency], Vienna 2012, p. 5 f.

³ Johannes Tinctoris: *Terminorum musicae diffinitorium*, cap. III, c. 1472: « *Cantus compositus est ille qui per relationem notarum unius partis ad alteram multipliciter est editus qui resfacta vulgariter appellatur.* » (Cited from the edition of 1554 - http://conquest.imslp.info/files/imglnks/usimg/b/bf/IMSLP249758-PMLP404790-terminorum_musicae_diffinitorium.pdf - 2nd Sept. 2013)

additional goal was to create a new format in art education in which the scientists and restorers cooperate. Several aspects of this idea are interesting: *Res Facta* establishes a connection between practical and theoretical issues, consolidates the employees and the participants find out about different ranges of responsibilities in the museum, that are seldom realized by the visitors, who normally see the exhibits, the museum keepers and staff in the shops or behind the pay desks but do not know about other occupational domains in museums.

One of the most important pedagogic goals was to activate all learning styles. Therefore the full-time program was divided into an extensive lecture using multi-media and live demonstrations, followed by a workshop with open end. As a very large target-group is welcome - adolescents, adults and elderly people – we try to diversify the program and to integrate different didactical methods. The theory of learning styles and the Learning Style Inventory (LSI) go back to David A. Kolb⁴, whose theses serve especially as fundament in art mediation and museum education. Kolb's model portrays four "modes of grasping experience – Concrete Experience (CE), Abstract Conceptualization (AC), Reflective Observation (RO) and Active Experimentation (AE)⁵." Following Kolb there are four types of learners: divergers, assimilators, convergers and accommodators. "People with the diverging style prefer to work in groups, to listen with an open mind and to receive personalized feedback", they bring together CE and RO. Assimilators "find it more important that a theory has logical soundness than practical value", they "prefer readings, lectures, exploring analytical models and having the time to think things through". People with this learning style have the abilities of AC and RO. Convergers "prefer to experiment with new ideas, simulations, laboratory assignments and practical applications" and they combine AC with AE. Individuals with an "accommodating style" have "CE and AE as dominant learning abilities", they learn from hands-on experience and "prefer to work with others to get assignments done, to set goals, to field work and to test out different approaches to completing a project"⁶. In schools and universities the knowledge transfer in the classical lecture format predominates, sometimes teamwork and experiments as well as computer-aided learning mix up the monotonous curriculum. In this learning context it is about a strong primary knowledge-acquisition and subsequently about specialization. In adult education acquisition and specialization are considered as concepts that are largely got over and integration gains in importance. Kolb points out that "in midcareer and later life [...] non-dominant modes of learning are expressed in work and personal life"⁷. Integration accompanies a holistic learning process that works round to the surroundings of museums, where communication, hands-on, information are located very close to contemplation, tranquility and non-verbal apperception. *Res Facta* takes advantage of this special environment and of the visitor's expectations by using different modes of instruction respectively learning and by operating in zones aligned with the teaching contents. The introductory speech in which theoretical, acoustical and organological facts are discussed and that ideally is addressed to assimilators – persons with the focus on abstract conceptualization and reflective observation – takes place in an exhibit hall that is channeled into an auditorium, where the audience can concentrate on the ex-cathedra lecture. As many items that are associated with the lecture's topic are on display in this hall, there are a strong visual stimulus and a very individual memorable spatial atmosphere enhancing the motivation to learn by giving new cognitive impulses. One of the most important factors for museums is

⁴ David A. Kolb: Individual learning styles and the learning process. Working Paper #535-71, Sloan School of Management, MIT, 1971.

⁵ Alice Y. Kolb, David A. Kolb: Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education, in: Academy of Management Learning & Education, vol. 4, no. 2, June 2005, p. 194.

⁶ Kolb and Kolb, Learning Styles, 2005, p. 196 f.

⁷ Kolb and Kolb, Learning Styles, 2005, p. 195.

that in these institutions information loses its abstractness and can be apperceived in concreteness. In the exhibit hall the participant experiences an incentive emanated from the original historic objects that leads to an intrinsic motivation to learn. The second part of the lecture given in the same surroundings encourages the audience to listen to music, deepen their knowledge in iconography and to learn about the playing-techniques of the instrument that will be manufactured afterwards. The audience is welcome to participate actively by posing questions and by discussion. This lecture part is addressed to the auditive type of perception, to the specific music target group and to the learning styles of concrete experience and reflective observation. According to Sachatello-Sawyer and Fellenz, who lanced a USA-wide poll on art mediation in museums, “interaction with the instructor or with other program participants” is “regularly cited as the one thing program participants remembered best” and “more than 85% of participants felt that it was very important to include time for questions and discussion”⁸. In general, human interaction seems to be the key to successful museum education.

For the workshop a change of location takes place: All participants go to the restoration zone. This part of the museum is a non-public and security zone that makes the surrounding in particular fascinating for the audience. On the one hand the change of location helps to avoid cognitive fatigue on the other hand the infrastructure makes it necessary to relocate the manufacturing process to the restorer’s workshop. The active process of instrument making attracts the learning styles of active experimentation and concrete experience as well as the haptic type of perception. In the context of *Res Facta* we could observe that the change of environment from a more academic and aesthetic setting of the exhibit hall to a mainly technical-concrete setting of the workshop brought a rearrangement of the participants’ roles and behavior that manifested itself in the breakup of hierarchies as far as the instructor and the participants are concerned and in an easy conversation while handling with the work-piece. The communication and all actions become more spontaneously because the participant is totally involved in the manual practice and integrated into a group of like-minded people. Spontaneous interaction stimulates the intrinsic motivated learning process and, according to Csikszentmihalyi and Hermanson, being involved in work successfully, that is with clear goals, unambiguous feedback and well matched skills, leads to a “flow experience”, where “attention is focused and concentration is so intense that there is nothing left over to think about anything irrelevant”⁹. At *Res Facta* the effortless transformation of the theoretical content into practical working steps on an intellectual level and the understanding of physical fundamentals by planning how to build the musical instrument were very interesting to notice, whereas the manual work sometimes became challenging for the participants because of the high demand of the instrument makers and restorers and because of the high aesthetic standard of the participants. The social environment consisting of the group of participants and the instructors tries to facilitate self-confident work and should support every member of the group. So the participants learn more and can increase their manual skills in a positive dynamic process and with the feeling of togetherness. If Csikszentmihalyi and Hermanson are to believe, the aspect of learning in a comfortable social environment seems to be ever more important because “shared events” became rare in modern society. Indeed, we learn “whenever we are exposed to an event that is

⁸ Bonnie Sachatello-Sawyer and Robert Fellenz: Listening to Voices of Experience: A National Study of Adult Museum Programs, in: The Journal of Museum Education, vol. 26, no. 1, Winter 2001, p. 19. The survey, carried out for the National Study of Adult Museum Programs covered education programs in 12 American medium scale museums of art, natural history and science.

⁹ Mihaly Csikszentmihalyi and Kim Hermanson: Intrinsic motivation in museums: why does one want to learn? in: J. H. Falk and L. D. Dierking (ed.): Public institutions for personal learning: Establishing a Research Agenda (pp. 67-77), Washington 1995. Text published at: www.ou.edu/cls/ (pdf) p. 150 f.

shared with others that feeling of connectedness is reaffirmed and strengthened” and “perhaps one of the major underdeveloped functions of museums is to provide opportunities for individually meaningful experiences that also connect with the experiences of others”¹⁰.

It is interesting that the audience listening to the lecture consists of all age brackets that come under our target group, but under the active participants of the workshop elderly people outbalance. In contrast, the group of passive participants consists mainly of younger people, including students and young parents. As *Res Facta* always takes place on Saturdays, when most of our potential participants has their leisure time, this phenomenon cannot be linked to the fact that employed persons pursue their professions. So, maybe it is the price¹¹ for the active participation that prevents younger not so wealthy people from an active participation? In her survey Huggins Balfe points out, that there is in general a specific motivation for American baby boomers and elderly people to participate in art education programs in museums whereas this particular motivation is not prevalent in the group of younger people. The background of this conclusion is that baby boomers and elderly people are “beyond the reach of formal educational instruction for longer periods” and therefore they feel more comfortable about learning in a non-academic setting. Moreover “unlike most educational or cultural institutions, museums provide open and inexpensive access to everyone, without entrance exams or testament of religious or political affiliation”¹². In addition elderly people prefer personal art mediation programs and Huggins Balfe outlines that members of this visitor group think that “docents or gallery tours were wonderful, but audio-tours were hated”¹³. The results of Huggins Balfe’s research elucidate our observation concerning the age distribution of the *Res Facta*-participants clearly. So, obviously *Res Facta* is perfectly made for elderly persons. Sachatello-Sawyer and Fellenz found out in their research project that the typical museum visitor, who is interested in mediation programs, has a high education level and only “few survey respondents (less than 1 percent) indicated that cost was a factor in deciding to attend a museum program”¹⁴. The strongest cohorts of participants were located in the age groups between 40 and 59 years. As they normally belong to the typical higher income group their attitude towards costs and fees is not astonishing. The motivation for attending art mediation programs is connected with the desire to learn and to educate oneself and in that context it is interesting that almost 80 % of the respondents answered the question “why do you learn?” with “for the joy of learning”, nearly 58 % want to “pursue a long-standing interest or hobby” and almost 54 % like “to meet people [and] socialize”¹⁵. Related to *Res Facta* these motives seem to be important, because most of the participants are music savvy people interested in playing musical instruments. Some of them want to escape from their everyday life and come to the museum to see something new or to learn things that are not related to their work or living environment but they are interested to use the new learning content immediately and profit from the new content in future. This

¹⁰ Csikszentmihalyi and Hermanson, *Intrinsic motivation*, 1995, p. 157.

¹¹ The costs for an active participation were about 80 Euro for *Res Facta I – The Monochord* and 125 Euro for *Res Facta II – The Panpipe*. Passive participation was made possible for 40 Euro.

¹² Judith Huggins Balfe: *Bring on the Baby Boomers: A New Look at Adult Learning in Museums*, in: *The Journal of Museum Education*, vol. 12, no. 3, Fall 1987, p. 22 f. Even if the management of museums in USA and Europe may differ from main conceptual principles and marketing strategies, the social function and ethical fundamentals of museums are identical. Therefore many results of investigations in the field of visitor research done by American institutions and their scientists apply to European museums, too. The poll by Huggins Balfe focuses on the most prominent museums of art history, natural history and modern arts in the USA.

¹³ Huggins Balfe, *Bring on the Baby Boomers*, p. 22.

¹⁴ Sachatello-Sawyer and Fellenz, *Listening to Voices of Experience*, 2001, p. 18.

¹⁵ Sachatello-Sawyer and Fellenz, *Listening to Voices of Experience*, 2001, p. 18, based on Lois Lamdin: *New Frontier in an Aging Society*, Phoenix 1997, p. 75.

meets perfectly with the results of Sachatello-Sawyer and Fellenz, who write that their interviewees thought “it is important that the learning experience [is] practicable and applicable to their daily lives”¹⁶. In *Res Facta* the participants put the theoretical teaching content on organology, acoustics, history, material science etc. directly to practice and they can carry on making music with the instruments. *Res Facta* takes place regularly and facilitates the coming together of a concrete group of people. It has shown that on one hand some of the participants, who form the “nucleus”, come again and keep in touch by means of the education program and on the other hand the participants socialize with the instructors and develop an interest in the collection or in other museum programs, like concerts or guides tours. *Res Facta* leaves the door open to a more intensive museum-visitor-relationship or – consequently – to a museum-supporter-relationship.

In conclusion we have a quick look at the statistics: At *Res Facta I* – The Monochord the active participation in the workshop was limited to seven people, the passive participation was limited to 10 persons and the lectures have been unlimited accessible. The active workshop was fully booked, the passive workshop was operated at half capacity and the lectures were attended by more than 25 persons. The full program, including the lectures and the active participation was available for considerably less than 100 Euro. *Res Facta II* – The Panpipe was restructured in price to perform a better cost-performance ratio, and so the museum calculated 140 Euro for the full program¹⁷. The active workshop was limited to 10 participants – in comparison to a monochord, the panpipe is a quite handy-sized instrument – the passive participation was limited to 6 persons and there were no restrictions for the access to the lectures. Nor the active neither the passive workshops were fully booked. (Seven persons attended the workshop as active participants and four as passive participants.) This fact may be linked to the price policy or to the scheduling of *Res Facta II* for September and the main advertising during the summer holidays. The lecture, on the other hand, was again well attended.

However, the two *Res Facta*-events offered many persons the possibility to learn about music and instrument making and they facilitated communication between scientists and the public in a trend-setting way.

Author

Mag. Dr. Beatrix Darmstaedter, MAS

Curator

Collection of Historic Musical Instruments Kunsthistorisches Museum Wien

Burgring 5, A – 1010 Wien

beatrix.darmstaedter@khm.at Tel: 0043 1 52524 4603

¹⁶ Sachatello-Sawyer and Fellenz, *Listening to Voices of Experience*, 2001, p. 19.

¹⁷ The prices depend on the costs for the material and particularly on the preparatory time for the instrument kits. The development and preparation of the panpipes were more time-consuming than the necessary working steps to make a construction set for the monochord.