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TREND COLOUR 'GREEN' IN CULTURAL HERITAGE: SIMULATION GAMES FOR INTRODUCING AND LIVING THE GREEN CHANGE IN MUSEUMS

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Abstract

Museums, preservation strategies and conservation methods need to be 'green' as ecologic and economic aspects have become a much-noticed issue in cultural heritage care. Implementing successfully "green" and "sustainable" concepts over the long term is a matter of decisions and consensus achieved within an organization. Museum staffs need to respond to changing circumstances by integrating security awareness and behavior in their daily museum work. In individually modeled scenarios participants undergo complex and challenging situations and learn how to cooperate with each other and to develop solution strategies. Two case examples of simulation games implemented for museum staff show a motivating and activating effect on the participants. These positive experiences and sense of achievement gained in the simulation game is a basic prerequisite for an internally induced change to a "green" working culture. If we assume that preventive conservation conforms to what we understand as "green" conservation we will be frequently confronted with conflicting goals as preventive conservation concerns different levels and divisions within an organization. Simulation games specifically adapted to museum needs are an appropriate method to strengthen team structure and internal communication. Utilizing simulation methods helps to break down barriers.

Keywords: *Simulation games; Emergency preparedness; Preventive conservation.*

Introduction

Nowadays museums, preservation strategies and conservation methods need to be 'green' as ecologic and economic aspects have become a much-noticed issue in cultural heritage care. Conservation professionals have opened their minds for interdisciplinary discussions on energy efficiency, climate and lighting technologies, micro biology and chemistry to develop sustainable concepts for the long term preservation of cultural properties. Anyhow implementing successfully "green" and "sustainable" concepts over the long term is also a matter of decisions and consensus achieved within an organization. 'Green' should not only be a label or a concept, it should rather become a life-style and a working culture within the museum [1].

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It is an imperative of museum work to maintain an encompassing protection and continuous care for the collection; but in the light of changing framework and room conditions e.g. with varying exhibitions and events, construction and refurbishment measures, it is a big challenge to reach all protective goals in an equal and effective manner. Especially in these situations security risk and hazard potential for the collection are increasing. And yet the human factor, his behavior and actions, has a significant impact on the integrity of cultural assets and on the feasibility of sustainable concepts in museums [2]. Thus museum staffs need to respond to changing circumstances by integrating security awareness and behavior in their daily museum work. Therefore systemic approaches are required to achieve organizational improvements. Specific training and coaching programs are developed to support the change management within an organization.

Cultural heritage is the common property of all human beings and can never be recovered after destruction; thus, cultural heritage requires designated preventive conservation. Both natural phenomena and man-made disasters have serious effects on both tangible and intangible cultural heritage. The effects of disasters on cultural heritage are expanding because of rapid climate change and the changing environment caused by human activities.

It is necessary to raise public awareness of the importance of disaster risk (education and promotion) and train people to address disaster risk to our cultural heritage. We must recognise, predict, and assess possible disaster risks caused by climate change utilising plan-related response strategies. Immediate response can reduce damage to a minimum [3].

Simulation Game for Capacity Building and Training

Simulation methods are a well-established and proved method in the social sciences for the reflection of critical situations and for explaining complex negotiations such as in politics and international conflicts [4]. Simulation games are conducted in vocational education and training for different professional groups as well as in schools [5]. Various scenarios can be created where participants can play roles according to their real functions or are assigned randomly to them. As simulation games are an action- and behavior-oriented learning method the participants are actively involved in the learning and development process and are encouraged to discuss their issues with each other [4]. The effect is that everybody involved can identify himself with the solution and commit oneself to support the team in the best possible way [6].

Simulation games specifically adapted to museum needs are an appropriate method to strengthen team structure and internal communication. In individually modeled scenarios participants undergo complex and challenging situations and learn how to cooperate with each other and to develop solution strategies. There are no limits for thematic focuses; any scenario can be created for the simulation game. The learning objectives are adapted to the needs of the museum staff; they can play their real roles and functions within a fictive scenario and gain profound knowledge in their own fields or they can represent other functions or roles in the game and therefore gain a better understanding of the whole organization [7]. In any way they establish an efficient teamwork to master the high requirements of museum work facing times of limited personnel and financial resources [8].

Case Example 1: Simulation Game "Storage Under Water!" for Iraqi and Syrian staff from different Departments of Antiquities

The Orient-Department of the German Archaeological Institute is annually hosting an Iraqi-German Summer Program for young museum professionals. Within three weeks they learn the basics of museum work, scientific documentation of excavation sites and finds and conservational handling of objects. This year's special event was the simulation game "Storage Under Water!" which describes a scenario that has happened in real life some years ago in an Iraqi museum. The target groups were young people with a Bachelor degree in History and Chemistry with some working experience in museums on the one side and on the other side staff members with similar academic education but long-term working experience who are the supervisors of the young professionals. A small group of scientific members with a higher Master Degree from the Syrian Department for Antiquities in Damascus joined the group. The participants were divided into two teams mixing different institutions, degrees and nationalities. Also staff members from the hosting German Archaeological Institute were invited to join in so that two heterogenic teams with eight members each were formed.

The scenario takes place in a typical provincial museum somewhere in Iraq with predominantly archaeological inventory collected from different, mostly international excavations over centuries. The overcrowded storage is situated in the basement; the finds are packed in crates which themselves document the long tradition of archaeological excavation in Mesopotamia. The shelves are completely filled so that several boxes are stacked in the aisles. The incident is described as a pipe break where the emerging water causes a short circuit and the failure of the water pump. Subsequently the ground water could rise and swamp the basement floor. The framework condition is that the collection is not inventoried completely – especially the contents of the historic crates have to be confirmed. It is Ramadan and the daily rhythm in the museum is a little bit slowed down. A special event of the day is that German archaeologists are expected to a meeting in the museum with some representatives of the Ministry of Culture and Antiquities planning an international exhibition with special finds from Uruk stored in the museum. One of the museum team discovers the disaster early in the morning two hours before the museum opens for visitors.

Two teams consisting of a museum director, a curator/deputy director, a head of inventory, a conservator and a registrar were working parallel in separate rooms. The game tutors were giving hints to lead the group through the general procedures of crisis intervention but also confronted the players with situations where they had to prove their communication skills towards bystanders and towards external stakeholders. Both teams had different approaches and described a different setting of the museum but at the end they all accomplished a common strategy to solve the problem. Each team presented their results in a "press conference" where they had to face up to critical questions posed by the audience consisting of the other team and the game tutors (Figs. 1 and 2).

In the light of the actual situation in the Near East a simulation game dealing with a common problem seems to be inconvenient but a closer dialogue with the young museum professionals reveals a picture of their daily work situation as being similar to those in small and middle-sized museums in rural areas of Germany: limited personnel and financial resources, a lot of objects and over-crowded storages in need of rehabilitation. The difference is the societal and political setting; the museum staff cannot draw on external support to solve

their problems and have to develop their own resilience. This is exactly the training success to be reached.

The simulation game was useful for the participants as they learned to exploit all available resources and to apply them effectively within an operation strategy. Especially the younger members were taken up in their roles and could fully unfold their creativity and ability to solve urgent problems. The only female participant, a young lady, could perform her specific function and clearly assert herself in the team. In this situation they enjoy their supervisor's full confidence and respect. The museum staff was encouraged by a sense of achievement as they could prove their competences and team spirit.

In the feedback round one young participant admitted that for a short moment he got into a panic but quickly gained confidence that the problem can be solved together. The supervisors of the institutions were positively inspired by the simulation game and proposed further scenarios in different settings also including evacuation scenarios in open air archaeological museums endangered by looting and ideological vandalism.

Fig. 1. Iraqi and Syrian Team Working on the Operation Plan; Photo: M. Yoshida.

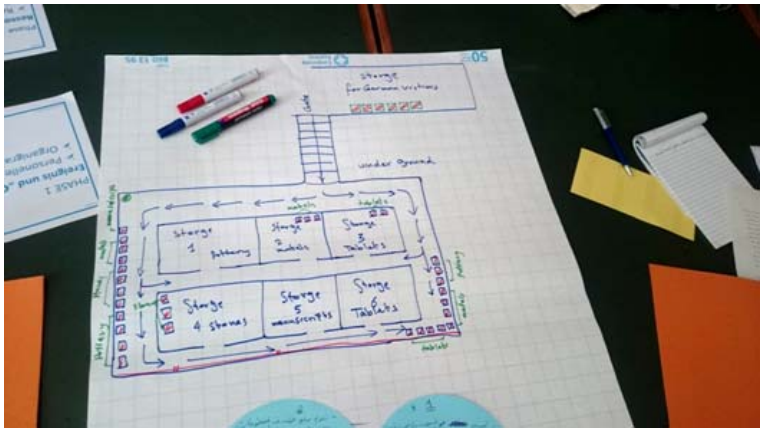

Fig. 2. Situation Plan and Damage Assessment; Photo: M. Yoshida.

Case Example 2: The Simulation Game "Welch entsetzliches Gewässer! Herr und Meister, hör mich rufen!" for Saxonian museums

The German cultural landscape is characterized by a high number of municipal and private museums in the regions. Several organizations as well as federal and state departments support these non-governmental, small and middle-sized museums with financial subventions, consulting and training. The simulation game "Welch entsetzliches Gewässer! Herr und Meister, hör mich rufen" [9] were conducted on behalf of the Saxonian State Department for Museums. The aim of the event was to introduce the issue of emergency preparedness to a wide audience and to give them an impression of how a simulation game helps them to understand the basics of emergency planning. The target group came from different museums and formed a heterogenic group with different professional backgrounds. They were divided in five teams, four of them playing museum staff and one playing reporters from different media.

There are two different scenarios taking place in a freshly refurbished museum. ***In the first story a pipe burst occurs and swamps the basement interim storage***. This incident is detected by the facility manager coincidentally – the emerging water has caused a short circuit and subsequently a power cut which must be remedied. At that time the water has already risen some centimeters. Most of the objects are stored in shelves but a part of the collection must be put on the floor in the aisles. The second story describes a situation of ***high water caused by long-lasting rainfall***. The rising river levels have been observed over days and the flood seems to be inevitable. The background situation of the two stories is the same: in the course of a museum development plan the museum has undergone a complete redesign. Focus theme was "Inclusion and Integration"; the route guidance was generously broadened and designed barrier-free. Former storage rooms were converted to seminar and playing rooms for target-group oriented events. After re-opening the museum the number of visitors has increased and the refurbishment seems to be a full success. But, as a result of the reutilization of the storage room the collections must be distributed in other available rooms such as in the basement and in the attic. Everybody in the museum knows that these rooms are not appropriate but they have to accept it as an interim solution.

The two scenarios were played by four teams each representing a common composition of a museum staff. The procedure was the same as in the case example with the Iraqi and Syrian museum workers. The players went through the typical phases of crisis intervention and formed a solution strategy which was presented to each other in a "press conference" (Figs. 3 and 4).

In recent years several Saxonian museums suffered from floods and some of them may have some experience with water damage caused by a technical problem. Even though standards in museums are relatively high and organizational structures are established only few persons could confirm to have an emergency plan or to be part of an emergency network. However, it is to believe that everyone has an idea of what to do and who to inform in case of emergency but there is no clear picture about how communication and measures are structured and coordinated. Thus organizing the team, ensuring the access to available resources and coordinating the measures were the main challenges all the teams had to cope with. The learning objectives were especially adapted to museums with small teams consisting mostly of volunteers and not specially educated staff. Particularly these people need advice and support but also the confidence that mastering a critical situation does not necessarily depend on a special academic degree but need a good communication and teamwork.

With this simulation game the participants went together through a difficult situation. ***In the first phase they learned to structure themselves, in the second phase to locate the problem and assess the extent of damage and in the third phase to assure the availability of resources***. ***In the fourth and last phase of the game they were enabled to plan the operation procedure***. Although the participants were able to relate to the scenario and propose appropriate measures it seemed to be difficult to some of them to identify themselves with their roles in the simulation. But in the end they realized that measures have to be coordinated in a consistent procedure and a clear decision structure is needed.

Fig. 3. Simulation Game in Saxonia; Photo: Z. Giertlová.

Fig. 4. Discussing the Outcomes with the other Teams; Photo: L. Klemm.

Implementing *Green Conservation* Bottom-up or Top-down?

Green Conservation is not only a matter of technologies, financial resources or political will; Green Conservation is a change of culture which in fact should be directed top-down but to a great extent must be accepted and implemented bottom-up. Thus realizing the change to an ecofriendly, healthy and sustainable way of working is a matter of communication, mediation and insemination [8].

The simulation game as participative method seems appropriate to involve staff from different levels of an organization in the development and implementation of "green" concepts. In this way a greater acceptance for the change can be achieved [10]. As the simulation game is also an action and behavior oriented learning method, it can also have a multiplier effect when new working processes are introduced and exercised within an organization.

The case examples showed a motivating and activating effect on the participants: some of them might have discovered new talents in themselves or might have grown beyond oneself to master a highly critical situation. These positive experiences and sense of achievement gained in the simulation game is a basic prerequisite for an internally induced change; understood, supported and wanted by each staff member. The game teams, even if they did not know each other before, showed a strong cohesion which was obtained also during the coffee and lunch breaks. They continued to discuss their problems among their own team but also with the other teams. Such positive group dynamics can be useful as it creates a communicative atmosphere where people are enabled to find a common way to solve problems and to agree on aims – an optimal way to induce cross-departmental or inter-divisional change measures. The role and function of the managerial level in this case would be to moderate and to channel the changing process, to give a technical framework and to provide the necessary infrastructure [11-14]. Furthermore the results are to be exploited and communicated in the sense of "do good and talk about it" since change can be protracted and therefore needs good practice examples.

Conclusion

If we assume that ***preventive conservation*** conforms to what we understand as "green" conservation we can look back on several achievements in the last years. But still, a long way is lying ahead to be walked on. We will be frequently confronted with conflicting goals as preventive conservation concerns different levels and divisions within an organization. Utilizing ***simulation methods*** might help us to break down barriers. Let us discuss about differing opinions and argue with each other! Let us celebrate our achievements but also the defeats! Finally we will realize that life is a game.

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