THE TALENTSUCHE – GIVING FEEDBACK TO VISITORS ABOUT THEIR ABILITIES

The Talentsuche invites visitors to explore their individual interests and abilities playfully. Therefore, they can use 20 interactive exhibits designed to address different cognitive abilities and motor skills. In order to serve the visitors best we continuously refine and adapt the visitor's abilities to the example, we varied the difficulty in single steps. An analysis of the collected talent server’s data provides insight into the exhibits quality.

BICYCLE CAROUSEL – AN EXAMPLE

The Bicycle Carousel requires gross motor skills (Figure 2). Players peddle to move the construction forward in a circle. To keep balance either a big wheel and two ropes or a small wheel and a single handle were provided as support (Figure 3). The instruction was to complete 5 rounds as fast as possible.

METHODS + RESULTS

All in all we tested 11 conditions. Here, we concentrate on only the first and the last one. For each condition the data of 3010 visitors matched for age and sex (Mage=12 years, SDage=2 years; 50% female) was extracted from the talent server. The performance of each group was plotted in a histogram (Figure 3). We found only small differences of the players’ performance in the original condition. Half of the players finished a round in 6.6 sec or less. The modification to the small wheel and a single handle enabled us to differentiate better between good and excellent users (Figure 3).

CONCLUSION

An analysis of the collected talent server’s data provides insight into the exhibits quality. To adapt the visitor’s abilities to the example, we varied the difficulty in single steps. Moreover, we transform this one and other exhibits to its best form for the future exhibition of the Talentsuche.

EXPERIMENTA AS SCIENCE BROKER CONCEPT OF PARTICIPATION

In order to really connect with our audience we redefine our own position as a Science Centre. Thus, we elaborated a science broker concept in which visitor’s participation is deeply embedded in a specific manner. The new concept has been developed in cooperation with the Transfer Zentrum für Neurwissenschaften und Lernen (ZNL) in Ulm.

CONCEPT

1. SCIENCE BROKER

The concept involves a significant change of the experimenter from a science “provider” to a science “broker”. A science broker strives for linkage between creators and consumers of knowledge. The visitor is no longer seen as a mere consumer of knowledge, but as an motivated learner who shares experiences and questions. Hence, the experimenta has to turn into an exchange platform for STEM topics and questions of science.

2. PARTICIPATION

The communicative strategy of the science broker concept is participation. With participative offers we want to...

activate our visitors that they become scientific citizens...
illustrate how science works...
meet the visitor’s requirements...
establish participation as the “normal” case.

RESULTS

We found that the results differed among groups (Figure 2). Visitors of the special exhibition used more technical terms (0.43) and described less negative (3.29) and more positive emotions of electricity (1.63) than the other groups. The difference for positive emotions was significant (F [2, 19] = 3.64, p = .064) with large effect sizes (d = 1.11). The difference for negative emotions failed to reach significance (F [2, 19] = 1.44, p = .23) but revealed large effect sizes (d > 0.78).

CONCLUSION

The study and the interpretation of the results were limited by the small sample size. Large effects seem promising, however, and indicate a lasting effect of the special exhibition to maintain the effect and its workings. It is proposed that the effect works indirectly by influencing visitors’ attitude to the topic and in due course their experiences with the phenomena.

LONG TERM EFFECTS OF SCIENCE CENTRE VISITS

Do our exhibits and exhibitions really help visitors to learn something and to take something home? Our aim was to find out whether there exist measurable long term effects of the exhibition’s content after visitors engaged with the exhibits. We investigated this effect on the basis of the special exhibition “Zimter Strom” in 2011.