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# Video games: addictive learning?

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THE ECSITE MAGAZINE

SUMMER 2014 | ECSITE.EU

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THE 2014 ECSITE  
ANNUAL CONFERENCE

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For *OSCILLATOR* exhibition, the Science Gallery opened the floor to a group of artists and researchers from outside Trinity College. “The Body is a Big Place” is the resulting artwork – here a heart is being reanimated at the gallery opening in 2012.

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# Visions for universities and science centres: going back to the roots

“We want to give young people a place in the story of science.” That is how Bart Van de Laar, Head of Science LinX, describes the mission his university-based science center has developed over the past eight years. “We don’t just want them to learn some theory thought up by very clever scientists”, he explains, “But rather to participate in science, interacting with real scientists and real questions. And take up that challenge in education and work.” This is not only the essence of Science LinX, a department of the University of Groningen (Netherlands), but also of the Science Gallery, linked to Trinity College Dublin (Ireland). For its part, Universum Bremen (Germany) is aware of having drifted away from its founding university but wants to reinstate those links.

It’s a bit like football; there is only one Lionel Messi, but there are millions of amateurs who enjoy kicking a ball around. In the view of Van de Laar, the role of a science centre is to coach people to start kicking the ball. “And we’re the junior league, trying to inspire kids in school to choose a science career. This way we could contribute to a massive increase of science students in Groningen.” Science LinX organizes training programmes for science teachers, runs science trucks, welcomes school classes at the university and sets up serious encounters with science through exhibitions and events. But Science LinX also reaches out to the city and beyond, by participating in the local science café, the annual Night of Arts and Science and national events.

According to Van de Laar, this capacity to bring the public inside a working research organization but also to take science out to the public is the biggest asset of university-based science centres. A strategic position at a time when policy makers, in particular at EU level, are urging universities, science centres and local science stakeholders at large to forge stronger ties. Science LinX participated in the Ecsite coordinated PLACES project on scientific culture and currently coordinates a € 2.5 million EU project called ‘IRRESISTIBLE’, aiming to link formal (at school) with informal (at a science museum or festival) teaching to familiarize pupils with science.



RENÉ FRANSEN  
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Science centres and museums come in all shapes and sizes. Some target the very young, aiming to instill a sense of wonder, with colorful and spectacular exhibits. Others focus on history, showing collections sometimes built over centuries. Still others invite the public to be part of science itself, which science centres based at, run by or born from universities like Science LinX, the Science Gallery and Universum seem particularly well placed to do. Are they shaping the future of science centres at large?

“I feel that science centres should be very closely connected to universities. Like a publisher who needs his authors, science centres need real scientists to involve visitors in science, which after all is a human endeavor”, says Van de Laar. “But universities also need the networks and expertise of science centres, like authors need a publisher. When it is about reaching out to teenagers and young adults a press release is not enough. Not even when you’re on the front page of *Nature*.”

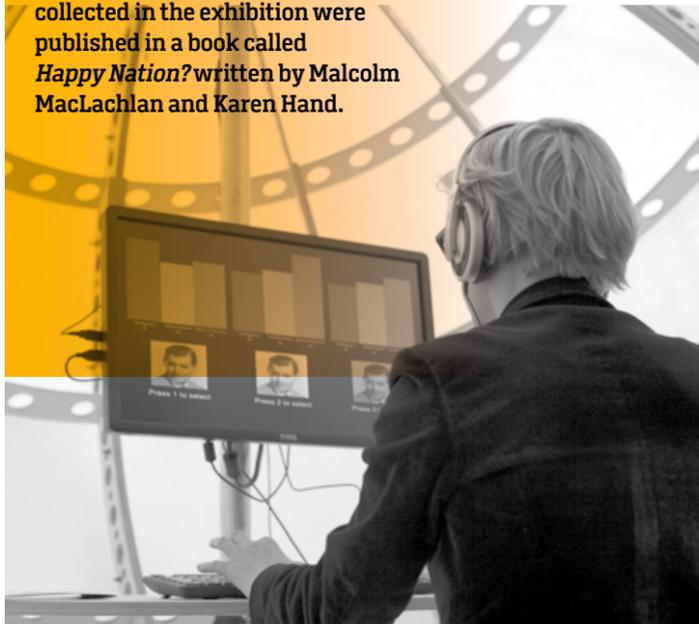
Science LinX invites scientists to explain and discuss research with teachers and pupils. “We can only do that because we know who’s who in the science faculty. That is one big advantage of being part of a University.” But is it possible to both promote science and represent just one university? “A very good question. Being part of a science faculty, as we are, we have lots of resources available, like lab space and over a thousand researchers on call. But there is the danger of just promoting local interests.” Van de Laar argues that being at the university brings so many regional and international contacts that it keeps the balance. “So far, the



The *Teilchenzoo* exhibition was developed by Universum Bremen in collaboration with the DESY particle physics organization in Hamburg – an example of successful collaboration outside of Universum’s original founding university.

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The *HAPPY?* exhibition at the Science Gallery explored the theme of happiness through real research experiments, designed ‘inhouse’ by the School of Psychology at Trinity College Dublin. Results collected in the exhibition were published in a book called *Happy Nation?* written by Malcolm MacLachlan and Karen Hand.



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The Science LinX live project takes scientists and visitors out of campus, onto surprising locations such as canal boats or private kitchens.

© Science LinX

university has never interfered in our projects. On the contrary, they’ve asked us to represent the university on several occasions.”

Interestingly, Universum Bremen feels like it lost some of its soul by growing too independent from its founding university. When it opened in 2000, it set the standards for a generation of German science centres. “But after a while the science centre and the university sort of drifted apart”, regrets current Director Herbert Munder.

With around half its visitors under 18, the centre is an ideal spot to introduce potential students to science and technology. “That is necessary, as the number of students taking scientific subjects is predicted to go down over the next few years.” Munder and his staff are working on a new vision for Universum Bremen: “The science centre of the future should be a communication platform for science with an exhibition attached, not the other way round. To achieve this, we need to bring back scientists.” He points to the EU research agenda Horizon 2020 and its strong public engagement with science component. So scientists will be asked to sit on Universum’s Advisory Board, and ties with the university are intensifying. Scientists will be involved in designing and building exhibits. “However, we are not part of the public relations department, we want to stay neutral in the debates we will facilitate”, cautions Munder. This new vision will be implemented in the new permanent exhibition opening next year.

For its part, the Science Gallery Dublin is firmly rooted in Trinity College – a strong, but non-exclusive relationship. “We’ve collaborated with all universities in Ireland, and many more beyond”, explains Programme Manager Ian Brunswick. “Collaboration is crucial, with scientists, artists and policy makers.” The Science Gallery is for many visitors a first venture into Trinity College, but also into the world of science.

Participation of scientists is crucial to the concept of the Science Gallery. “People don’t get engaged by demos or artefacts. They should join in the science with the scientists. That empowers our visitors, they feel they are making a

difference.” Each exhibition is combined with a research project in which visitors are invited to participate.

**“There have been several peer-reviewed papers featuring data collected during exhibitions.”**

Brunswick’s vision for the future is to deepen the visitor engagement: “We currently run four exhibitions each year, which takes a lot of time to plan and build. So we’re building a network of Science Galleries across the world, which means we can swap exhibitions. That will free some time to work on the depth of engagement.” And it will not loosen ties with research, he assures: “Each Gallery will be linked to a local science institute. Exhibits need to be relevant to each local community.”

University-based science centers are in a privileged position to contribute to the evolution of science centres at large argues Van de Laar: “To get people involved in education, research and innovation we need to explore which models work and which don’t. This is vital to the mission of science centres.” ¶

**“The science centre of the future should be a communication platform for science with an exhibition attached, not the other way round. To achieve this, we need to bring back scientists.”**

— From gallery floor to scientific publication Hand, Karen & MacLachlan, Malcolm (2013). *Happy Nation?: Prospects for Psychological Prosperity in Ireland*. Dublin: The Liffey Press.

Science LinX  
[www.rug.nl/sciencelinx](http://www.rug.nl/sciencelinx)

Universum  
[www.universum-bremen.de](http://www.universum-bremen.de)

Science Gallery  
[www.dublin.sciencegallery.com](http://www.dublin.sciencegallery.com)

European project IRRESISTIBLE  
[www.irresistible-project.eu](http://www.irresistible-project.eu)

European project PLACES  
[www.openplaces.eu](http://www.openplaces.eu)

