Sandpits can develop cross-disciplinary projects, but funders need to be as open-minded as researchers

The research “sandpit”, where a cross-disciplinary group of academics and practitioners come together for a short time to create new projects around a given theme, is gaining ground as a way to foster innovation and creativity in research design. While sandpits can spark ideas for novel projects better suited to tackling grand challenges and urgent questions, research from Kate Maxwell, Paul Benneworth, and Martin Siefkes suggests that until funders are as open-minded as participating researchers are expected to be, the transformative potential of this method will not be realised.

The “sandpit” method of generating cross-disciplinary research projects is gaining ground as a way to encourage innovation and creativity in research design. A sandpit is an event where academics and industry professionals from different disciplines, institutions, and places come together for three to five days with a view to creating new projects around a given theme. As a method it can indeed spark new ideas, but unless research funders are themselves as open-minded as they expect the participating researchers to be, the full potential of this method will never be met. This was one unexpected finding from our recent research into, and also experiences of, research sandpits.

A sandpit is an intense event which seeks to stimulate a progression from individuals with an interest in a theme into teams pitching more-or-less funding-ready ideas to research councils. In a typical sandpit event, participants spend the first couple of days actively thinking without their usual disciplinary or institutional restrictions to imagine how research involving a group of participants could function freed of these constraints. The remainder of the event involves selection and convergence, taking these creative ideas and turning them into project ideas, to then be finalised in a more traditional way after the event.

Sandpits could therefore be a highly innovative way to create novel projects better oriented towards societal challenges and urgent questions. Often, however, funders’ restrictions impede this process. Researchers may discard progressive ideas as they confront bureaucratic restrictions during the event, or funders may refuse to support the most path-breaking proposals submitted. A clear problem arises when this sifting has nothing to do with proposed projects’ merits, and everything to do with the funding bodies’ internal workings and politics.

One of the researchers interviewed for our recent article on the Norwegian Idélab (sandpit) in 2014 stated:

“If I ever take part in another Idélab I will be less open-minded, and more targeted towards what the funders actually want, which is unfortunate, but that's how it is unless the Research Councils become more open-minded themselves.” (Researcher A2)

At this particular sandpit, projects to be funded had to involve at least two of the subject areas providing the finance for the resultant projects: nanotechnology, biotechnology, and information technology. It is obvious, with hindsight, that this sandpit would favour technology-based projects, in which “soft” disciplines (social sciences and humanities) would play a lesser role. Hindsight is all very well, but this restriction was initially downplayed, both in the build-up to the sandpit and in the event's first few days. Indeed, the English version of the call for proposals did not mention this restriction, simply noting that “it is the individuals – not the institutions – who are key actors at an Idélab event”. The more detailed (and legally definitive) Norwegian page, Forskningsrådet 2013, did make this clear. Likewise, the call for participants to the Österreichische Forschungsförderungsgesellschaft (FFG)’s most recent sandpit on intelligent machines and systems in Austria last month stresses interdisciplinary work and the human side of the theme. Yet in practice, the FFG’s rule of only funding “applied research” (potentially leading to a sellable product) was rigorously applied, effectively excluding more humanistic projects.
The lived experience of sandpit participants is that they are led on an intense trail of innovative, out-of-the-box thinking and brainstorming. Only once all these good and exciting ideas have emerged are they reminded of funders’ real-life agendas. What we can see is that the practice of sandpits in creating new ideas has run far ahead of what research agencies are capable of funding in terms of their selection criteria. These often reflect discipline-specific preoccupations, or expect more fully developed project proposals than can be realistically generated in a few days by people who have only just met (thus rewarding ideas that were not necessarily designed from scratch at the event itself). A sandpit should not be a fancy brainstorming event bringing different people together to ultimately produce familiar-looking topics.

The sandpits’ real value should be precisely in generating projects that would not otherwise be funded through traditional means. Sandpits open new pathways for academics’ personal disciplinary research journeys, and show how these can be viewed in a new, cross-disciplinary light. But they all too often fall short once the event ends, retreating into familiar, traditional funding approaches and not consolidating these new ways of working. Our interviewee from the Research Council of Norway acknowledged this, and, to their credit, they have actively sought to address this in their subsequent Idéalabs. But unless research funders are able to find a way to the same kind of medicine that the participants themselves swallow at these events (for example, by using some of their funding specifically for cross-disciplinary work without creating ill-feeling by cutting back on individual disciplines or research areas) in order to truly embrace innovative multidisciplinary thinking, then sandpits are unlikely to realise their transformative potential.

This blog post is based on the authors’ article, “The construction of new scientific norms for solving Grand Challenges”, published in Palgrave Communications (DOI: 10.1057/s41599-018-0105-9).

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