

Web Science Institute Research Collaboration Stimulus Fund Project Final Report
Participation and Responsible Innovation in Co-Design for Exchange (PRICE)
Melanie Nind (SEdS), Sarah Parsons (SEdS), Andrew Power (Geography), Clare Hooper (IT innovation)
& Barod (community partner)

Project outline

In this pump-priming 'PRICE' project we set out to address the longstanding problem of involving marginalised, usually unsalaried, groups in Inclusive Research¹ by exploring the potential for securing a funded study to co-design, develop and study an online 'TimeBank'. We have placed great importance on collaborative working in a partnership between university academics and the Community Interest Company Barod and in dialogue with the inclusive research community in the field of learning disabilities. We planned to analyse existing online brokering systems and other projects focused on accessible/inclusive Web design exploring appropriate ingredients for an accessible and functional tool for people with learning disabilities. We wanted to use the affordances of the Web to transform the usual rules of engagement for the social production of Inclusive Research and overcome practical challenges for bi-directional and collaborative working with partners outside the academy.

Activity and outcomes

During the funded period of the project (Oct 2014 – July 2015) we have undertaken the following activities to successfully meet the goals of the project:

(i) Analysed four bodies of literature i.e. (a) studies of: TimeBanking with a particular focus on the facilitating factors; (b) Human-Computer Interaction, particularly focused on disabled people; (c) web tools supporting brokerage and facilitating circles of support; and (d) web accessibility, addressing universal design and personalisation and individualisation through assistive technology, and focused on identifying an evidence base for decisions in our TimeBank design.

(ii) Conducted a face-to-face focus group with 17 inclusive researchers to investigate their responses to the idea of a TimeBank, the types of brokering it could usefully facilitate for them, and how a low tech TimeBank could be transformed into a web-based version addressing the challenges of the need for accessibility, communication and security.

(iii) Conducted a digital focus group via a scheduled Twitter chat to extend discussion of the challenges of developing the web-based TimeBank. Informed consent was gained by tweeting prior to and during the group with a link to the study webpage describing the study and how the data would be used. We specified that inclusion of the study hashtag (#pricestudy) with a tweet denoted consent for the content of that tweet to be used as research data. The questioning route was similar to the face-to-face group, with anchor questions about what participants would give and take from a TimeBank; any worries about trust, accessibility, and communication; and the website functions they would they want. There were 108 relevant contributions from 38 Twitter accounts. We used the Twitter Archiving Google Spreadsheet (TAGS) v.5.1 application to capture the data.

(iv) Analysed these data to co-produce an initial technical specification for the web-based TimeBank reflecting user-centred design.

(v) Developed a working prototype of the online TimeBank following short iterative cycles of development and user-centred feedback from the inclusive project team.

(vi) Tested the prototype through focused discussions with participants trying out the system and communicating feedback face-to-face or online. Seven people participated at this stage: two

¹ Inclusive research encompasses any partnership, participatory or emancipatory research in which the people who are usually objects of research undertake more active, powerful roles as research partners, advisors or leaders so that the research is *with* them and not *on* them, meaningful to their lives and likely to be a beneficial process for them.

inclusive researchers from the face-to-face focus group; two experts in web accessibility; one academic doing collaborative work in health; and two people with learning disabilities (one familiar with TimeBanks but not using the Web and one familiar with the Web but not TimeBanks).

(vii) Co-produced a paper for the WebSci15 conference, exploring the idea of the TimeBank as a social machine, 'porting' human networks and interactions to a digital, or hybrid physical-digital, context, and continuing to foster connectivity and creative, reciprocal working within the inclusive research team.

(viii) Authored a journal article discussing the potential of a TimeBank for inclusive research to address some of the challenges in inclusive research that relate to power and money. The paper provides an account of what the problem is, and then discusses the concept of TimeBanking. The case is made for developing a TimeBank for inclusive research and the early research towards co-producing a prototype is reported. We conclude that while we are some way from bringing the concept into reality, there is value in creating a hybrid digital-physical TimeBank to further explore if it can be accessible enough and flexible enough to attract usage.

(ix) Used a conceptual mapping tool (MindMup) to track the bi-directional transactions and pathways including the social media networking routes in the progress of the project and the development of a prototype TimeBank (<http://tinyurl.com/psl8fcs>).

(x) Created a draft funding application to the Nominet Trust and a further grant-seeking plan.

(xi) Established a strong working partnership with a commitment to continuing this work using the TimeBank to log the work effort until further funding can be secured.

Findings:

The face-to-face focus group indicated strong interest in the potential of online TimeBanking. Moreover, it indicated that a TimeBank could function initially with around 20 researchers if we could overcome practical challenges. The challenges identified included: risk of digital exclusion for many people with learning disabilities whose computing and networking capabilities are under-developed, and the need for accessible information about the TimeBank concept and for training in using an online TimeBank. Specifically, the web-tool would need to be developed to cope with the different ways in which research needs and offers for exchange are communicated to allow matching despite these exchange tasks being thought about in different terms. The TimeBank would need to be accessible across a range of platforms, enabling use of communication preferences, and establishing mechanisms for online safety to facilitate trust.

The digital focus group contributions focused on constructive solution-finding including the necessity for user control, clear parameters and transparent working for users of the TimeBank. Solutions for issues of trust were suggested including regional meet-ups for users within local networks. Additionally, good entry-level information to explain TimeBanking simply; use of social media to build a community in line with the TimeBanking ethos; and user profiles and aspects of gamification to encourage active engagement, were all advocated.

Evaluation of the initial prototype highlighted aspects for development that will be taken forward into future bidding plans. Participants provided feedback on the ease of logging in and navigating; the accessibility of terms such as transaction; the level of safety people thought they would experience when using the TimeBank; additional features they would like (particularly examples, visuals and video); and their response to the whole concept. Once again, there was considerable enthusiasm for a TimeBank for inclusive research and for university-public collaborative working more generally. Participants were generous in sharing their expertise regarding possible solutions to some of the accessibility, usability and trust challenges. Where quick solutions were feasible these have been enacted but there remains a list of adjustments that can be made as soon as additional funding for software developer time is secured.

The role of human mediation emerged from the study as a thorny issue. The literature shows the importance of a proactive, enabling broker to foster networking and this was reinforced in the research where interpreting what could be brokered might be needed rather than an automated system. The prototype employed a dropdown list of choices to resolve the issue of moderation of free-text inputs to the system, but further testing of this is needed. Human brokers are practical but expensive and do not necessarily solve the power issues in inclusive research that underpin the initial rationale for developing the TimeBank. A solution might be rotating the broker role around the network of academic and community researchers, but this could potentially undermine the trust that is built up with a particular broker over time.

Another emergent issue was the role of gamification. Participants, particularly but not exclusively from the digital focus group, expressed an interest in developing this aspect in which TimeBankers might earn rewards or badges for playing the TimeBank 'game' well. We are aware, though, of the danger of focusing too much on gamification which could be at the cost of the sense of reciprocity and intrinsic mutuality at the heart of Cahn's² original TimeBanking principles. Another highlighted threat to the principle of reciprocity in the operationalisation of the TimeBank would be an imbalance of needs and offers with some people donating or taking rather than exchanging. The potential for academic researchers exchanging between themselves and community researchers doing likewise was evident and attractive to participants but again took the concept in different directions from the original desire to address the salaried-unsalaried divide.

Outputs:

Hooper, C., Nind, M., Parsons, S.J., Power, A. & Collins, A. Building a social machine: Co-designing a TimeBank for inclusive Research, WebScience conference, Oxford, June 28 - July 01, 2015, ISBN 978-1-4503-3672-7/15/06 DOI: <http://dx.doi.org/10.1145/2786451.2786472>

Nind, M., Armstrong, A., Cansdale, M., Collins, A. Hooper, C. Parsons, S. & Power, A. TimeBanking: Towards a co-produced solution for power and money issues in inclusive research, (in progress).

<https://price.it-innovation.soton.ac.uk/timebank/>

Impact and public engagement

The PRICE project has involved a working partnership between Southampton academics and a Community Interest Company throughout. We met in person in Cardiff three times during the year, plus coming together for the face-to-face focus group in Bristol. A software developer from IT-Innovation joined the team in April. We had an additional five skype meetings. Collaboration with 'external' stakeholders, has therefore, been integral to the work. We have established a team committed to further co-working on the next funding application. A further sixty potential users of the TimeBank have made an impact in terms of user-centred design. Presentation of the work at the Webscience conference and discussion of it at self-advocacy fora in Wales has extended public awareness of the study. Further dissemination about the project will follow.

² Cahn, E. (2000) *No More Throw-Away People: The Co-production Imperative*. Washington, D.C: Essential Books. In his book, Cahn positions people as assets, all with potential to contribute in two-way transactions in which we need each other.