

# Social Inclusion through the Digital Economy: Digital Creative Engagement and Youth-Led Innovation

**Lalya Gaye, Atau Tanaka**  
Culture Lab Newcastle University  
NE1 7RU UK  
lalya.gaye, atau.tanaka@ncl.ac.uk

**Ranald Richardson**  
CURDS Newcastle University  
NE1 7RU UK  
ranald.richardson@ncl.ac.uk

**Kazuhiro Jo**  
Tokyo University of the Arts  
Tokyo 110-8714, Japan  
jo@jp.org

## ABSTRACT

SIDE is a UK-based research project investigating the social benefits of digital technologies for marginalized social groups. The Creative Media Group works in particular with creative practices and young people, with a twofold research focus: the fostering of engagement through digital creativity, and the support of youth-led innovation with digital technologies. This paper describes the aims and objectives of the Creative Media Group in the SIDE project, as well as the first few months of its research.

## Categories and Subject Descriptors

K.4.0 [Computers and Society]: General.

## General Terms

Human Factors

## Keywords

Social inclusion, urban regional development, youth-led innovation, creative engagement, DIY, interactive media.

## SOCIAL INCLUSION THROUGH THE DIGITAL ECONOMY

The ‘Social Inclusion through the Digital Economy’ (SIDE) research hub [10] is a project funded by the UK Research Councils that applies developments in ICT to social benefit. It aims to actively explore the transformative potentials of new technologies for individuals and communities at risk of or suffering from social exclusion. For that purpose, it addresses four fields where digital technologies may deliver major social benefits: Connected Home & Community; Accessibility; Inclusive Transport Services; and Creative Industries. SIDE’s contention is that it is necessary to work with end-users in a sustained way, to understand their situation, environment and needs. Our multidisciplinary teams of researchers have access to large user groups affected by social exclusion, including a group of 3000 volunteers, containing people from a range of age groups and with a variety of social backgrounds and forms of exclusion. SIDE is also centred on the formation of ‘communities of practice’ of social inclusion stakeholders,

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

*IDC 2010*, June 9–12, 2010, Barcelona, Spain.

Copyright 2010 ACM 978-1-60558-951-0/10/06...\$10.00.

which include academics, practitioners, technology producers and those who are, or who feel themselves to be, excluded from parts of society. In establishing such a community, SIDE seeks not just to create products and applications to assist users in ameliorating social disadvantage, but to establish inclusionary processes to help excluded people participate in society. In this process, SIDE seeks to broaden the horizons, capacities and understanding of all partners and contribute to formulating future policy on a socially inclusive digital society.

The Creative Media Group represents one of the four strands of research within the SIDE project, the Creative Industries. The research group is based at Culture Lab, a world-class research centre for creative inquiry with art and technology that is part of Newcastle University. It works specifically with creative arts practices and young people in methodologies of co-creation to combat effects of marginalization. This position statement describes the work of the Creative Media group with digital technologies and social inclusion of marginalized youth, in collaboration with regional youth work organisations.

## YOUTH-LED INNOVATION AND DIGITAL CREATIVITY

The SIDE project takes place in a context of urban regional development of the North East of the UK. In the work of the Creative Media Group, it tackles notions of Culture-Led Regeneration, and of Youth-Led Innovation.

## Urban Regional Development through Culture-Led Regeneration

The North East region of England is a former mining and shipping capital that has undergone significant poverty in connection to the de-industrialisation era of the 1980’s. It has been the focus and recipient of major urban regeneration efforts, as well as the subject of European research schemes in urban regional development. The region - and the city of Newcastle upon Tyne in particular - have undergone massive economic transformation through a process of Culture-led Regeneration, i.e. the application of cultural initiatives to revitalise urban areas in decline [5].

One of the driving forces of the cultural sector, especially in terms of economical impact, is the Creative Industries, which include but are not restricted to traditional media (television, radio), online media, design, film, music, publishing and video games. In the UK, this represents nearly 10% of the total economy. Following culture-led regeneration, the North East region has today a significant

creative industries sector, with over 2,000 commercial creative enterprises and nearing 30,000 sector employees (company staff and freelance) in a region of population 2,000,000. However, this new source of wealth still co-exists throughout the region alongside the economic and social legacy of multiple generations of unemployment and other types of social exclusion.

### **Youth-Led Innovation**

As young people in the North East are growing up in the dynamic described above, there is a question of how they may actively participate in these developments in their surroundings in order to truly benefit from them and not be left out of the positive economical, cultural and social impacts of the regeneration.

Youth-Led Innovation has been identified in [9] as an important and successful form of such process of youth participation. It is defined as socio-economical activities where young people initiate, and assume responsibility for actions and developments concerned with their own socio-economic situation; whether the activity is institutionally facilitated, or completely youth-driven. Youth-led innovation can become a powerful process of social inclusion by allowing excluded young people to bring social capital into society. It is also a great means for young people to represent their interests as a social group and get increased visibility and impact. The potentials of youth-led innovation bring interesting research challenges: how to foster such youth-led innovation, in order to include young people (and in particular marginalized youth) in the process of culture-led regeneration.

### **Digital Technologies and Creative Engagement**

The emergence of the digital society adds a level of complexity to the equation of urban regional development, with digital networked technologies becoming an essential part of many cultural processes and of society as a whole. On the one side, emerging issues of access, digital literacy and other sources of digital divide for people living in difficult social climates, can create a new layer of potential marginalization. For urban regeneration processes operating in the digital realm, this might minimise their impact on certain social groups, including certain young people. Young people do use some digital technology extensively, but not necessarily in ways that may improve their inclusion into mainstream society and culture as a social group. It may sometimes rather isolate them from it. Access to technology does not necessarily mean inclusion [1].

One the flip side of the coin, digital technologies offer potentials of wide-spread outreach and engaging forms of interaction, which can become strong tools for empowerment, e.g. with the advent of open-source technologies that are not only free but even open to appropriation, and may provide a sense of ownership of technological solutions. Besides questions of access and digital literacy, it is important to find socially innovative ways of using digital technologies that may help

marginalized young people engage with the world around them, increase their participation as citizens, and eventually help them gain skills, confidence and opportunities to take more control over their lives.

While this is an ambitious agenda, observing the work of culture-led social work organisations provides a great insight into mechanisms that can lead to such social impact. The North East of the UK is for instance home to several successful organisations that work with social inclusion of marginalized youth through creative processes. In a logic similar to culture-led regeneration schemes named above, these organisations are working with young people in activities leading to creative output, as a means for social inclusion and personal development. Examples of such activities are creative collaborations among marginalized young people to make them work together towards a common goal, or training programmes supporting the development of creative skills that might give them access and opportunities to taking part in the creative industries. Such activities not only lead to providing them with a creative outlet for self-expression, but even e.g. increase their self-confidence and engagement with others [2].

As a research centre in art and technology, we have experience in working with digital technologies and interactive media, and are familiar with the affordances and creative qualities of such medium. We are in particular oriented towards modes of face-to-face interaction (as opposed to focusing on online or desktop-based interactions) and in the interface that interactive technology provides between the digital realm and the physical world we live in. In collaboration with organisations already working with creativity and social inclusion of young people, we are therefore interested in exploring the creative potentials of this medium for marginalized youth; and the innovative and socially grounded opportunities for self-expression and creative engagement embedded in the real world, that working with this medium offers [8].

### **METHODS AND WORK PLAN**

In short, our research focus is two-fold: 1) How to support and foster youth-led innovation within the creative sector, in a way that digital technologies become an empowering resource for their initiatives (as opposed to an obstacle); 2) How to design for creative engagement and social inclusion through digital technology (in particular for marginalized youth who would not otherwise have opportunities for creative activities). To achieve this, our strategy can be described as having three main components: creative workshop activities in collaboration with local youth work organisations; participatory design of interactive prototypes; and region-wide deployment.

#### **1) Creative Workshops with Local Organisations**

As part of forming communities of practice as mentioned above, we partner with various regional outreach programmes and community arts organisation. We organise creative workshop activities with them that involve young

people from difficult backgrounds. In carrying these activities, we are able to study the effects of the interaction between marginalized youth and the interactive digital medium, in a situation of creative engagement.

## **2) Participatory Design of Interactive Prototypes**

Findings made during such activities will inform the design of new interactive prototypes in a user-centred participatory manner, involving the various stake-holders of social inclusion in the process.

## **3) Deployment and Study of Use**

Finally, the last phase of the project will consist of region-wide deployment of these interactive prototypes and of large-scale user studies of their use and social impact on people's everyday lives.

### **Methods & Techniques**

The work of the group can be defined as action research: interventions in context, within existing webs of cultural actors and meaning, and with an aim to make an impact. Research techniques employed in the project are based on user-centred methodologies of participatory design, and encourage DIY appropriation and co-production. We also approach collaborations in a bottom-up manner, valuing the existing skills of the actors involved in the process (youth workers, young people, etc) and building activities and design based on their input. Prototypes and technology probes range from low-tech DIY hacks to high-tech implementations and off-the-shelf devices. We use traditional methods such as photos, video-recordings and analysis, live observations, focused discussion groups, questionnaires etc, in order to study people's interactions and experiences in context.

### **FIRST PHASE OF THE PROJECT**

Part of the start of the project has been to map out the existing landscape of such regional actors and to work with them on sketching out collaboration schemes. Each of the actors we have been talking with has their own unique aims, objectives, target group and working methods. At the moment, we are focusing on working with the following organisations: Generator [4] with whom we are currently doing workshop activities with creative technologies; and the Regional Youth Work Unit (RYWU) [6], where we support young people in implementing a social inclusion project that they are managing themselves. Here we mainly describe our work with Generator as a case of using digital technologies for creative engagement, and give a brief overview of our work with RYWU as a case of support for youth-led innovation.

### **Digital Creativity – Generator UMT**

Based in Newcastle, Generator is the leading national agency for the development of popular music. Among other things, Generator provides a variety of programmes for regional music business development, industry skill-building, and for the support for emerging and aspiring young musicians. One of the programmes covered by

Generator is an Urban Music Training (UMT) programme for aspiring young musicians (from DJs to instrumentalists and vocalists) which supports them in creating, recording and performing their own music, as well as helps them organise and promote events and provides them with professional level training for entering the music industry. Generator tends to target youth from difficult neighbourhoods who would benefit the most from engaging in such a programme. Young people enrolled in the programme represent a wide diversity of ethnical and educational backgrounds and ages, although boys are slightly over-represented. Generator encourages musical innovation and supports high-quality professional level end-results that the young people can take pride in and potentially compete with on the musical market. UMT thus displays an aim to nurture the young people's self-esteem and open up professional opportunities. One of the UMT classes called UMT:BEATS is targeted towards DJs and urban music producers and runs twice a week after school hours over a period of 12 weeks. Another one called UMT:PLAY is focused on instrument playing in band formations, and runs each year for a week, full-time. Each programme ends with a public performance in settings of professional standard.

Our collaboration with Generator consists in this stage of taking part in the UMT programme, by exposing young people to innovative experimental music technologies and processes, as well as designing participatory activities aimed towards technology-supported creative engagement in physical and community space. The first part of the process in working with UMT was an approach phase consisting of reciprocal visits, demos and focused discussions that have led to potential workshop ideas. This was followed by a short planning phase that resulted in a proposal for a 'Remix Your Instrument' pilot workshop, which we delivered shortly thereafter. The workshop took place during UMT:PLAY and aimed to build on the young people's existing musical skills. At the same time, it aimed to open a new world of possibilities and musical innovation to them and make a connection between urban electronic music and the physicality of instrument playing. Split into groups, the young people got to experiment with augmenting music instruments with sensors (pressure, light intensity, bend, movement etc) that modified the sounds that they produced. We used open-source, easily programmable hardware and software that we packaged in simple and approachable modules, in order to let the young people quickly learn how to use them while giving them a chance to modify them themselves. Young people in each group collaborated to make music: playing instruments, using the sensor they were provided with, and modifying sound effects. Some even used their own mobile phones, voices and other resources at hand in the process. Although very short, this workshop was very successful in getting the young people excited and engaged in playing with innovative interactive music technology. One group

was even eager to continue playing with the technology after the workshop and kept its module for the rest of week.

The next activities will start shortly and happen under a longer period of time, within the UMT:BEATS training programme. They will consist of three workshops centred on the use of mobile phones and MP3 players; technologies that young people are fairly familiar with and enjoy using [11]. These ‘Remix Your ‘Hood’ workshops will make use of RJDJ [7], an off-the-shelf free reactive music application that remixes ambient sounds into music in real time, in a way related to e.g. [3], typically through headphones. This enables one to see their own environment with new eyes, engage with it, and be creative with it in context. Various so-called ‘scenes’ (sound processing options) are available in RJDJ, together with the possibility to record the resulting music and share it online. Here as well, there is a DIY dimension to the technology: it is built on top of an open-source environment, which allows one to create their own scenes. Workshops are currently sketched out to be the following: 1) sound-walks with existing RJDJ scenes and brainstorming design session; 2) a programming session for composing one’s own scenes; 3) a “make your own speakers/sound-parasites” DIY hacking workshop for turning any surface into a speaker – from junk boxes to windows in urban space. The last workshop may end with a performance in public space, with the everyday environment used as a resource for creation and an interface for performance. Besides taking pride in the creative potentials of the mundane of their neighbourhood environment, this process aims to foster locally-rooted and original musical innovation which may give a sense of “representing” the North East region, or one’s community.

Throughout our collaboration with Generator in this phase of the SIDE project, we are interested in observing how young people interact with such creative interactive technologies and appropriate them, as well as explore how this makes them engaged in their environment and with others. Based on findings from this, the following phase will transition to the participatory design of interactive prototypes for creativity and social inclusion of young people, a process where the input of the participants will help them bring social capital in technology development that will be deployed at the scale of the whole region.

#### **Youth-Led Innovation - Regional Youth Work Unit**

The Regional Youth Work Unit is an organisation partly steered by young people (through a Youth Advisory Board - YAB) that aims at encouraging youth work and represents youth interests on e.g. government and school level. One of YAB’s projects, which has been initiated and managed them, aims to help other youth to find their ways through educational options and open a dialogue on this subject with their parents. This tool will come in the form of a playful interactive game that will be tested in pilot schools and eventually be distributed across schools throughout the region. SIDE collaborates with YAB on this project, by

helping them implement the game in the way they intend it to be. We are also helping them do this themselves, in order to empower them in regaining control over the project, which they otherwise lose when delegating the work to others. This collaboration takes place as a participatory design process, with weekly meetings taking place over a period of two months. Through this process, the young people are involved in all aspects of the implementation: its ‘look & feel’, its programming, as well as its structure and interaction design; making sure at each step that they remain in control of the process. We will also participate in the evaluation of the tool in pilot schools.

#### **CONCLUSIONS**

This paper described the aims and objectives of the Creative Media Group in the SIDE project, and the first months of its research. We hope that by using a participatory user-centred approach when involving young people in creative processes and when supporting initiatives they might have, this process will have a meaningful and sustainable impact in their lives. We also look forward to region-wide deployment and testing of prototypes to assess the impact of research findings on a larger scale.

#### **ACKNOWLEDGMENTS**

We wish to thank all the local organisations we have been talking and collaborating with, in particular Generator, RYU and Helixarts. We also wish to thank the young people we are or have been working with; Jamie Allen, Adam Parkinson and Andrzej Wojtas for their precious contributions; and our colleagues at SIDE.

#### **REFERENCES**

1. Ackermann et al. Cultural Coding and De-Coding as Ways of Participation: Digital Media for Marginalized Young People. IDC 2009.
2. Decortis F. et al. Semiotics Artifacts, Space and Community: a Case Study on Pinholes. IDC 2008.
3. Gaye L., Mazé R., Holmquist L.E. Sonic City: The Urban Environment as a Musical Interface. NIME 2003.
4. Generator. <http://www.generator.org.uk>
5. Middleton C. & Freestone P. The Impact of Culture-Led Regeneration on Regional Identity in North East England. Proc. RSAI 2008.
6. Regional Youth Work Unit. <http://www.rywu.org.uk>
7. RJDJ. <http://rjdj.me/>
8. Rogers Y. Moving on from Weiser’s Vision of Calm Computing: Engaging UbiComp Experiences. UbiComp 2006.
9. Sebba J. et al. Youth-Led Innovation. Enhancing the Skills and Capacity of the Next Generation of Innovators. NESTA report (2009).
10. SIDE project. <http://research.ncl.ac.uk/side/>
11. Unterfrauner E. and Marschalek I. ICT and Mobile Phones as Resources for Marginalised Youth. IDC 2009