

REVIEW ARTICLE

From Intervention to Invitation: Reshaping Adolescent Sexual Health through Story Telling and Games

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Abstract

The University of Chicago and the University of Ibadan in Nigeria have partnered to exchange innovative insights into the sexual and reproductive health of disadvantaged populations in Chicago and Nigeria. Youth in both Chicago and Nigeria face disproportionately high rates of mortality and morbidity due to poor sexual and reproductive health. Traditional models have fallen short of the needs of these youth, so the University of Chicago is seeking to reframe and retool adolescent sexual health education. Game Changer Chicago is an initiative that incorporates digital storytelling, new media, and game design to conduct workshops with youth around issues of sexuality and emotional health. Based on the success of storytelling and digital media programs in Nigeria and the success of Game Changer Chicago, we believe this model holds promise for implementation in Nigeria and other sub-Saharan countries (*Afr J Reprod Health 2012 (Special Edition); 16[2]: 189-196*).

Résumé

L'Université de Chicago est associée à l'Université d'Ibadan pour échanger des aperçus innovateurs de la santé sexuelle et de reproduction des populations défavorisées à Chicago et au Nigéria. Les jeunes à Chicago et au Nigéria font face aux taux de mortalité élevés à cause d'une mauvaise santé sexuelle et de reproduction. Des modèles traditionnels ne répondent plus aux besoins de ces jeunes. L'Université de Chicago cherche donc à restructurer et à rééquiper l'éducation sexuelle de l'adolescent. Le Game Changer Chicago est une initiative qui intègre les contes digitaux, les médias modernes et les jeux pour organiser des ateliers avec les jeunes sur les problèmes de la sexualité de la santé émotionnelle. En nous basant sur le succès des contes des programmes des médias digitaux au Nigéria et sur le succès de Game Changer Chicago, nous croyons que ce modèle fait espérer la réalisation au Nigéria et dans les autres pays subsahariens (*Afr J Reprod Health 2012 (Special Edition); 16[2]: 189-196*).

Keywords: Reproductive Health, Sexuality Education, Digital Media, Game Design, Nigeria

Introduction

The sexual and reproductive health of youth in sub-Saharan Africa continues to be one of the world's most pressing issues. The prevalence of sexually transmitted infections (STIs), high maternal and infant mortality and morbidity rates, unsafe abortions, and undesired pregnancies threaten women and girls' health. For instance, the

adolescent fertility rate in Africa is 117 (per 1000 girls aged 15-19)¹. Of the countries with the highest rates of unmet need for family planning among women ages 15-19, four out of five are in sub-Saharan Africa¹. Among sub-Saharan African women ages 20-24 years, 38% were married before age 18². Additionally, in many countries in the region, high percentages of unmarried women ages 15-19 are sexually experienced³. Nearly 10

million people in sub-Saharan Africa between the ages of 15-24, about 7% of young adults, are living with HIV/AIDS and half of all new infections occur among this age group⁴. These problems are not easily addressed; beyond the biological and clinical issues lay complex cultural, political, and socioeconomic factors. Thus, dynamic, system-based approaches for improving youth sexual and reproductive health are needed.

In 2010, a physician-researcher at the University of Chicago began to develop a new interdisciplinary centre for sexual and reproductive health: The Center for Interdisciplinary Inquiry and Innovation in Sexual and Reproductive Health (Ci3). A partnership with the Centre for Population and Reproductive Health (CPRH) at the University of Ibadan in Nigeria has been a cornerstone of the University of Chicago's centre formation. Ci3 seeks to better understand the ecology of biological, behavioral, social, and political factors that influence health behaviours and outcomes with the purpose of identifying novel solutions to pressing problems. The University of Ibadan's CPRH has a long history of conducting research, trialing and scaling up promising interventions to improve the sexual and reproductive health of women and children. A core principle of the partnership is that effective innovations in one setting might provide cross-cultural insights and tools for use in another. The partnership provides opportunities to exchange programs and learn from the similarities, as well as the differences, in context.

The partners immediately saw connections between the urban landscapes in developing African nations and resource-poor communities of color in the United States. Many Nigerian youth face significant challenges to preventing pregnancy and STIs. The adolescent (15-19) fertility rate in Nigeria is high at a rate of 126 births per 1000 adolescents. In 2003, 21% of adolescent women had a child and 16% had an unwanted pregnancy⁵. Communities of colour in the United States also suffer from disparate rates of adolescent pregnancy, STIs, HIV and abortion compared to youth raised in wealthier communities. In 2009, birth rates for black and Hispanic teens were more than twice that of white teens⁶. Gonorrhea and chlamydia rates are highest

among those aged 15-24, and rates among blacks are 18 and 8 times the rates among whites, respectively⁷. Chicago's South Side, where the University of Chicago is located, is home to the poorest communities in the city. Despite many community assets, these areas have the city's highest rates of HIV/AIDS, teen pregnancy, sexually transmitted infections, single-parent homes, and school dropout rates⁸. These similar health problems led the partners to wonder whether approaches to sexuality education being studied at the University of Chicago might have relevance for African youth. Our interdisciplinary team at the University of Chicago has been examining new approaches to sexuality education. While education is one important tool for improving health outcomes for youth, its availability and effectiveness can be affected by larger social, political, and cultural factors. For example, for many years, sexuality education in the United States has been dominated by the teaching of abstinence-only until marriage. More recently, funding for sexuality education has focused on programs supported by research evidence. Yet, there is still concern that these evidence-based programs are insufficient to make substantive changes in the lives of youth⁹. Others have argued that even evidenced-based programs overemphasize risk behaviors, undervaluing important areas such as decision-making, agency, and critical thinking¹⁰. Thus, we began an initiative to create new paradigms and programs for the sexual development of youth. Our goal was to meet the sexual and reproductive health needs of low-income youth of colour in a way that was engaging, compelling and relevant to them. Given high rates of school drop-out and concerns about privacy for youth seeking sexual health information, it seemed particularly important to identify ways for youth to learn about sexuality in both a formal school setting and also in informal settings. We turned to digital media and found that even among low-income youth in the United States, many were online and socially networked through mobile phones, as well as home, public, and classroom computers¹¹. Thus, we became particularly interested in how digital media— e.g., text messaging, social networking sites, shareable

video sites, RSS feeds, and wikis could be adopted for sexuality education.

This paper provides an overview of our work in digital media and sexuality by describing a series of three projects that fall under the University of Chicago's Game Changer Chicago initiative (gamechanger.uchicago.edu): the Digital Storytelling Workshop, the Game Changer Transmedia Storytelling workshop, and the Game Changer Transmedia Game workshop. Through these three projects, we are developing and studying a new youth-driven approach to sexuality education: education through invitation rather than intervention. In this paper, we briefly describe each program and how we came to combine digital media, personal narrative, and sexuality education through a genre called transmedia games. We then compare elements of our program in Chicago to current research and programs taking place in sub-Saharan Africa, with a particular focus on Nigeria. While Game Changer Chicago takes a unique approach to sexuality education, its linkages and similarities to existing programs suggests its relevance for Africa.

Program Description

The diverse disciplinary foci of the team comprising the Game Changer Chicago initiative contribute to the innovation and rigorous inquiry that characterise each project. The team members bring expertise in medicine, reproductive health, youth development, contemporary literature, game design, technology, digital media, storytelling, and social justice. The participants in this collaboration began by asking a number of foundational questions. How can we create a program of study that is meaningful and relevant to youth living in challenging and perilous conditions? How do we engage youth so they drive the program's content, ensuring its relevance to their everyday lives? How do we help youth develop systems-based thinking: in other words, how do we help them understand the interrelated parts (e.g., biologic, social, political elements) that make up the whole of their lives?

Our first step was to inform the process by increasing our own understanding of the questions and concerns of urban youth. While focus groups

and interviews were options, we wanted youth-led, youth-generated content to ensure that we focused on the issues and questions that were most significant in their everyday lives. Thus, we used personal narrative and storytelling to lay the foundation for this project. We worked in the tradition of digital storytelling: a production-driven workshop, in which participants craft a script and use video editing tools to integrate images, effects, and music, resulting in a short digital video akin to an in-depth interview or memoir. At the workshop's core lies the story circle, a process for soliciting self-governed participation through a series of oral and written prompts related to an overarching theme. The democracy of the circle, which consists of check-ins, group agreements, deep listening, and witnessing, fosters a safe environment for learning across modes of intelligence, expertise, and praxis. Our first digital storytelling workshop, with 11 male and female youth from the South Side of Chicago, allowed participants to discuss personal issues ranging from neighbourhood violence and parental loss to pregnancy, sexual violence and bullying. The four-day workshop resulted in 11 digital stories. The youth later reconvened to further interpret and analyse the digital stories, identifying the most salient themes to create a foundation for future workshops and research. Our experience with digital stories informed our second workshop, Game Changer Transmedia Storytelling, which used digital media and storytelling to create a narrative-driven game. This second workshop recreated the intimacy and deep discussion about sexuality contained in the digital storytelling workshop, but paired it with skill building in new media and computer-based technology. The workshop took place over 7 days, each day lasting approximately 7 hours. The collaborative setting gave youth an opportunity to discuss and research their questions about sexuality, social, and emotional health. They then used their questions and research to design an online, narrative-driven game discussing issues such as rape, gender inequality, incarceration, and parent communication. In addition to new knowledge and critical thinking, the youth walked away with enhanced communication and artistic skills as well as specific technological skills.

For our third project, the Game Changer Transmedia Game workshop, we worked with a smaller group of youth over a 3-month period to create a pervasive transmedia game. Transmedia games are an emerging form of game design that tell a single story across numerous technologies and media, and can include text, video, audio, flash, print, phone calls, websites, email, and social media networks. Here, youth created a story based on research that indicated that pregnancy outcomes vary in different communities according to wealth and social status. This approach built upon the rich conversation, research skills, and critical thinking of the prior workshops, but emphasized game development with the end-user or game player in mind. Youth focused on developing games, role-playing, and engaging in online research that taught them to identify health information and enabled important decision-making skills.

One of the unique capabilities of digital media is that it is interactive and highly shareable. Users can create content and share it widely. The Transmedia Game workshop took advantage of these features in the context of game development and game play. The completed game is disseminated online with clues designed to draw a diverse audience of youth into a collaborative play process and to build anticipation through serial narrative and plot twists. The final game reflects the lessons learned in game development, challenging youth to think about issues of disparities in reproductive health and the larger political and economic systems that enable these disparities. This particular game involves puzzle-solving and skill-building. For example, in order to advance to the next stage of the story, youth have to conduct online research about sexual and reproductive health, collaborate with one another to complete transmedia challenges, and produce a creative video that furthers the narrative. These activities are meant to help youth develop self-efficacy for sexual and reproductive health behaviours, as well as develop multimedia and gaming literacy¹². An online forum allows players to discuss the issues that arise in game play. In addition, the forum enables the game developers to “observe” game play, interacting with the game players and even identifying teachable moments. Overall, the workshops emphasise a positive approach to sexual and reproductive health: one

that is open and system-oriented rather than negative and risk-oriented. This series of projects is distinctive because youth are highly engaged and in a creative and inquiring mode as they learn. Rather than traditional pedagogical models, including lectures or even skill building, here youth are compelled by the act of designing, the thrill of puzzle solving, and the opportunity to collaborate with their peers. Fundamentally, this work reframes and retools sexuality education by infusing it with youth knowledge and voices.

Throughout the Game Changer Initiative, we have used a variety of evaluation techniques and worked with others to consider how best to evaluate digital media for health promotion¹³. In our work, we have directly observed and interviewed participants, studied their journal entries and blog posts, and analysed digital stories and video commentaries. We use a mixture of qualitative and quantitative methods in our analyses to describe changes in knowledge, attitudes, self-efficacy, and an increase in skills related to communication, online research skills, behaviors and technology skills. Additionally, participation provides youth with technology skills, communication techniques, and multiple forms of literacy. We believe that youth who participate in the workshops gain new relationships with peers and adults, engage in critical thinking and increase their understanding of systems-based thinking and sexual health. Because youth use these skills to design games, they quickly develop from learners to designers, promoting self-efficacy. Further evaluation must ask some fundamental questions. For example, can skills learned in the safe context of game play and game design be translated to schools and real world settings? Can the power of story, a medium that is safe, familiar, and engaging for youth, leverage positive outcomes for those who live in contexts that are often harsh and sometimes dangerous? We hope to discover whether lessons learned in storytelling, game design and game play can fortify youth for the world around them.

Cross-cultural Applications

One of the next phases of the Game Changer initiative is to consider whether our projects are relevant and transferable to youth living in other countries and settings. Indeed, our programming

was created with this cross-application in mind. Youth sexuality is often a taboo subject, perhaps contributing to low rates of contraceptive and condom use in many countries. The constraints of these conservative cultures necessitate creative approaches to the promotion of sexual health. Each individual component of the Game Changer initiative- storytelling, digital media, and gaming has been employed with success in sub-Saharan Africa, indicating promise for the potential success of the Game Changer model in that setting.

Each Game Changer workshop draws on the tradition of storytelling. Storytelling is an essential art form that permeates the human experience. From stories, we distill lessons, knowledge, values, and styles that influence our attitudes and behaviors. The ability to change attitudes and behaviors through stories and narrative is well illustrated in the Nigeria-based project using theater to promote conflict resolution: 'Building Bridges: Promoting and Consolidating Peaceful Co-existence in Nigeria –Kaduna and Kano'¹⁴. The "Building Bridges" team created plays involving the audience, which collectively resolved conflicts and discussed the outcomes and actions. Theatre provided a safe forum to openly discuss politically and religiously charged ideas. This grassroots project enabled participants to research and analyse problems, create critical awareness, and potentiate action to solve the problems. This three-phase program included a baseline study of causes of conflict, training of community organizations to solve problems, followed by community outreach programs for peace building. Our commitment to widening stakeholder participation is fundamentally aligned with popular methods in Nigeria. The National Popular Theatre Alliance (NPTA) is a network association for trans-disciplinary practitioners using per-forming arts to advance participatory development. The NPTA is parent body to the Theatre for Development Center, whose participatory development approaches such as theatre for development (TFDC), participatory video and participatory learning and action have been established as academic practice at Ahmadu Bello University. These methods have been employed across Nigeria in multiple fields and contexts, including education, public health and

conflict resolution. Of particular relevance to Game Changer Chicago is a behavioural change project undertaken by TFDC, which has the dual aim of providing sexual education to adolescents and preventing school dropout due to teen pregnancy. Participatory, collaborative digital story-telling is being widely used in the developing world as a tool for increasing agency among youth. Our own work in digital storytelling began through collaboration with the Center for Digital Storytelling (CDS) (www.storycenter.org), an international training, project development, and research organization. CDS has collaborated with a number of partners to use digital storytelling in health promotion. For example, the Sonke Gender Justice Network is a South African nongovernmental organization dedicated to gender equity. Sonke created a series of digital stories with South Africans affected by HIV/AIDS, gender violence, and poverty. They conducted sessions with traditional leaders, youth, men and women living with HIV/AIDS, and social activists. Digital stories enable participants to learn skills in technology and storytelling, to learn from others and to hear the importance of their own voices. Sonke then paired the digital stories with facilitator guides so that as others viewed the stories they had better tools to interpret and understand the stories. These stories were made available on the Sonke website and serve as tools for others conducting work on gender-based violence in sub-Saharan Africa. Recently, this organisation has embarked on a media campaign to change public discourse and understanding about HIV/AIDS. To increase the scale of these projects they worked with community-based radio stations. The digital stories helped promote conversation, dialogue, and public discourse about HIV/AIDS. This project demonstrates how narrative and personal stories created in a small group setting can be a powerful experience for the storytellers, but can also be promulgated to change discourse, policy, and lives.

While narrative and political theater are compelling ways to produce critical thinking, the popular form of games has not yet been explored extensively as a mode of intervention for addressing major health problems in under-resourced settings. Yet games may be particularly

appropriate for youth as they are collaborative, social, play-oriented, and familiar. We use games because they are a youth-friendly and compelling way to pilot new behaviours, ideas, and perspectives without fear of failure or criticism, as indeed, failure and flexibility are the norm in gameplay. They are non-threatening ways of grappling with sensitive topics and thus may be uniquely suited to discussing sexuality in socially conservative settings. As a creative venture, the initiative ultimately explores the questions youth stories present and reposes them as puzzles. It explores the systems they navigate and repurposes their journeys as games.

Games are starting to be developed to address major sociopolitical problems in Africa. *Get H2O* was created by an Amsterdam-based company, Butterfly works, in 2011 in collaboration with Kenyan partners. *Get H2O* asks players to consider how to create a healthy community when conflict is an issue. How do you obtain water, support your family, and build a house? *Get H2O* includes both a board game and mobile phone-based game version aimed at helping players explore issues such as resource shortage and conflict resolution. Players are encouraged to meet in community settings and to promote discussion about the issues that arise through game play. An online forum supports gameplay. This game is highly popular and has been disseminated in Nigeria and Senegal. Another recent project from the World Bank demonstrates how games have been used for real world impact. The World Bank Institute, the learning arm of the World Bank Group, developed the game *Evoke*, which was directed by Jane McGonigal a world-renowned game designer and researcher who specializes in pervasive transmedia games. Players undertook quests with the goal of empowering people to find creative solutions to social problems. Players were socially networked and communicated through a central forum. Following game play, lead players were mentored by experienced social innovators and business leaders and given seed funding for their ventures. This instance is just one in which the game world encourages players to become absorbed, use their imaginations, learn multimedia skills, and generate ideas that are applicable to the real world.

Game Changer projects focus specifically on

an emergent game form: transmedia games. These games are played across many digital media platforms and can incorporate non-digital elements, often blurring the line between reality and the game world. Transmedia games can take advantage of real-world locations, use available technology (text messaging, Twitter, Facebook, email, phone calls), and incorporate social media. Transmedia games may be particularly suited to developing countries, as the game play platform can be context-specific. For example, in South Africa, only 6% of youth report daily Internet use, yet 72% own mobile phones and 59% report using them daily¹⁵. According to the World Bank, Nigeria had 55 mobile subscriptions and 28 Internet users per 100 people in 2010¹⁶. In this context, mobile phones would be an ideal platform to use in a transmedia project. New digital media is shareable and highly interactive, which promotes collaboration: a key component of transmedia games. Thus, a relatively low-tech device, such as a mobile phone, allows these projects to be brought to scale in an inexpensive way. The projects can be further enhanced through an accompanying discussion forum providing an ongoing discussion about game play and thematic issues that arise. Because transmedia games often rely on non-digital elements, real world activities and skills can be incorporated into game play.

Conclusions

In the global struggle to address health disparities in under-resourced communities of color, few would argue that youth are not centrally at risk. While yet in its early stages, our work is promising. Storytelling, game play and new digital media are proving to be natural tools for addressing youth-centered issues. Games are by nature fun, rule-governed, and occurring in spaces separate from everyday life and thus might seem inadequate as responses to major health and social problems. Yet, games use the interplay between rules and free play to enable participants to become aware of and explore larger systems.

In this paper, we explore Game Changer Chicago, a project to reframe and retool adolescent sexual health education. We focus on inviting rather than intervening with youth, which

encourages self-empowerment that is catalyzing towards increased awareness and self-efficacy. Our goal is to disseminate tools and skills that promote continuous education, agency, and empowerment. Here we demonstrate that many of the novel elements we use in Game Changer Chicago have precedent or are currently being piloted in the African context. Indeed, the rich and varied cultures of sub-Saharan Africa feature strong traditions in storytelling and narrative-driven arts. In addition to online applications, our particular genre of game design might also take advantage of other popular communication media such as radio and SMS. We provide examples of how readily games and digital media have been adopted by many communities.

One of the most promising aspects of these programs is the potential for these games to reach a large audience. Transmedia games have been called “prosocial”: in other words, promoting community and socialising. New networks of people are formed as players rely upon one another to solve puzzles and follow the narrative. Game discussion boards bear similarity to the discussion created following an NPTA play or in response to the Sonke radio show. While collaboration begins as a means of puzzle solving, we intend that the issues raised, questions asked, and technology skills learned result in ongoing communication. The Game Changer Initiative focuses on projects that require only basic technology and can be shared widely through social media. Thus they offer an inexpensive way to bring projects to scale.

There are a number of limitations to this work. Game Changer is a new and emerging project and we have focused mainly on outcomes related to the workshops, such as knowledge, attitudes, and research and technology skills. It is yet to be determined whether participants will have better sexual health outcomes as a result of participation. Similarly, we can evaluate the game designers most closely, but the game play experience may not be as compelling or educational as the workshop experience. These questions are critical and currently being studied by our team.

In addition, while our work is guided by a curriculum, each workshop is shaped by the ideas and experiences of the participants. Thus, each

workshop results in a very different type of game, or series of stories. Nevertheless, we would argue that this adaptability and personalization is an essential element of the process. Our engagement, skill transfer, and curricular elements remain constant, but the process is truly one of co-creation. Here, we present lessons learned and ongoing questions, which build upon the premise that an integrative, media-oriented, and youth-centered approach is well suited for meeting the many challenges of adolescent sexual health globally.

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