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## Acronyms

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<th>Description</th>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>ARG</td>
<td>Alternate Reality Game</td>
</tr>
<tr>
<td>CIC</td>
<td>Community Information Center</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communications Technologies</td>
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<tr>
<td>ICT4D</td>
<td>Information and Communications Technologies for Development</td>
</tr>
<tr>
<td>ICT4E</td>
<td>Information and Communications Technologies for Education</td>
</tr>
<tr>
<td>iEARN</td>
<td>International Education and Resource Network</td>
</tr>
<tr>
<td>IP</td>
<td>Internet Protocol</td>
</tr>
<tr>
<td>ISP</td>
<td>Internet Service Provider</td>
</tr>
<tr>
<td>LAN</td>
<td>Local Area Network</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
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<tr>
<td>PBL</td>
<td>Problem-based Learning</td>
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<tr>
<td>RPG</td>
<td>Role-playing Game</td>
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<tr>
<td>SNA</td>
<td>Social Network Analysis</td>
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<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<td>WBI</td>
<td>World Bank Institute</td>
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Summary

Background and findings

EVOKE is a multiuser online game, created under the auspices of the World Bank Institute (WBI), which was intended to engage players in social-innovation activities that addressed global challenges. The game ran from March to May 2010, and was open to players1 of any age around the world (although it was recommended for players above the age of 13). EVOKE’s primary user population comprised young people in sub-Saharan Africa, and especially in South Africa. At the end of the game, players could submit “Evokations,” plans for real-world social-innovation activities, which could qualify for various forms of support and incubation.

Engagement and participation

Levels of international and African regional participation in EVOKE were high. Web-traffic data on participation from all countries shows that:

- EVOKE received 286,219 visits by 171,958 different individuals during its ten-week “run-time.”
- 19,386 people (or 11.3 percent of unique visitors to the website) registered as players.
- 6,618 people (or 34 percent of registered players) completed at least one mission or quest.
- 142 people (0.73 percent of registered players) completed all ten missions and quests.
- 73 people (0.37% of registered players) submitted Evokations.

Levels of engagement shown by visitors to EVOKE were much higher than those shown by visitors to other development-related websites (worldbank.org, unesco.org, kiva.org). Visits

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1 The term “player” is used throughout this paper to refer to individuals who participated in EVOKE.
to urgentevoke.com averaged 9.0 minutes, while visits to worldbank.org average 3.5 minutes. Visitors to urgentevoke.com viewed more than twice as many pages per visit than the average for visitors to worldbank.org. These and other data support the following observation:

During EVOKE’s ten-week run-time, approximately 100,000 visitors under the age of 24 visited the EVOKE platform and engaged with development challenges and social-innovation-based solutions; in all likelihood, many of this group would not otherwise have encountered these challenges or considered solutions to them.

**South African players’ engagement and participation**

Players from South Africa comprised 5.2 percent (or 1,010) of the more than 19,000 registered players, with an additional 2.6 percent (or 519) registered players from other countries in sub-Saharan Africa. (EVOKE producers and partners conducted a focused marketing campaign and various outreach activities in South African, activities that were not replicated in other African countries.)

South African players demonstrated higher levels of activity and engagement than did all players in aggregate. South African players spent more time on the EVOKE website and viewed more pages per visit than the average for all players; South African players on average completed 40 percent more EVOKE missions than the “global norm,” and also posted more blog, photo and video evidence.

South African players’ overrepresentation in EVOKE, plus their high levels of engagement and participation, suggest that they contributed substantially to the success of EVOKE and to the lively dynamic of the EVOKE social network.

**Impact of EVOKE on African players**

Survey responses from sub-Saharan African players suggest that participation in EVOKE:

- Led players to change their thinking about issues
- Helped players increase their self-confidence
- Increased players’ sense of agency and of future potential

These and other findings are provisional, in part because they result from players’ self-assessments.

In addition, participation in EVOKE required affordable and reliable Internet access, technological fluency, English language skills, a degree of familiarity with social networking and other conditions that are not available to most people in African countries. Access-related issues limit participation to privileged user populations, such as university students and young professionals. These limitations notwithstanding:

Survey and interview responses indicate that EVOKE was very effective in helping those players in sub-Saharan Africa who had requisite capacities and access to resources to develop 21st-century life and learning skills. These players were likely to increase their sense of agency in relation to future actions, their awareness of and engagement with social, environmental and economic challenges, and their knowledge in relation to these challenges and to potential solutions.
**EVOKE in context**

EVOKE should be seen as occupying a unique and potentially important niche in the broad array of donor-driven and national programs for development. EVOKE’s impact stems primarily from two key factors: the establishment of a diverse, global social network focused on social and economic challenges, and; a powerful blend of fiction and reality.

EVOKE’s combination of an international social network focused on development with an imagination-infused reality reduced barriers to participation, prompted imaginative solutions to be proposed, and fostered a sense of moral urgency among players.

**Recommendations**

Recommendations are predicated on the idea that EVOKE will be revised and repeated, or that other development-focused Alternate Reality Games (ARGs) will be designed.

**Advancing opportunities for real-world action**

One cluster of recommendations address the need to augment the pathways to players who wish to engage in real-world action as a result of their participation in EVOKE.

- Establish pathways to connect players to local NGOs and social enterprises
- Establish pathways to connect players to international NGOs and social enterprises
- Support platforms for affinity and interest groups
- Increase the transparency of the Evokation awards
- Experiment with languages and social-network scale

**Advancing opportunities in education**

A second cluster of recommendations focuses on improving the linkage of EVOKE to higher and secondary education.

- Explore partnerships for the education of “social innovators”
- Increase support for teachers (teachers guide, online community of practice, pathways for telecollaboration)
- Develop an “export to portfolio” feature and improved search/cataloguing
- Explore partnerships to improve students’ Internet access

Some consideration should also be given to the risks and benefits of developing a “students-only” version of EVOKE.

In addition to the preceding recommendations, the report recommends improvements to the evaluation design and process.

EVOKE demonstrates that development-focused ARGs have strong potential to serve as cornerstones supporting the emergence of a cadre of young, civic-minded, socially engaged African and non-African innovators. These innovators, nurtured in EVOKE’s online
commingling of real and imagined worlds, will demonstrate increased abilities to find, organize and creatively make use of the knowledge resources and human resources necessary to address local, national, regional and international challenges in new ways.
Section 1:
Overview of EVOKE

Introduction

EVOKE is a multiuser online game that was designed to concentrate players’ engagement, simultaneously and on one platform, on global challenges and social innovation.

Social innovation, for purposes of this evaluation, is considered to be the development of new forms of action, organization, transaction or other social interaction that meet existing and emerging social needs.

Created by WBI, EVOKE’s aim is to empower players to: investigate the most pressing challenges around the world, collaborate to generate innovative and creative solutions, and act to turn ideas into reality within their own communities and beyond.

The game was open to players of any age around the world (although it was recommended for players above the age of 13), but targeted young people in sub-Saharan Africa, and especially in South Africa.

The game began on March 3, 2010, and its first season concluded on May 12th, 2010. During this ten-week “run-time” period players were asked to engage in one new mission per week. The topics addressed in the missions included: social innovation, food security, power, water crisis, money, empowering women, urban resilience, indigenous knowledge, and crisis networking.

Missions and quests

Each mission required completion of activities in three categories: Learn, Act and Imagine. In the Learn activity players were provided information and links to help them attain an in-depth knowledge on the topic. They then were asked to post blogs, photos or videos as “evidence” demonstrating or sharing what they had learned about the topic. In the Act activity players had to carry out actions in their communities related to the mission and post a blog, photo or video to demonstrate their action. In the Imagine activity players had to imagine how they would address the topic effectively in the near future, and post a blog, photo or activity to demonstrate their imagination. The Learn, Act and Imagine activities for each weekly mission were different.

Players also had to undertake quests every week that set them on paths to understanding their own abilities in order to change the world. For each of the weekly quest activities

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2 Although our working definition of social innovation involves the development of new forms of activity—and was framed originally by Peter Drucker and other economists in discussions and publications in the 1970s and 1980s—our evaluation does not anticipate that players will (necessarily) develop activities that are “globally new.” Instead, our evaluation focuses on players’ experiences, and encompasses forms of “the new” that are new to them and new to their communities.
players were expected to talk about themselves and post a blog, photo or activity to demonstrate their personal development. The quests covered in the game were: secret identity, motivation, environment, amazing stories, pivotal moment, call to action, opposition, superhero symbol, secret allies and news from the future.

Through the missions and quests, players were expected to learn about different global challenges, do independent research, collaborate with other players, develop thoughts and ideas, form their own innovation networks, come up with solutions, learn about what it takes to be a successful social innovator and entrepreneur, act to implement their ideas into action, and have fun while working on the activities.

Players could view each others’ mission and quests, comment on them and assign points to each entry. Players could also assign each other points that contributed to EVOKE powers, comprising the core skills, abilities and talents for making social innovation possible. The ten powers included collaboration, courage, creativity, entrepreneurship, local insight, knowledge share, resourcefulness, spark, sustainability and vision. A leader-cloud page was set up that showed a list of players who had attained points and placed them in the following categories: newest heroes, emerging heroes, questing heroes, heroes on a mission, power generators, mega heroes, heroes of the week and leading powers heroes.

**Game runners**

A group of 11 game runners played EVOKE and at the same time facilitated or conducted some of its essential operations. Game runners’ responsibilities included assigning points and providing feedback to the players’ game inputs, answering questions about the game, encouraging players, facilitating players interactions and game inputs, creating active discussions, and keeping the game moving forward smoothly.

**The ‘Evokation’**

At the end of the ten-week game, players could submit ‘Evokations,’ either alone or as part of a group. The Evokations consisted of vision and mission proposals for social-innovation projects in a specific subject area and region. The winners of the Evokation competition were awarded the following prizes: seed funding; mentorship by respected social innovators, entrepreneurs and international development professionals; and an opportunity to post their project for crowd funding on the *Global Giving* challenge (www.globalgiving.org/evoke). A subset of winners was also invited to an EVOKE summit held in Washington DC in October 2010.

**Recognition**

Players who completed all ten missions and quests received WBI certificates and were recognized on the website as Certified EVOKE Social Innovators – Class of 2010. Other players who had completed one or more missions and quests were also recognized as the EVOKE class of 2010 graduates.

The Evoke website remains online at the conclusion of the game for players to continue their interaction with each other and with the game resources. A second season of EVOKE might take place pending additional fundraising by the World Bank team.
Summary of the evaluation methodology

The goal of the evaluation, as determined in consultation with the World Bank Institute’s Robert Hawkins, EVOKE executive producer, was to determine the impact of EVOKE on the development of 21st-century skills in relation to social innovation, particularly among youth in South Africa. Among an extensive array of higher-order thinking skills and activities, key 21st-century skills in this context include: information literacy; problem solving (and especially the design of multi-stage solutions to complex problems); the discovery, use and citing of facts and information, and; communication and collaboration skills (especially those provided by “Web 2.0” tools), as well as soft skills important to leadership, such as empathy. Linked to these skills, and to the overall goal, were a “basket” of EVOKE objectives, such as helping players learn to identify social challenges, engaging players in activities that they perceive are socially and personally meaningful, and developing players’ self-confidence, among others. This basket of objectives in combination with an array of 21st-century skills formed the foundation for evaluative indicators.3

Evaluation activities

The evaluation of EVOKE relied on the following methods:

• Monitoring of the EVOKE game and Web site
• Review of web-traffic data
• An online, end-of-game survey of EVOKE players
• Interviews with EVOKE players, game runners, educators and others
• Review of winning Evokations

The broader-scope quantitative methods—the review of web-traffic data and the online survey—enable development of an accurate picture of participation in EVOKE, and of participation by players among the intended populations in South Africa. The qualitative approaches—monitoring the game site, interviews with players, game runners and others, and review of the Evokations—provide more detailed pictures of the experiences and reactions of a few intensively engaged players.

Survey participation

As mentioned in the previous section, participation in the online survey was relatively high: Five-hundred eighteen (518) respondents completed the survey.

Methodological limitations

Methodological bias emerges from several factors. Chief factors in potential bias are: the administration of the survey at the end of the EVOKE missions, and; use of an online survey. These two factors likely bias the sample of results in favor of players who participated throughout the ten-week period of the game and in favor of players who had adequate Internet access and for whom the cost of Internet connectivity was not a barrier.

These areas of bias, plus lack of ability to control the data sample, complicate any effort to demonstrate correlations through experimental statistics (e.g., regression analysis).

These factors notwithstanding, the methods used do support extensive description of the experiences of engaged players. Most critically, however, the problematized sample complicates understanding of the barriers to engagement, especially as these barriers affected players in Africa. It is impossible, for example, to gauge the extent to which poor-quality or expensive Internet connectivity impeded individuals attempting to participate in EVOKE.\(^4\)

However, Ronald Kasendwa, a Ugandan EVOKE player at Makerere University, has provided first-hand information that confirms and qualifies the impact of poor-quality Internet connectivity even among relatively privileged groups. See the section, Limitations on EVOKE impact: Internet access as a barrier at Makerere University for more information.

Levels of participation in EVOKE greatly exceeded expectations, and supported a relatively high number of survey responses (approximately 3.5 percent of the 6,618 people who completed one or more activity). Within this sample, respondents from South Africa and from other sub-Saharan African countries are well represented (12.2 percent of all respondents).

However, survey responses by South African players were strongly influenced by the exemplary participation of one or more groups led by educators. An unknown number—up to 20 of the 63 South African survey respondents—might be students in the Global Studies course taught at the Bishops High School (or Diocesan College) in Cape Town South Africa. This potential over-representation compromises findings based on responses from players in South Africa.

**Conceptual limitations**

Prior to the launch of EVOKE, this evaluation was framed and planned as an assessment of EVOKE’s impact as an ICT4D project and as a more traditional education project; the parameters of such assessments exclude many of the most important contributions that EVOKE and ARGS-for Development can offer to the donor community and over the longer term to developing-country populations. These contributions are addressed in Section 4: Recommendations: EVOKE in the context of development.

**Detailed methodology**

For a more extensive discussion of the evaluation methodology, refer to Annex A: Evaluation methodology.

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\(^4\) It is important to note, in this context, that there are many potential barriers to participation in EVOKE that are widespread in South Africa and sub-Saharan Africa. Obvious barriers range across issues such as access to technology, technology and information literacy skills, discretionary time, among others; less obvious factors include, for example, cultural perceptions of value (i.e., what constitutes a worthwhile activity?). As will be discussed throughout this report, the goals, objectives and design of EVOKE should not be seen through the conventional “lens” of an ICT4D or ICT4E project. Rather, EVOKE is best viewed one part of a larger effort to establish an “innovation infrastructure” focused on social and economic development in Africa.
Section 2:

International participation in EVOKE

Overview

International participation in EVOKE was high, although standards for assessing participation in Alternative Reality Games (ARGs) are unclear. A majority of players report changes in their understanding of global and local challenges, and of the role that social innovation can play in addressing such challenges. Players also report that they felt that they were part of an important network or community, and that they were inspired by the activities and solutions that emerged from EVOKE.

Participation levels

Worldwide, 19,386 people registered to play EVOKE. Key facts about these players’ levels of participation, collected in the web-traffic data, include:

- 6,618 players completed at least a single mission or quest
- 142 players completed all ten missions and quests
- 73 players completed some or all mission activities and quests and submitted Evokations

In addition, an unknown number of regular visitors read blogs, contributed comments, shared information about EVOKE and otherwise participated in the “life” of the site.

Active players’ activities and engagement

Levels of participation in EVOKE surprised the game developers (and the evaluators), and appear to be at least on a par with participation in other socially-focused ARGs. In terms of online viewers of development-related information, comparison with other development-
oriented websites is also instructive. In terms of audience, and in terms of page views per visitor and average time on site, EVOKE effectively filled an “information niche,” providing younger, non-professional people with access to information and with interactions revolving around social and economic development.

The numbers of players completing missions and quests or posting evidence suggest that EVOKE achieved a high level of engagement and participation among registered players. Approximately 19,343 people created profiles in EVOKE,\(^5\) with at least 6,618 of these people, or 34 percent, completing one or more quests or missions. Participants included residents of 150 different countries.

![Figure 1: Players completing missions, quests and evidence](image)

**Mission and quest completion among survey respondents**

Approximately 40 percent of survey respondents (41.6 percent) report completing between one and three missions and between one and three quests (38.4 percent). The second most common response was completion of all 10 missions and quests. As expected, many survey respondents were very active players across the duration of the game.

It should also be noted that 84 of the 516 survey respondents (16.6 percent) did not complete a single mission and 87 of the respondents did not complete a single quest. These data demonstrate that these players visited the game website at least in Week 10—when the survey announcement was posted—and that they were sufficiently motivated by their experiences with EVOKE to contribute to the survey. These data support the inference that

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\(^5\) There was some potential—unmeasured in the scope of this evaluation—for players to create multiple profiles. Reasons for doing so could include dissatisfaction with existing profiles and the intention to submit material that was inflammatory or likely to be banned, among other reasons. In terms of metrics, eliminating multiple profiles would decrease the total number of active and inactive players, but would increase the proportion completing activities or submitting evidence.
many visitors to EVOKE derived value and perhaps contributed value even though they did not participate as “agents” to any measurable extent.

<table>
<thead>
<tr>
<th>Missions completed (n=437)</th>
<th>Quests completed (n=438)</th>
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<tbody>
<tr>
<td>Zero</td>
<td>19.2%</td>
</tr>
<tr>
<td>1 to 3</td>
<td>41.6%</td>
</tr>
<tr>
<td>4 to 6</td>
<td>15.6%</td>
</tr>
<tr>
<td>7 to 9</td>
<td>3.2%</td>
</tr>
<tr>
<td>10</td>
<td>20.4%</td>
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</table>

*Table 1: Missions and quests completed, survey respondents*

Refer to the following section, *All visitors’ levels of engagement*, for additional discussion of the impact on visitors who did not complete one or more missions or quests.

**All visitors’ and repeat visitors’ levels of engagement**

In addition, visitors to the EVOKE site on average spent longer lengths of time on the EVOKE site than is the norm for development-related websites. In combination with survey data, these figures suggest that visitors not meeting the criteria for “active players” were also spending significant time engaging with development issues and exploring social innovation.

During the ten-week sequence of missions, running from March 3, 2010 to May 12, 2010, the website received 286,219 visits with 171,958 absolute unique visitors resulting in a total of 2,145,735 page visits. These data yield average number of page views per visit of 6.72. The average time that visitors spent on site was 09:00 minutes.

For purposes of comparison, visitors to [www.worldbank.org](http://www.worldbank.org) during the three months preceding October 2010 averaged 3.13 pages per visit, with an average time spent on the site of 3:36 minutes. Visitors to the microlending website [www.kiva.org](http://www.kiva.org), which has more traffic than the World Bank website, average about the same number of page views per visit, 3.25 over the preceding six months. Traffic data for [www.unesco.org](http://www.unesco.org) show both fewer visits, especially among U.S.-based Internet users, and a demographic biased slightly toward users over 65 years of age.

In terms of page views and time spent on site, visitors to urgentevoke.com demonstrated substantially higher levels of engagement than those visiting worldbank.org, kiva.org or unesco.org.

Web-traffic data show the following:

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• 286,219 visits to EVOKE took place during the run-time of the game.
• Approximately 100,000 people visited the urgentevoke.com more than once.
• Distributed among all 286,219 visits, average page views (6.72) and time-on-site (9 minutes) are substantially higher than for other well-known development-related sites.
• Of the 19,343 visitors who created profiles, approximately 35 percent completed one or more activity (mission or quest)
• We can confidently infer that among these active players and the ~80,000 others who visited urgentevoke.com more than once, actual time-on-site and average page views were substantially higher than the figures for all visitors.

Thus, in addition to 19,000 registered players, approximately 80,000 repeat visitors also participated in EVOKE by repeatedly visiting the site to read the graphic novel, read blog posts and linked web resources, and view photos and videos.

(This inference is further supported by the fact that 16.6 percent of the 518 survey respondents report that they completed neither a mission nor a quest, per the section, Completion rates of survey and interview respondents, suggesting that they spent time on urgentevoke.com reading information posted by others.)

EVOKE, then, has likely increased awareness of development activities, global problems, and innovative solutions among an audience of at least 100,000 active agents and repeat visitors.

Age of EVOKE players and visitors

The age demographic of EVOKE players and visitors in comparison to other development-focused sites suggests that increases of awareness and engagement achieved by EVOKE took place in a much younger age group than those served by other development-focused websites. EVOKE players, not unexpectedly, are largely under 30 years of age: Seventy-three percent of survey respondents are between the 18 and 30 years old.
Of the 100,000 repeat visitors, up to 34,000 worldwide are likely aged 18 to 24, which represents a proportion of under-24 users to all users that is approximately two times greater than that of any of the other development-focused website included in this comparison, and two times greater than the proportion of Internet users worldwide who fall into that age group.

More important, however, EVOKE visitors aged 18 to 24 are significantly over-represented in relation to the proportion of this age group among all Internet users. While the other sites included in this comparison are viewed by younger Internet users at rates proportional to the overall Internet-using population, EVOKE was visited by younger Internet users at approximately two times that rate.\footnote{Data for all websites used in this comparison are from www.alexa.com. As Alexa does not publish quantitative data of audience demographics, only bar charts, the chart shown in Figure 3 (next page) is an approximating representation of Alexa data for all sites included in this comparison.}
Viewed in combination, the age distribution of urgentevoke.com traffic and the high levels of engagement sparked by the game and website suggest that EVOKE and EVOKE-style “social ARGs” can, potentially, play a valuable role in increasing understanding of and participation in development and development-related issues. The “EVOKE demographic” is substantially younger than the visitor demographics of the World Bank, UNESCO and the Kiva microfinance site.

In the first season of EVOKE, approximately 100,000 visitors under the age of 24 engaged with development challenges and social-innovation-based solutions; in all likelihood, many of this group of 100,000 would not otherwise have encountered these challenges or considered participating in their solution.

EVOKE demonstrates that development-focused ARGs have high potential to expand development awareness and engagement among younger users.

**Access via mobile telephone**

Although urgentevoke.com supported access via mobile telephone, phone-based access was rare. EVOKE designers suggest that that user experience on mobile telephones was less than satisfactory.

Web-traffic data, following, show that mobile visits to the UrgentEVOKE website over the ten-week period were very low. Only 3,207 visits (0.01 percent) out of a total of 286,219 visits to the website were made from mobile phones.
Figure 4: Comparison of EVOKE visits by mobile phone to all visits

Given the failure of mobile-phone access in the current version, it will be tempting to eliminate support for this platform. However as mobile-broadband Internet and the “installed base” of lower-cost smartphones in targeted regions and countries increase, additional support for mobile versions of EVOKE will be valuable. Consideration should be given to design and development intending to reduce barriers to participation among users who do not own computers or have cost-free Internet access.

Inasmuch as individual EVOKE users in sub-Saharan Africa report that access and expense were barriers to their participation in EVOKE, and inasmuch as mobile telephony and the use of “smart phones” continues to expand in that region, future versions of EVOKE should continue to strive for inclusion of players accessing EVOKE by mobile telephone.

Since the initial design of EVOKE, commercial developers of blogging and other social-networking platforms have increasingly provided support for mobile-phone-to-blog and email-to-blog features [e.g., www.posterous.com]. Future versions of EVOKE or of development-focused ARGs might be better positioned to take advantage of these emerging tools.
Section 3:
EVOKE’s Impact in Africa

Overview
Proportional participation rates by players from South Africa were higher than South Africa’s share of the global population. Participation by South African players was also proportionally higher than participation by players from other countries in the Global South.

Survey responses from players in sub-Saharan Africa suggest EVOKE has engaged them in social-networking activities, increased their awareness of global issues and of their connection to local issues, led them to change their ideas and encouraged them to think boldly about their futures.

Web-traffic data show that 1,010 people from South Africa (or 5.2 percent of the total number of registered players) registered to play EVOKE, an over-representation in relation to South Africa’s population. South African players spent more time on the EVOKE website and viewed more pages than did all players in aggregate. The level of mission activities and quests completed and blogs, photos and videos inputted by players in South Africa was also higher than the international players’ mean. These findings provide strong evidence that the game design and the accompanying outreach and support mechanisms (including arrangements with universities to have students play EVOKE as part of their coursework) were effective in encouraging and helping to sustain participation and engagement of players in South Africa.

Based on these and other evidence, we can conclude that EVOKE players from South Africa demonstrated higher levels of engagement than did all players in aggregate.
Participation in South Africa

Players from South Africa on average spent more time on urgencevoke.com, completed more missions and quests, and posted more evidence than the average for all players. Factors influencing these outcomes likely included: the focused marketing campaign directed toward South African universities; strong efforts by World Bank personnel and associates to recruit South African teachers and their classes; connections made by teachers between EVOKE and class curricula and activities; and many elements of the game design. Such game-design elements range from contemporary visual design, gaming components and social networking to pervasive presentation of issues, topics and activities that were intended to be relevant to players in African countries. Overall, survey and web-analytic data demonstrate that EVOKE elicited and sustained higher levels of engagement and activity among its South African players than were achieved by all players.

Although the proposition isn’t tested in this evaluation, it’s reasonable to assume South Africans’ high levels of participation helped sustain other users and the game as a whole and benefitted the “EVOKE brand.” The South Africans’ visible contributions increased the perception that the game had the potential to be an effective development tool and the sincerity of the sponsors’ efforts to make it one.

Web-traffic data show that in terms of the numbers of weekly visits to urgencevoke.com, South Africans were substantially overrepresented relative to their proportion of the world’s population.\(^8\)

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Visits From South Africa</th>
<th>Total Visits</th>
<th>Visits from South Africa as % of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 3-March 10</td>
<td>3,007</td>
<td>45,759</td>
<td>6.6%</td>
</tr>
<tr>
<td>March 11-March 17</td>
<td>1,165</td>
<td>24,557</td>
<td>4.7%</td>
</tr>
<tr>
<td>March 18-March 24</td>
<td>949</td>
<td>50,110</td>
<td>1.9%</td>
</tr>
<tr>
<td>March 25-March 31</td>
<td>722</td>
<td>34,323</td>
<td>2.1%</td>
</tr>
<tr>
<td>April 1-April 7</td>
<td>569</td>
<td>29,191</td>
<td>1.9%</td>
</tr>
<tr>
<td>April 8-April 14</td>
<td>596</td>
<td>26,793</td>
<td>2.2%</td>
</tr>
<tr>
<td>April 15-April 21</td>
<td>608</td>
<td>22,781</td>
<td>2.7%</td>
</tr>
<tr>
<td>April 22-April 28</td>
<td>587</td>
<td>20,423</td>
<td>2.9%</td>
</tr>
<tr>
<td>April 29-May 5</td>
<td>625</td>
<td>16,842</td>
<td>3.7%</td>
</tr>
<tr>
<td>May 6-May 12</td>
<td>537</td>
<td>15,440</td>
<td>3.5%</td>
</tr>
<tr>
<td>Total</td>
<td>9,365</td>
<td>286,219</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

*Table 2: Percent of visits from South Africa*

Viewed in terms of levels of Internet penetration—South African Internet users make up approximately 0.2 percent of total Internet users—visits to urgencevoke.com by South Africans remain substantially over-represented.

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8 The entire ~49,100,000 population of South Africa is approximately 0.7 percent of the world’s population.
(Per Table 2, South African visitors to EVOKE were most highly represented in Week 1. Following Week 1, visits from all countries dropped substantially, as is normal for ARGs, before increasing again near the end of the game. However, visits from South Africans dropped still more steeply than did visits overall, bottoming out at 1.9 percent of total visitors in Weeks 3 and 5, before climbing again to 3.7 percent in Week 9. The numbers of visits from South Africa, then, follow the same pattern as all visits in aggregate but with a more extreme dynamic, first with greater decline and then with greater growth.)

**Levels of engagement**

Visitors from South Africa on average spent more time on urgentevoke.com and viewed more pages of EVOKE than did all visitors.

Time-on-site and average page views per visitor were generally higher for South African visitors than for all visitors. Week 8 shows the greatest differences, with South Africans spending 16:08 minutes on the EVOKE site compared to 8:08 minutes for all visitors and viewing 10.76 pages per visit compared to 6.71 for all visitors—increases of 98.8 percent and 37.7 percent, respectively.

<table>
<thead>
<tr>
<th>Week</th>
<th>Average Time on Site for South African Visits (in minutes)</th>
<th>Average Time on Site for all Visits (in minutes)</th>
<th>Average Page Views for South African Visits</th>
<th>Average Page Views for all Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>10:47</td>
<td>10:45</td>
<td>8.06</td>
<td>9.40</td>
</tr>
<tr>
<td>Week 2</td>
<td>13:25</td>
<td>10:16</td>
<td>11.46</td>
<td>9.05</td>
</tr>
<tr>
<td>Week 3</td>
<td>10:20</td>
<td>08:34</td>
<td>8.64</td>
<td>7.48</td>
</tr>
<tr>
<td>Week 4</td>
<td>09:14</td>
<td>08:16</td>
<td>7.03</td>
<td>7.04</td>
</tr>
<tr>
<td>Week 5</td>
<td>11:25</td>
<td>08:00</td>
<td>8.38</td>
<td>6.40</td>
</tr>
<tr>
<td>Week 6</td>
<td>08:53</td>
<td>08:00</td>
<td>5.71</td>
<td>5.80</td>
</tr>
<tr>
<td>Week 7</td>
<td>08:47</td>
<td>06:36</td>
<td>5.46</td>
<td>5.83</td>
</tr>
<tr>
<td>Week 8</td>
<td>16:08</td>
<td>08:18</td>
<td>10.76</td>
<td>6.71</td>
</tr>
<tr>
<td>Week 9</td>
<td>08:15</td>
<td>08:32</td>
<td>5.67</td>
<td>7.25</td>
</tr>
</tbody>
</table>

*Table 3: Time on site and page views, all visitors and South African visitors (web traffic)*

These data suggest that in addition to being over-represented among EVOKE visitors, South African visitors were more engaged with game activities than were other EVOKE visitors.

(Some amount of additional time-on-site could be ascribed to poor connectivity [longer page-load times], poor literacy or English skills [longer times spent reading] or more difficulty interpreting the EVOKE interface. However, per Figure 7, which follows, South Africans spent only slightly longer time per page, suggesting that for this particular audience the EVOKE site was interpretable and relatively fast-loading.)
Supporting the findings based on Table 3, South African visitors averaged more minutes per page than all visitors averaged, but the difference is slight.

**Quests and missions completed**

Players from South Africa averaged greater numbers of completed quests and missions than did all players. In light of their high levels of representation within the game and high levels of engagement or participation, South African players can be said to have contributed significantly to the overall success of EVOKE as an ARG. Levels of participation by players in South Africa—in terms of the number of mission activities and quests completed—were higher than the international mean in almost all categories, as shown in Figure 6: Mission and quest completion, South African and all players.
As the table demonstrates, South African players responding to the survey averaged almost 40 percent more completed missions than the global norm (.51 missions to .32 missions).

In terms of posting “evidence”—blogs, photos or videos—South African players were again more active than the average of all users, as shown in the graph below:
The marketing campaign focused on South Africa and efforts by World Bank personnel and associates to make alliances with universities and high schools appear to have been successful in increasing participation by South African students.

This comparison also suggests different levels of technology access among South African players and other players. South African players posted approximately 170 percent more photos on average than did all players. And while South Africans also posted more videos, in this instance the increase is only 22 percent above the mean. Likely factors include access to technology—most mobile phones now support photos, while access to digital-format video recorders, as well as Internet bandwidth available for uploads, is much less common for South Africans.

The disproportionately high number of South African registered players, 5.2 percent of all registered players, and the South African players’ high levels of participation in EVOKE, suggest that players from South Africa made a substantial contribution to the success of EVOKE.²⁹

**Participation by “active players” from South Africa**

Comparisons of South African players to norms for all players are still more striking when only active players—players who have completed one or more missions or quests—are considered. Active South African players averaged almost twice as many missions and quests as was the norm for all active players—suggesting that the game design successfully presented development and social-innovation information in an engaging and motivating manner for South African youth and others.

In this section, comparisons are described for active players in two groups: all active players and active players within a relevant category. Players are considered “active,” if they completed one quest or mission of any kind. Thus, players who complete one Learn mission, or one quest, are counted as part of the total number of active players when analyzing the percentages of players who complete Act and Imagine missions (i.e., n=all active players).

The alternate consideration only of category-specific active players (i.e., n=all players who complete a specific Act mission) possibly gives a more true comparison.

When all active players are considered, South African players completed objectives at much higher rates than the overall mean: Learn objectives—104 percent above the mean; Act objectives—56 percent above the mean; Imagine objectives—101.6 percent above the mean.

In addition, South African players on average posted three times as many photos as did players overall (a 200 percent increase).

When active players within a single category are compared, South African players continue to “hit above their weight” in terms of participation.

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²⁹ Although again the proposition isn’t tested in this evaluation, it’s probable that the high levels of participation by South Africans helped sustain other users and the game as a whole and benefitted the “EVOKE brand.” The South Africans visible contributions increased the perception that the game had the potential to be an effective development tool and the sincerity of the sponsors’ efforts to make it one.
As shown in the preceding table, when only players active in a given category are compared, South African levels of participation are between 61 percent and 92 percent higher than the international mean. Comparison based on postings of evidence are similar, although the very large difference in terms of the numbers of photos posted diminishes significantly (to a 76-percent higher rate among South Africans), while the mean number of blog posts by South Africans who are moderately active increases to 109 percent higher than the international mean.

Under any circumstances, higher levels of participation by South African players provide strong evidence that the game design, and EVOKE’s accompanying outreach and support mechanisms, were effective in encouraging and helping to sustain participation by players in South Africa.

**Impact of EVOKE on sub-Saharan African players**

Players from sub-Saharan Africa as a whole in surveys and interviews suggest that EVOKE led them to engage in social networking, consider new ideas and expand their understanding of what might be possible for them to achieve.

Survey responses from sub-Saharan African players, representing 12 percent of all survey respondents, are strongly favorable and suggest that for African players who were able to access EVOKE, the game was an empowering experience. As mentioned previously, survey data are skewed by heavy participation from students at one school, Dioscesan College in South Africa. In addition, reported self-perceptions, especially in relation to change, are unreliable.

Survey results form part of the basis for findings presented in this section; while those results are unreliable, they are strongly supported by interviews.

**Changed thinking**

Eighty-three (82.7) percent of survey respondents from sub-Saharan African countries report that they changed their thinking about an issue as a result of their participation in EVOKE.

Although the nature of these changes is unknown, in light of the thematic focus of EVOKE activities—addressing issues such as food security, women’s rights and indigenous knowledge—the changes players experienced were almost certainly focused on issues related to social and economic development in their communities and internationally.
Among all survey respondents, in comparison, 63 percent reported changing their thinking about an issue as a result of their participation in EVOKE.

One South African university student who played EVOKE as part of her coursework said in an interview:

I live in small university town so by playing EVOKE I got to look beyond the bubble I live in. You hear about stories in the news and read about them in the paper but now I actually got a chance to give my opinions, to see the bigger picture and to see things beyond the small town I live in. It opened my eyes to a lot of things, let me put it that way.

**Use of social-networking skills**

Twenty-first century skills are multifaceted and complex; EVOKE engaged players—and African players—in activities that support development of learning and life skills, specifically in relation to local and global challenges.¹⁰

Players from sub-Saharan Africa reported that playing EVOKE had a “strong effect” in terms of engaging them in a “basket” of online social-networking activities. Such activities include:

<table>
<thead>
<tr>
<th>Activity</th>
<th>African respondents</th>
<th>All respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friended someone</td>
<td>41.5%</td>
<td>53.0%</td>
</tr>
<tr>
<td>Was friended by someone</td>
<td>47.4%</td>
<td>65.6%</td>
</tr>
<tr>
<td>Visited another agent’s EVOKE page</td>
<td>92%</td>
<td>89%</td>
</tr>
<tr>
<td>Gave feedback on evidence</td>
<td>47.7%</td>
<td>55.7%</td>
</tr>
<tr>
<td>Received feedback</td>
<td>54.5%</td>
<td>64.3%</td>
</tr>
<tr>
<td>Took part in an intensive discussion</td>
<td>34.1%</td>
<td>31.8%</td>
</tr>
<tr>
<td>Blogged on EVOKE</td>
<td>63.6%</td>
<td>76.6%</td>
</tr>
<tr>
<td>Communicated about Evokations</td>
<td>36.4%</td>
<td>31.7%</td>
</tr>
</tbody>
</table>

**Table 4: Social-networking activities, African and all players (Survey)**

African survey respondents participated in social networking activities on EVOKE at rates slightly lower than those reported by all respondents. Various potential factors, ranging from lack of experience with Web 2.0 activities to limited English skills to challenges in accessing computers and the Internet, can influence this outcome.

An adult player with a winning EVOKATION described, in an interview, the role of EVOKE in reducing barriers related to self-confidence:

Evoke gave a safe place to put the idea out there and when no-one laughed but actually had good things to say it gave me the confidence to approach others...so I

¹⁰ For more detailed information, refer to the Partnership for 21st-Century Skills ([www.p21.org](http://www.p21.org)).
can only imagine that there are many students out there with similar ideas, but without the confidence to pursue them.

It is not clear that EVOKE engaged African players or all players in Web 2.0-related activities for the first time. Most African survey respondents, for example, reported that EVOKE had “no effect” (29.4 percent) or “slight effect” (26.4 percent) in terms of helping them learn to play online games—suggesting that they had experience and expertise that had been built prior to playing EVOKE.

Under any circumstances, however, EVOKE players from sub-Saharan African reported engaging in Web 2.0-style activities at somewhat lower rates than did all participants.

**Thinking about local and global challenges**

In addition to building 21st-century skills in general, EVOKE engaged players in consideration of development-related local and global challenges. A majority of African survey respondents reported that EVOKE had a “strong” or “moderate” effect in relation to issues related to social and economic development at global and local levels.

The online survey assesses several specific areas of awareness, for which the combined rates of strong and moderate effects range from 63.8 percent to 79.9 percent, with strong effects predominant in all instances.

<table>
<thead>
<tr>
<th>Area</th>
<th>Strong effect</th>
<th>Moderate effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop new ideas about global challenges</td>
<td>45.9%</td>
<td>29.7%</td>
</tr>
<tr>
<td>Develop new ideas about local challenges</td>
<td>48.5%</td>
<td>28.5%</td>
</tr>
<tr>
<td>Learn potential solutions to global challenges</td>
<td>54.2%</td>
<td>25.7%</td>
</tr>
<tr>
<td>Learn about people in other countries</td>
<td>41.6%</td>
<td>30.5%</td>
</tr>
<tr>
<td>Learn about sustainability</td>
<td>47.2%</td>
<td>16.6%</td>
</tr>
</tbody>
</table>

*Table 5: Effect on awareness of local and global challenges among African players (survey)*

African players increased their self-assessed capacity to act positively in relation to global and local issues as much as or more than all players.

As discussed in the section, *All visitors’ levels of engagement*, EVOKE engages visitors in more sustained address of development-related issues, as demonstrated by average page-views and average time-on-site by all visitors. Survey results suggest that these comparatively high levels of engagement translate into learning about global and local problems and about potential solutions to problems.

**Self-actualization, organizational understanding and empowerment**

African players provide very high self-assessments of the positive impact of EVOKE on their self-confidence, their self-images in relation to agency and future action, and their visions of the future. Moreover, there is evidence that in this area the impact of EVOKE on sub-Saharan African players was significantly stronger than the norm for all players. This
finding, then, suggests that EVOKE achieved to a measurable extent its primary objective of contributing to the development of 21st-century skills in relation to social innovation.\textsuperscript{11}

Responses in this section are very provocative, suggesting that for African respondents participation in EVOKE facilitated changes in self-image centering an increased sense of “social agency” and expanded possibilities for the future. Such changes, benefitting the players themselves and—at least hypothetically—the world at large, indicating that players develop more potent and more exciting visions of future action as a result of the their participation in EVOKE.

<table>
<thead>
<tr>
<th>Build self confidence</th>
<th>Strong effect</th>
<th>Moderate effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build self confidence</td>
<td>37.1%</td>
<td>17.1%</td>
</tr>
<tr>
<td>Imagine the design of a small business or NGO</td>
<td>48.6%</td>
<td>21.6%</td>
</tr>
<tr>
<td>Think big thoughts about the future</td>
<td>60.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Picture myself starting something new</td>
<td>60.0%</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

Table 6: Effect on sense of empowerment, African respondents (survey)

Self-assessed impact in these areas is stronger for African respondents than for all respondents: “Strong effect” survey responses from all players lagged those of African players. Null-hypothesis comparisons suggest that in two categories—building self-confidence and imagining the design of something new—African players were significantly more likely to report that EVOKE had a strong positive impact.\textsuperscript{12} Significance in this instance suggests that results shown in surveys—that African respondents were more likely to report strong effects in relation to self-confidence and designing businesses or NGOs—can be confidently considered as extending to the population of all of the 1,010 African EVOKE players.

The table that follows shows that the interval between African and all respondents who felt that playing EVOKE built their self-confidence is significant—that the greater number of African respondents who felt that playing EVOKE had a strong effect on their self-confidence is not ascribable to chance.

<table>
<thead>
<tr>
<th>Build self-confidence (strong effect)</th>
<th>All respondents</th>
<th>African respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base size</td>
<td>383</td>
<td>35</td>
</tr>
<tr>
<td>Proportion</td>
<td>70</td>
<td>13</td>
</tr>
<tr>
<td>Percentage</td>
<td>18.28%</td>
<td>37.14%</td>
</tr>
</tbody>
</table>

\textsuperscript{11} While self-confidence is not explicitly mentioned as a 21st-century skill (see www.p21.org for a framework on 21st-century skills), self-confidence is linked to many skills in the “life and career” category, such as adaptiveness to change, flexibility, resilience, and to skills listed under “initiative and self-direction.”

\textsuperscript{12} Tests are “Z-tests for two proportions” run using statistical tools from Dimension Research. These (and most) tests of the significance of proportional difference are “null hypothesis tests”: the difference in responses from one group (all respondents, in this instance) and a sub-group (sub-Saharan African respondents) is tested to determine whether the probability that such a difference could result from chance. Significant results have occurred when the difference is highly unlikely to arise by chance.

The confidence level used in these tests is 1 percent. To be significant, differences in the responses must have a 1 percent or less probability of resulting from chance.
The next table assesses the difference between African respondents’ and all respondents’ self-assessed abilities to imagine the design of a business or NGO.

<table>
<thead>
<tr>
<th>Imagine design of business or NGO</th>
<th>All respondents</th>
<th>African respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>(strong effect)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base size</td>
<td>383</td>
<td>37</td>
</tr>
<tr>
<td>Proportion</td>
<td>84</td>
<td>18</td>
</tr>
<tr>
<td>Percentage</td>
<td>21.93%</td>
<td>48.65%</td>
</tr>
<tr>
<td>Z value</td>
<td>3.419</td>
<td>100%</td>
</tr>
<tr>
<td>1-Tail confidence level</td>
<td>(significant)</td>
<td>(significant)</td>
</tr>
</tbody>
</table>

Table 8: Interval confidence test (z-test), imagine design of business or NGO

This test, again, suggests that in relation to the development of the ability to imagine the design of a business or NGO, the difference between African respondents’ self-assessments of the impact of EVOKE and that of all respondents is significant.

These responses combine to suggest that playing EVOKE helped African players increase their feelings of agency and potential in general ways—related to self-confidence—and with regards to specific activities related to social innovation—the imagining of an NGO or enterprise. One interviewee described the impact of EVOKE as a window onto realized potential, and how such potential is realized, in Africa:

One agent created a good story about energy efficiency but the game was not just about reading and commenting on the story but about learning and seeing things differently. I then also learned that in South Africa people are using solar energy to generate electricity. When I see those things happening in South Africa it is just amazing.

—Evoke player, South Africa

The above comment highlights the role that exchanges of information played in prompting new understanding and new thinking, and specifically the import of such new perceptions in relation to events in Africa: Players accustomed to thinking that innovation never happens in African countries were able to see African successes and internalize organizational and transactional models appropriate for Africa.

In relation to thinking “big thoughts about the future” and picturing oneself “starting something new,” African respondents report much stronger impact than is the norm for all respondents, but these results cannot be considered significant.

<table>
<thead>
<tr>
<th>See myself starting something new</th>
<th>All respondents</th>
<th>African respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>(strong effect)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base size</td>
<td>382</td>
<td>35</td>
</tr>
<tr>
<td>Proportion</td>
<td>164</td>
<td>21</td>
</tr>
<tr>
<td>Percentage</td>
<td>42.93%</td>
<td>60.0%</td>
</tr>
<tr>
<td>Z value</td>
<td>1.768</td>
<td></td>
</tr>
<tr>
<td>1-Tail confidence level</td>
<td></td>
<td>(significant)</td>
</tr>
</tbody>
</table>
African respondents’ abilities to “think big thoughts about the future” are, similarly, impressive; however the difference between African and all respondents’ assessments cannot be confidently considered significant.

<table>
<thead>
<tr>
<th>Think big thoughts about the future (strong effect)</th>
<th>All respondents</th>
<th>African respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base size</td>
<td>388</td>
<td>35</td>
</tr>
<tr>
<td>Proportion</td>
<td>209</td>
<td>21</td>
</tr>
<tr>
<td>Percentage</td>
<td>53.87%</td>
<td>60.0%</td>
</tr>
<tr>
<td>Z value</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>1-Tail confidence level</td>
<td>(Not significant)</td>
<td></td>
</tr>
</tbody>
</table>

Table 9: Interval confidence test (z-test), see self starting something new

Although they don’t achieve significance at a 1-percent level, these results are in line with those previously cited: Playing EVOKE appears to have disproportionately helped African survey respondents build images of a future in which they play positive, active and innovative roles.

Overall, African survey respondents in self-assessments indicate that EVOKE was very effective in helping to develop emotional and conceptual capacities related to social innovation, including subsets of 21st-century skills. Of the four categories examined, in two—building self-confidence and imagining the design of business or NGO—African responses suggest that the impact on African players was much stronger than on all players.

It was important, in the sense that it made me think more proactively about what’s happening around me. It made me realize that I can’t just be a spectator and I have a role to play in whatever way I can...it made me realize my role in the different problem areas in the world. It definitely did change me because now rather than just being aware of what is happening around me I’ve actually seen that I also have a responsibility to do something....no matter how small it might start out.

—EVOKE player, South Africa

**Limitations on EVOKE impact**

As mentioned in the section, *Summary of the evaluation methodology: Methodological limitations*, determining impact of various barriers that prospective African players might have faced in attempting to participate in EVOKE is outside the scope of this evaluation. However, specific limitations can be inferred and, in the case of Internet access, have been reported.

**Internet access as a barrier at Makerere University**

While over one thousand players from African countries were able to participate in EVOKE to varying degrees, poor quality of Internet connectivity kept at least one group of Ugandan university students from participating.
This section is based on a first-person account shared by Ronald Kasendwa at the EVOKE Summit, September 28 – 30, 2010. Mr. Kasendwa was among the players whose Evokations were selected to be honored at the conference. He also attempted to champion EVOKE play at Makerere University in Kampala, Uganda. Mr. Kasendwa is currently studying for his masters degree in computer science.

In the first weeks of EVOKE play, Mr. Kasendwa organized a workshop for prospective players among university students. He planned in this workshop to review the urgentevoke.com website, walk through various aspects of the game, build enthusiasm and alliances, and generally help other students get started playing the game.

At the workshop, however, Internet connectivity failed. The group of students waited for several hours, and some returned as long as five hours later, but connectivity was not restored. The workshop was not resumed. To the best of Mr. Kasendwa’s knowledge, none of the other workshop participants became EVOKE players.

The positive findings reported in this evaluation notwithstanding, readers should bear in mind that for most residents of countries in Africa—including many university students—limited connectivity makes participation in EVOKE impossible or impractical.

**Inferred limitations on EVOKE impact**

In general, participation in EVOKE is enhanced for users who have effective Internet access and relatively high levels of comfort and skills in relation to Web 2.0 tools and interactions. These characteristics are more likely to be met by users at universities; these users, on this account and on others, are likely to be members of privileged, if not elite, groups within their countries.

To some extent, however, this limitation must be considered part of the “topography” of any use of the web to engage youth on a global level and on country-specific and regional levels in an ICT4D initiative. For these reasons, EVOKE and related efforts—while they can be evaluated in relation to specific levels of representation and local types of impact—should be seen as one means of supporting development among many.

Several interview respondents commented on the impact of limited connectivity on wider participation.

> I talked about the game to people I know outside of the university here but the Internet connection is not good enough to get a lot of people involved. Not many people use social networking and it was a conceptual leap for them to understand the game.

—EVOKE player, Uganda

Other factors are also likely to have limited participation to players in elite or privilege situations. Among these is the need to pay for Internet access in public locations:

> Yes, sure Internet access was a problem as there was changing Internet speed. If accessing from a university it was ok but if you were accessing from an Internet café you had to pay and it is hard as the costs are a bit high. And to post your evidence was quite a problem.

—EVOKE player, South Africa
In addition to cost and access to technology and the Internet, other potential limiting factors include: limited English language skills; limited ICT skills; lack of familiarity with social networking, gaming, and contemporary web interfaces and designs.

While the degrees to which these and other potential limiters affected EVOKE participation cannot be gauged in the current evaluation, their influence can confidently be inferred.
Section 4:
Analysis of EVOKE in context
and Recommendations

EVOKE in a context of development

The chief recommendation of this report is for all interested parties to consider EVOKE—and, more generally, gaming employed as a development tool—in relation to the complete array of donor-driven activities focused on social and economic development. Thus, EVOKE should be seen as occupying a specific and as of this moment unique niche in development interventions: EVOKE created a global social network of players focusing on development challenges and on innovative solutions to those challenges within an environment that intertwined an imagined future with current reality.

EVOKE should thus not be viewed, or at least not viewed exclusively, from within the perspective of traditional development projects. The social network that emerged during the game crossed international boundaries. Players gained skills and capacities related to real-world activities in social contexts—21st-century skills, to a large extent—that imply capacity and motivation for future actions rather than immediate and measurable impact. Given these factors, then, EVOKE and future iterations of development-focused ARGs should be considered as tools for ongoing education, advocacy, outreach and public engagement in relation to development challenges and potential solutions.

In key areas, this evaluation has found that EVOKE generates impact that eludes more familiar interventions:

- EVOKE achieves high levels of user engagement and activity relative to other development-focused websites.
• EVOKE helps African players develop belief in their own agency and in their abilities to organize for social innovation and entrepreneurship.

• EVOKE supports building 21st-century learning and life skills.

However, as mentioned, the impact of EVOKE is limited to a very small subset of African participants. These participants, in particular, tend to be young (79.3 percent are 30 years-old or younger) with a large proportion (52.4 percent) of university students.

This limitation to EVOKE’s impact positions the project as a counterpoint to prevalent practices in donor-driven projects. Such projects cluster around two poles: At the first of these poles are regional and international projects that aim to improve specific conditions in many poor countries, such as projects run by the Global Fund,13 and country-specific projects intended by bi-lateral and multi-lateral organizations to achieve objectives such as those outlined in the Millennium Development Goals (MDGs). At the other pole, donor-driven efforts generate pilot-scale projects, such as Distributed Basic Education 2 (USAID) or the ADB-funded support for Minimum Service Standards, both in Indonesia—projects that address less than 0.5 percent of the country’s more than 200,000 schools. Such projects are small, but have some chance of being adopted, replicated and scaled by national governments, or of contributing to knowledge of better practices and lessons learned.

EVOKE, on the other hand, conformed to neither the broad based nor the pilot-scale approaches described above; instead EVOKE provided a unique “basket” of opportunities that was explored by more than 19,000 registered players, including more than 6,000 active players. These opportunities centered around participation in a network-enabled community that engaged in collective imagining and action to address real development issues. Of critical importance, EVOKE connected players from African countries, from developing countries in other regions, and from developed countries.

I got to see things from a different point of view, from a different perspective. There were certain missions where you got first hand information from people in other countries, for example, in the women’s mission you got to hear stories about how women had been treated in their societies and the actions people are taking to alleviate the situation they are in.

—EVOKE player, South Africa

Seen in the contexts of its achievements and its limitations, then, EVOKE and subsequent ARGs for development are best understood as important complements to traditional development initiatives. Key potential contributions of EVOKE and ARGs include:

• Building capacity for and interest in development and social innovation
• Connecting people in development-focused social networks
• Enabling people to address development-related challenges

Current analysis and future iterations of EVOKE should be informed by awareness of these three main potential outcomes.

13 The Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria
**Blending reality and fiction to increase impact**

One of the more unique and effective aspects of EVOKE (and one of the elements farthest outside the scope of this evaluation) was the game’s interweaving of reality and fiction to motivate players and reduce barriers to action.

EVOKE was set in the year 2020, the fictional EVOKE network is headed by Alchemy, an anonymous and fictional character who interacts via voice-memo and written messages with the agents of the network, which includes both the fictional team of agents in the graphic novel and the real-world EVOKE players. The graphic novel’s team responds to the mission assignments and serves as the main characters in the novel’s narrative. (As with many graphic novels—*The Dark Knight*, for example, the EVOKE storyline featured compressed and intensified emotional reactions and interactions; EVOKE, however, also featured elements of semi-fictional reality-television programming [e.g., *Survivor* and *Lost!*].)

One effect of EVOKE’s fiction/reality intermarriage was to blur the boundary between current real-world development activities and the fictional mission assignments. As an example, Mission 4: Water Crisis ([http://www.urgentevoke.com/page/water-crisis](http://www.urgentevoke.com/page/water-crisis)) informs players that one person out of six, today, lacks access to safe drinking water and sanitation; the mission involves learning about creative solutions to the water crisis, acting to form an alliance with a “water visionary,” and imagining EVOKE’s participation in “Happy World Water Day 2020.” These three missions shift players’ activities from a starting point in contemporary reality to an imagined future based on that reality.

Crucially, players’ ideas and opinions were within the game environment frequently re-anchored to the realities of poverty by their research and their interactions:

> I liked the fact that it was open to the world. One of my favorite exchanges was one student in America was prioritizing putting water first and another African player said if you don’t have your health you can’t carry water. So that was a good example of how those sorts of exchanges mean a lot.

—Game runner

That re-anchoring process notwithstanding, EVOKE’s blurring of fiction and reality, or more precisely the creation of an “imagination-infused reality,” ensured that constraints on the players’ ideas were negligible. The EVOKE social network encouraged all players to participate:

> … [W]hen I submitted my own evidence there were many comments about how people in our communities think they cannot make it. Then many other players came and said you can believe in yourself. EVOKE made people tackle what they thought was impossible. Players now believe that can do it, if others believe it is possible you also begin to think it is possible.

—EVOKE player, South Africa

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14 These two programs each trade on their relationships to real life, however they use different techniques. *Survivor* reproduces the narrative circumstance of dystopian fiction (e.g., *Lord of the Flies*) using non-actors in unplotted situations; *Lost!* uses videographic and performance techniques that mimic documentaries to tell a multi-faceted serial story. The EVOKE graphic novel shares its central premise with both programs: a small group of diverse characters operating in extreme circumstances.
In practice, EVOKE’s fictional/imaginative elements freed younger or less experienced players from the “burden” of feasibility stemming policies and protocols, donor agencies, national governments and other sources—and from the sheer difficulty of success.

**EVOKE as an engine for development-focused interaction**

EVOKE essentially brought about the emergence of a broad international social network, and provided that network with opportunities for focused consideration of key real-world and fictional issues. A player from South Africa summed up his experience:

> It was crucially important as a young person and as a person who wants to learn and grow. It is not only about doing research but also interacting with other people and interacting with professionals. Creating a network and interacting with others. So how can you remain as you are after interacting with others?

As mentioned in *Section 1: Overview of EVOKE: Conceptual limitations*, many of the most important aspects of EVOKE’s impact fall outside the parameters of this assessment’s design. The evaluation would be remiss, however, if judicious assessment of these aspects were not included. These conclusions result from observation and inference, with only limited support from the data collected inasmuch as these data were intended to support other analyses. As a development-focused ARG, EVOKE:

- sparked the emergence of an international social network focused on development-related issues
- Increased understanding of such issues and of potential solutions among members of that network

In addition to its focus on development, the EVOKE network was distinctive in the diversity of its members: players included many students, as mentioned, but these students interacted with development professionals, personnel in different local NGOs, academics, and individuals-at-large, including an unknown proportion of entrepreneurs and potential entrepreneurs. Viewed on a different axis, the EVOKE network connected players from developed and developing countries, at times intensively.

> Sense of community definitely, you got to interact with people from all over the world and you’re reading their blogs, making comments and they’re responding to you...it was a two way communication. You see things in a completely different light, you see that there are ways you can help people and they can help you. This is definitely something I took away from the game.

—EVOKE player, South Africa

The diversity and extensiveness of the EVOKE social network combined with the game’s education-focused activities to help participants’ build understanding of poverty and development.

**Blending fiction and reality to generate “moral suasion” and real action**

The intertwining of fiction and the real world—with social, economic and environmental crises as a series of bridges between these two spheres—generated a kind “moral suasion” on EVOKE players in both developed and developing countries:
It was important, in the sense that it made me think more proactively about what’s happening around me. It made me realize that I can’t just be a spectator and I have a role to play in whatever way I can...it made me realize my role in the different problem areas in the world. It definitely did change me because now rather than just being aware of what is happening around me I’ve actually seen that I also have a responsibility to do something....no matter how small it might start out.

—EVOKE player, South Africa

While awareness of the real-world consequences of poverty and inequality, on its own, can obviously motivate action, the EVOKE social network and the imaginative capacities nurtured by the game environment augment such awareness with specific detail and moral weight, increasing players’ motivations to engage.

Pathways to real-world action: Evokations

EVOKE as implemented offered players a pathway to continued activity—creation and submission of an Evokation. The Evokation process also served as a goal and endpoint for EVOKE. Seventy-three Evokations were submitted, representing slightly over 1 percent (~1.1 percent) of active players. Thirty-six proposals were selected to advance to the next stage. Based on review by the evaluators, the ideas presented in the Evokations were generally appropriate and well-informed, and in some cases innovative.

A total of 36 winners were declared. The winners received multiple awards:

- 10 Evokation winners were given seed funding of US $1,000
- 22 Evokation winners were provided with post-game mentors
- 15 Evokation winners were invited to the EVOKE summit in September
- 36 Evokation winners were invited to participate in the EVOKE Global Giving Challenge in August 2010

Three of the winning Evokations were from South Africa. Two winning Evokations, “Food Security in the informal settlement of Monwabisi Park, South Africa” and “Safety/fire issues in poor areas in Indlovu, South Africa” originated in the same private high school, Bishops (or Diocesan) College in Cape Town. These players participated in EVOKE for its entire ten-week duration as part of a weekly extracurricular course. These students have their own laptops and their teacher helped them engage with the game, provided advice on their Evokations, and facilitated field trips for them to go into the communities where their Evokations were set.

The third winning Evokation from South Africa, “A platform for entrepreneurs in Matabeleland, Zimbabwe, and Limpopo, South Africa,” was created by a computer programmer, who came across EVOICE by chance and only started to play the game two weeks before its conclusion. Over this two-week period he spent an hour a day playing the game, during which time he completed one activity for each of the ten missions, along with all of the quests. In interviews, this player stated that he had invented the core concept of his Evokation a couple of years ago but that the game’s missions played a major part in moving that idea from a dream to something concrete. He added that:
The missions may not all have had something in my Evokation I can point to and say that was inspired from mission X, but they did build a mindset and raise issues which will stick with me as I develop the project. For example, there wasn't anything in the Evokation about empowering women, yet I will be targeting women as entrepreneurs.

—Evokation winner, South Africa

He also said that while he was only participating for a short period, his postings attracted comments by some players, and that these helped him. Further, EVOKE gave him the confidence to pursue his idea in earnest, talking to an ex-colleague to set up a meeting with a magazine for entrepreneurs, taking a leadership course, and setting up meetings with government officials.

Evoke gave a safe place to put the idea out there and when no-one laughed but actually had good things to say it gave me the confidence to approach others. And I'm not a shy guy, I am 30 year old professional used to dealing with senior management and presenting ideas to the board. So I can only imagine that there are many students out there with similar ideas, but without the confidence to pursue them.

—Evokation winner, South Africa

The Evokation process was supported by EVOKE’s partnership with Global Giving (www.globalgiving.org). Global Giving is an online marketplace connecting small donors (and corporate employee-giving plans) with NGOs and social entrepreneurs in more than 70 countries. Thirty-six Evokation winners were invited to use Global Giving as a fundraising platform to build support for their ideas. As a result of this partnership:

- 25 projects raised a total of more than US $29,000 in total
- 6 projects met Global Giving requirements needed for continued presentation on the Global Giving site (US $3,000 and 50 donors)

These outcomes—as well as others in relation to EVOKE’s support for social innovation among its worldwide social network—underscore the project’s differences from those of most development programs: EVOKE’s potential value should be measured only minimally in terms of its short-term performance, or its total number of players, or even its impact on students’ skills; rather, EVOKE must be viewed at least in part from the vantage of a longer timeframe, as a project that has very high potential returns of value based on the impact of one or more successful initiatives or individuals that emerge from it.

**Real-world action outside of EVOKE**

In some instances, EVOKE’s integration of moral purpose and gaming led to actions that crossed outside the boundaries of the game itself. One player from the United Kingdom started a Kiva EVOKE group (http://www.kiva.org/team/urgent_evoke). The Kiva EVOKE group as of December 2010 consisted of 56 EVOKE players who have made 54 loans for a total amount of $1,475. (Kiva connects people via micro-lending as a means of alleviating poverty.) The group’s first loan was made to a group of teachers at a primary school in Mabonkani village in Sierra Leone. The loan will go to pay for school fees for children, furniture, plots of land, house-building materials and investments.
Other groups were also established outside of EVOKE. These groups included one that addressed the use of EVOKE in k12 education (http://urgentevoke.wikia.com/wiki/Calling_All_Teachers) and a second that was created to support independent activities in development outside the framework of EVOKE (http://evokeforever.groupsite.com/main/summary). These two groups appeared to be moribund as of fall 2010. Still more groups, however, were likely to have been established, and might continue to be active.

**Recommendations: EVOKE in a context of development**

The recommendations that follow focus on the ramifications of acknowledging the nature of EVOKE’s impact—as a means of building participation in development worldwide and of building 21st-century skills—and the role for development-focused gaming that is implied.

Because the first season of EVOKE is completed, recommendations in this and subsequent sections are offered under the assumption that EVOKE will be repeated or will be replicated by other ARGs.

- **Clarify goal and objectives.** EVOKE and related ARGs can be strengthened by improving the accuracy of its stated goal and related objectives in relation to its impact. Such improvement will support a more improved understanding and assessment of EVOKE’s role and effectiveness. One example of such a restated goal is:

  …to serve as a cornerstone supporting the development of a cadre of young, civic-minded, socially engaged African and non-African innovators, who are able to find and organize knowledge resources and human resources to address local, national, regional and international problems in new ways.

  A broad, future-oriented statement along these lines can support educational objectives (including development of 21st-century skills), social-networking objectives, and motivational objectives.

Additional recommendations in this arena reflect the framing of EVOKE as a transitional intervention, one that channels university students, recent graduates, and other young, socially minded individuals into development-focused activities and careers.

The most effective potential measures, in the opinion of the evaluators, revolve around establishing more opportunities for players to take action as they finish (or advance) their participation in the game itself. These opportunities should be conceived of as providing follow-on or complementary avenues for participation similar to the Evokation process.

- **Establish “follow-on” pathways for connections to local NGOs and social enterprises.** Players in all countries should have opportunities to contribute to—as volunteers, primarily—the activities of NGOs and social enterprises. To increase the “traction” between EVOKE participation and these contributions, these organizations should be consulted in advance, with interested and capable (or “qualified”) organizations becoming part of the EVOKE follow-on strategy.

  The Evokation process represents a good first step, especially insofar is it serves as a goal and endpoint for EVOKE participation. However the barriers to completion of an Evokation, as well as lack of opportunities open to non-winners, further raise the already considerable barriers to participation among developing-country players.
• Establish “follow-on” pathways for connections to international NGOs and social enterprises
The EVOKE design, blending fiction and reality, successfully lowers barriers to participation in the game itself. Linkages with international NGOs and social enterprise, as per the previous recommendation, are intended to reduce barriers to participation in development after players have gained experience and understanding as a result of playing EVOKE.

Distinctions between local and international organizations, as well as the abilities of developed- and developing-country residents to contribute to these, have become less clearly demarcated as a result of many factors. Organizations such as the Rotary Club exemplify one type of global/local structures, while others associated with diaspora groups and emigrant populations, environmental groups such as the Nature Conservancy are also effective. Internet-based resources; increased travel, tourism, and service tourism; church engagement; free and open-source software tools and platforms (e.g., Frontline SMS, Ushahi di); these and other factors support increased participation in development-related activities by wide ranges of contributors.

• Support platforms for creation of affinity and interest groups
The Evoke Forever (E4E) group established within the EVOKE platform points to the possible benefit of enabling groups to self-organize on platforms that are “tangential” to EVOKE. The goal of such support would be to facilitate the establishment of ongoing fora for discussion and action outside of (and without operational support from) EVOKE or its sponsors. Certainly, there are many existing independent platforms (e.g., Facebook). However as such fora are difficult to sustain, a loose connection to EVOKE and its further iterations could help provide ongoing enrolment of new members plus other means of generating, sustaining and focusing involvement.

• Experiment with languages and scale
Iterations of EVOKE can and should address other “language populations” that were excluded from participation in the first version by language, or that might benefit from outreach efforts similar to those conducted in South Africa. Potentially suitable language—with large, geographically diverse populations of speakers—include Hindi, Mandarin, Indonesian, Spanish, French, Portuguese, Arabic and Turkic languages, as well as others. As new versions of EVOKE are staged in languages other than English, the characteristics of viable language populations for EVOKE participation can be identified (e.g., Internet penetration, secondary-school completion rates, tertiary enrolment levels, etc.), as can effective measures to increase these populations’ participation.

Such experiments will—along with experiments in support for education-focused iterations—likely prompt consideration of the scope and scale characteristics of viable populations. Fundamental questions will emerge as to what levels of participation are too high or too low. Further investigation of the impact of facilitation and other forms of support on participation by disadvantaged populations should also be investigated.

• Increase the transparency of the Evokation awards
Criteria for the evaluation of the Evokations were not made available to players. The Evokations were judged by senior education specialists at the World Bank Institute; and while this report includes no information suggesting that the evaluations were anything
other than fair, future iterations of EVOKE will benefit from consistency and transparency in this area.

- **Broaden the focus of evaluation**
  As mentioned several times previously, the primary points of focus in this evaluation were the impact of EVOKE in relation to educational objectives and its impact as an ICT4D project. At the same time, the assumption underlying this evaluation—for reasons of practicality—has been that these impacts could be assessed via data collection that took place during the run-time of the game itself. Over the course of the game and this evaluation, however, the importance of EVOKE in relation to its establishment of an engaged and dynamic social network has become clear. Evaluations of future iterations should be structured to include the resulting social network and to take advantage of an emerging toolset for Social Network Analysis (SNA). As important, longitudinal studies—perhaps of players submitting Evokations, perhaps of players in selected age or academic cohorts—should be conducted.

  For additional recommendations regarding evaluation of future iterations, refer to the sub-section, Recommendations: Evaluation, which follows.

These recommendations and similar efforts should be seen generally as intended to lower the threshold for ongoing action below that established by the Evokation process.

**EVOKE in a context of education**

The highest-value impacts of EVOKE should be sought outside of education systems, or at least in the actions of EVOKE players outside of formal education; however, higher- and secondary-education students should remain the target populations of development-focused ARGs, especially in developing countries. Technological fluency and access to the Internet, as well as other resources, capacities and aptitudes favor students’ participation whether via formal linkage to their institutions and curricula or independently and ad hoc.

The EVOKE community featured a large number of students in developing countries, including African countries, largely as a result of the above-mentioned factors and of effective outreach initiated by the game’s producers. Several actions, however, have the potential to increase the suitability of EVOKE for use in courses and other educational environments. These recommendations, following, are split into those for higher and those for secondary education, however consultation with faculty in both instances should help determine which measures will be most appropriate and effective.

**Recommendations: EVOKE in higher education**

Measures that might increase EVOKE impact in higher education are primarily logistical or tactical. These include tighter coordination with university calendars (so as to avoid conflicts with final exams, for example), the development of orientation guides and other resources for faculty, and greater efforts to include faculty and students in developed-country universities.

In addition, it would be possible to develop iterations of EVOKE that revolve around specific sectors or development issues in conjunction with course curricula or degree programs. Examples include: tropical or infectious diseases in conjunction with public-health
or medical curricula; enterprise development and microfinance in relation to business-school curricula, and; conservation and environmental issues in conjunction with resource-management, biology or other related curricula. Long-term efforts in this area can also explore integration with e-learning. (As mentioned, more tightly focused iterations entail risk in relation to the number of participants.) These and all supporting inputs should be developed in collaboration with (or by) university faculty.

Thus, rather than an ARG focusing all participants’ attention on broad development issues and soliciting increased participation among Africans, a “second-generation” version of EVOKE could be used to support the introduction of Problem-based Learning (PBL) to medical-students in developing countries around the world. (In posing this example and other examples of narrower-gauge versions of EVOKE, the evaluators are not constricted by organizational or cost issues that might be immediately apparent to EVOKE producers.)

In addition, EVOKE producers should:

- **Explore partnerships for education of “social innovators”**
  University students who played EVOKE form the group with the highest potential to engage in development or social innovation following their participation in the game. (Factors include, among others, these students’ unformed career goals, diverse work opportunities, minimal family and financial responsibilities relative to other life stages, and their readiness to participate in advanced degree programs.) Students who are most motivated by EVOKE, and who demonstrate visionary or practical capacities in relation to social innovation can benefit from further motivation and from education in areas related to development, social innovation and social entrepreneurship. Several universities offer two-week incubation programs to young but experienced social entrepreneurs; one such program is the Global Social Benefit Incubator at the Center for Science, Technology and Society (University of Santa Clara, California). Such programs have the logistical and educational expertise to nurture “youth” or “fledgling” social innovators through provision of short course of study and collaboration centered on social innovation. Participation by EVOKE players should result from a competitive, and transparent, process similar to the Evokation.

**Recommendations: EVOKE in secondary education**

Development of supporting inputs to increase EVOKE’s value to secondary education should similarly begin with consultation with teachers. Possible avenues for such support include:

- **Increase support for teachers**
  There are many forms of support for teachers that are likely to lead to increased or improved use of EVOKE in secondary schools. A partial list of such measures includes:

  - **Develop a teachers guide**
    A downloadable teachers guide might include sections such as: Orientation to EVOKE; Introduction to 21st-century learning and life skills; Learning objectives; Assessment guidelines, including rubrics linked to objectives; Management techniques for EVOKE in schools; Tutorial; Integrating EVOKE into your curriculum; Curriculum activities or lesson plans for classroom (offline) use.
Support an online education community
EVOKE creates both the need and the opportunity for online collaboration and knowledge-sharing among teachers. Required features should be determined via consultation with teachers; a third-party hosting service should then be selected based on that service’s platform offering. Expert facilitation should support teachers’ participation. (Such a community might benefit by taking advantage of current e-mail-to-blog and mobile-phone-to-blog features [e.g., www.posterous.com].)

Enable tele-collaboration
Whether or not a separate education community is supported, EVOKE producers—probably in partnership with iEARN (www.iearn.org) or another suitable organization—should support teachers in establishing and conducting tele-collaborative projects. Such projects should encourage collaboration among students in developing and developed countries. Collaborative activities can focus on development of Evokations, of course, but should also include activities with lower thresholds for completion and that are linked to specific lessons and/or assessments. School-to-school activities, in addition, should be explored as one way to reduce the burden on school computer rooms to provide one-to-one computer access and high-bandwidth/high-volume Internet connectivity.

These and other supports for increasing participation by secondary students in EVOKE can be achieved with relatively low cost. It is absolutely critical, however, that materials are developed to meet teachers’ needs and to reduce barriers to the integration of EVOKE into curricula and classroom activities.

Develop an “export to portfolio” feature
Assessing students’ activities in the 2010 version of EVOKE is difficult in part because search functions are inadequate (possibly as a result of the Ning platform). For widespread participation by teachers and students, improved search (including search of comments based on their authors) is essential. Optimally, however, student-players would be able to export their most developed or most interesting comments, evidence, missions, quests to an online, portfolio-style repository (possibly on their school server) that would make those outputs available to teachers for assessment.

Explore partnerships to improve Internet access
Internet access is problematic for secondary students in all but the best-resourced schools in Africa. To increase student participation, EVOKE producers can explore combinations of partnerships and outreach to help secondary students gain improved Internet access both in school and after school. The Government of Rwanda, for example, has taken many steps to introduce computer hardware and free Internet connectivity in schools on a nation-wide basis and to emphasize development of 21st-century skills as part of its Vision 2020 plan. Partnership with MINEDUC to introduce and support an EVOKE iteration in Rwandese schools might produce exemplary results. A less-ambitious example involves partnership with the Botswana Public Libraries: Under the Global Libraries initiatives of the Bill & Melinda Gates Foundation, urban and rural libraries in Botswana are providing free broadband Internet at library-based Community Information Centers (CICs). Use of CIC computers, which might entail
easing restrictions on use of the computers, could serve as a catalyst for participation by Botswanan students.

One approach to increasing the suitability of EVOKE for secondary education revolves around creating a version of the game that specifically targets—and possibly is limited to—participation by students in schools (i.e., “EVOKE School Edition”). Such an approach might entail:

- The creation of a four- or six-week version EVOKE that better suits classroom schedules
- Addressing teachers’ (possible) concerns about Internet safety and their students’ interactions with adults via registration and log-in security measures
- Developing an EVOKE storyline that connected more integrally with shared curricula and learning objectives
- Complementing EVOKE participation with off-line, classroom-ready lesson plans
- Improved facilitation of tele-collaborative projects

These and other measures (some of which have been recommended in relation to at-large iterations of EVOKE) have the potential to help teachers overcome barriers to educational use of EVOKE. As an example, creating a sequestered, student-only version would address possible concerns about ensuring that the game offered a “level playing-field” for assessment of students’ projects. (Any use of an “at-large” version of EVOKE by secondary students as part of their regular classes runs the risk that students will individually benefit unequally from collaboration with adults.)

While a students-only version might increase the value of EVOKE for teachers, the approach entails risk. The EVOKE producers will likely be best able to judge both risks and drawbacks; among the most fundamental drawbacks, however, would be diminishing the contribution to EVOKE’s success made by its global community of participants. The fact that this community includes many individuals who were experienced in, and perhaps expert in, social innovation and development, was a key feature of the EVOKE social network. Participation by these engaged and experienced non-students achieved levels of scale and intensity that cannot be achieved solely through contracted or “incentivized” support. The outcomes that have been observed in the current version—including outcomes linked to building 21st-century skills—depend on high levels of relevance, on dynamic knowledge bases, and on communication with heterogeneous groups of correspondents. A students-only version might improve observable near-term education outcomes while gutting EVOKE’s ability to support outcomes that are longer-term, more elusive and potentially more valuable.

In addition, an education-specific version of EVOKE would call for evaluation in terms of cost-per-student analyses and comparison with other initiatives that would likely achieve country-governments’ near-term education objectives more cost effectively. (As mentioned, the impact of the current version of EVOKE cannot be captured in such analyses.)
**Recommendations: Improving EVOKE in developing countries**

As mentioned, poor-quality and expensive Internet connectivity limits participation by potential players in developing countries. Other possible barriers cluster around players’ skills, experiences and capacities. Recommendations for addressing these limiting factors include:

- **Develop for low-bandwidth environments**
  To address the limitations posed by Internet connectivity in developing countries, EVOKE developers can explore the feasibility of various solutions for low-bandwidth environments. One such solution, for example, would be a version of EVOKE running on a Local Area Network (LAN) with caching. In this solution, a local server—at, say, a university or local Internet Service Provider (ISP) would host a version of EVOKE that enables browsing of web pages and viewing of some downloadable media. Local players’ entries would be uploaded and other EVOKE data downloaded during light-use periods (e.g., early mornings) or whenever connectivity permits. These and other solutions should be identified and explored in collaboration with organizations focused on field-level implementation of technology in schools, such as Inveneo (www.inveneo.org) and NComputing (www.ncomputing.com).

- **Use Internet addressing to identify players in need of coaching**
  When players register for EVOKE, the Internet Protocol (IP) addresses of their computers are logged. These IP addresses can be used to identify the countries these users are in and, presumably, to trigger alerts to game runners or other potential coaches/mentors that specific players might need additional coaching or encouragement to participate fully.

**Recommendations: Program evaluation**

As mentioned, there are many limitations that affect the parameters of this evaluation. In relation to future versions of EVOKE or other development-focused ARGs, these limitations can be addressed via various measures, including measures that are more likely to uncover barriers to EVOKE participation. Such measures include:

- **Use Social Network Analysis (SNA) tools**
  Using Social Network Analysis (SNA) techniques and tools can support analysis of communications within the EVOKE user network in relation to clusters, scaling and other criteria. Objectives of such evaluation might include: measuring levels of interaction; identifying patterns of interaction within and among players in specific countries or groups; evaluating the impact of support for education-based users. Current SNA tools include UCINet and statnet, as well as business-focused tools such as iPoint and NetMiner and general-purpose, open-source tools such as Tulip; this field is evolving rapidly in response to the emergence of social networks in education, business and other sectors.

- **Develop case studies**
  Case studies can be used (much like interviews are used in this evaluation report, however more effectively) to provide detailed and nuanced pictures of users’ experiences. Development of case studies as part of an evaluation likely requires observation and reporting from specific players throughout the run-time of an EVOKE-
style game, so as to build understanding of the factors that contribute to or that inhibit success.

Limitations of the current evaluative mode include sample bias and the lack of baseline data or control data to support multivariate regressions and other experimental analyses. Such analyses should target factors influencing EVOKE participation and outcomes. Measures addressing these limitations include:

- **Administer brief pre-tests or self-assessments**
  If visitors are asked to respond to brief surveys at the time that they register to play EVOKE, some problems in relation to sample bias and lack of baseline data can be substantially mitigated. Other limitations, such as biased self-assessments, would remain.

- **“Push” surveys to random-sample groups during the game run-time**
  Another means of addressing sample-bias and baseline-data initiatives is to email survey invitations to randomized groups of visitors at several points during the run-time of an EVOKE-style game. (Visitors would be asked to check an “opt-in” box in order to participate in the survey.) By requesting responses from visitors rather than players, and by conducting surveys at several points during the game run-time, survey responses can be controlled for sample bias. It is possible that players completing all missions could be compared with players who stopped participating in the game via regression analysis. Finally, such surveys would open the possibility of interviewing players who were not active throughout the game’s run time.

- **Conduct longitudinal studies**
  More than many education programs, EVOKE has potential to yield or contribute to distinct and high-value outcomes some years out from the initial intervention. In part, young players will only develop their social innovation skills over time; in part, even the most instinctive and active of social innovators requires several years for organizational development.

  In any event, longitudinal studies should be conducted with EVOKE players from selected countries or organizations. Given the unique aspects of EVOKE, it should be possible to solicit participation by university education or sociology researchers (including, specifically, researchers at universities in African or other focal countries) to conduct such studies. Given that successful EVOKE players are technology fluent, establishing Internet-based communications for longer-term research should be trivial.

- **Address barriers to access and participation**
  Efforts should be made to assess the impact of “traditional” ICT4D barriers on EVOKE participation more effectively. Such barriers, including computer and Internet connectivity cost and quality, basic ICT skills, technological fluency (including navigation of the EVOKE interface), restrictive cultural mores, and others, should be evaluated via establishment of “control” populations drawn from likely or intended EVOKE players. Thus, students at specific developing-country universities, including both EVOKE players and non-players, could be interviewed and surveyed at selected intervals to determine levels of access and comfort. Conducting a multi-country evaluation of this sort with the aid of in-country university personnel should not be difficult.
Overall, the recommendations made here with regard to evaluation of future iterations of EVOKE are not technically difficult, in general. They require, however, high levels of prior coordination and of evaluation activity during the game’s run time.

Many or most of these recommendations should be undertaken only in the event that a series of EVOKE or EVOKE-like games is foreseen.
Annex A:

Evaluation methodology

The scope of the evaluation of the EVOKE project consisted of the following tasks:

- Review the history and objectives of the project
- Develop a set of key questions for the evaluation
- Develop the methodology and instruments for collecting data on key questions
- Implement the evaluation
- Collect, analyze and interpret evaluation findings and provide recommendations for future iterations of the project in a final report

Prior to this final evaluation report the evaluators provided the WBI:

- A technical report with key questions and an outline of methods to be employed in the evaluation
- An inception report with a detailed methodology and indicators of the evaluation

The methods that were employed for the evaluation included:

**Review of customized players’ data**

Data pertaining to the participation and engagement of the players in the game was collected by the EVOKE technical team using web-traffic records and other tools, and provided to the evaluators in an excel file. The web-traffic data consisted of the following pertinent indicators for each of the 19,386 players who registered to play EVOKE:

- Name
• Gender
• Country
• Age
• Date joined
• Powers received
• Powers earned
• Powers given
• Quests objectives completed
• Learn objectives completed
• Act objectives completed
• Blogs submitted
• Photos submitted
• Videos submitted

These data are primarily analyzed in aggregate forms. Disaggregation and cross-tabulation with data from the surveys is not possible within the time and resource constraints of the evaluation process.

**End-of-game survey for players**

A survey for registered players was developed by the evaluators and hosted on the commercial service provider Survey Monkey ([www.surveymonkey.com](http://www.surveymonkey.com)) and linked to the EVOKE website. Players were notified about the survey through announcements placed at the News and Blog sections of the game website; and through an official email sent to each registered player. The survey was made available for a period of two weeks and included questions pertaining to the players backgrounds, their participation in the game, their learning from and challenges with the game, the Evokation, and why they didn’t participate in EVOKE.

518 players took the survey. Seventy percent of the respondents were male and 30 percent were female. The survey respondents represented many regions of the world with the largest group (45 percent) from North America, while 12 percent were from Africa (South of the Sahara Desert).
The survey participants were of a variety of ages, with the largest groups being those between 18-23 and 24-30 years old.

The survey participants were from a variety of backgrounds with the largest group being students in college or university and the second largest group being those employed in private sector jobs.
End of game interviews

Interviews were conducted over Skype (each interview was recorded) with the following categories of people involved in the game.

• **Players**
  Eight players (five from South Africa, one from Ethiopia, one from USA and one from Canada) were interviewed. The interviews were open ended and solicited the players opinions regarding the game’s design, platform, features, missions and quests; game runners; mentoring; the Evokation; learning and benefits from the game; access issues; problems with the game; and how the game can be improved.

• **Game Runners**
  Four game runners, including the lead game runner, were interviewed. The interviews were open ended and solicited the game runners opinions regarding their own roles and responsibilities; the players interaction with each other and their game inputs and learning; the game’s design and features, missions and quests; the Evokation; access issues; problems with the game; and how the game can be improved.

• **Teachers**
  One teacher from a private school in South Africa, who used EVOKE as part of her coursework, was interviewed. This interview was open-ended and solicited the teacher’s opinions regarding the game; its use in schools in South Africa; how the game can be better disseminated to students in South Africa; and how the game can be improved.

• **Evokation Winner**
  One of the three Evokation winners from South Africa was interviewed. The interview was open-ended and solicited the player’s opinions regarding the game and the learning and benefits it brought to players; the Evokation; and how the game can be improved.
Review of winning Evokations
The evaluators reviewed the winning Evokations and as mentioned above interviewed one Evokation winner from South Africa.

Evaluators’ participation in the game
The evaluators registered and participated in the game during its entire duration. The purpose of this participation was to allow the evaluators to gain first-hand experience of the game’s features and progression from the perspective of a player. The evaluators also navigated the site frequently to view players’ game inputs for weekly missions and quests.

Sample bias and other survey limitations
Sample bias and other limitations in an assessment of this type are difficult to avoid without increasing the cost of evaluation significantly.

Sample bias
Possible sample bias and causes include:

• Under-representation of agents with low-bandwidth Internet: All Web-based surveys of development-related projects suffer from bias resulting from respondents’ information-infrastructure conditions. Given EVOKE’s focus on players in sub-Saharan Africa and South Africa, this potential bias limits the value of the survey.

• Over-representation of agents with positive experiences of EVOKE: Because the survey was launched at the conclusion of the ten-week game, all or almost all respondents will be drawn from groups that: 1) continued to play and/or monitor EVOKE over the course of the entire game; 2) began playing EVOKE at or near the end of the game. Players who registered for the game but did not view the game website at the end of 10 weeks (and beyond) and/or who did not read the email pertaining to the survey (that was sent to each registered player) are not likely to have know about the survey.

It also should be noted that under-representation of low-bandwidth users and over-representation of agents with positive experiences are likely to be mutually reinforcing: Users with low-bandwidth connections are less likely to have positive experiences with online games.

The most significant limitation of the survey—and one that is captured in the above statements of bias—is that it does not include responses from EVOKE agents who are likely to be most critical or most disappointed in their experiences playing the game. A second limitation is that—again as a result of bias—the survey is likely to include disproportionately fewer responses from the primary target-group of users, youth in South Africa and sub-Saharan Africa.

To mitigate these sample-bias issues and limitations, the following measures were taken:

• The majority of interviews were focused almost exclusively on African players
• Two players from Africa were interviewed who did not play the game for its entire duration
• An email notification about the survey was sent to all registered players

While these steps help address assessment of the primary objectives of EVOKE—in relation to South African youth—they do not enable collection of information from users who stopped playing the game before its conclusion. Mitigation of this limitation would require deployment of several surveys during the early and middle weeks of the game; while possible, these measures would be cost-ineffective relative to the overall expenditure of the evaluation.
Annex B:
Access and engagement

Overview
This annex presents additional information about players’ levels of engagement with EVOKE.

**Hours per week playing EVOKE**
The six players who were interviewed (and who had played EVOKE over its entire 10 weeks duration) said that on average they had spent between 1 to 3 hours on the game every week. During this time period all the interviewees said they read, researched, communicated with other players and provided some inputs regarding the weekly missions and quest, however they did not necessarily complete all the three activities (Learn, Act and Imagine) associated with each weekly mission.
The two largest groups of survey respondents stated that they spent less than 1 hour to between 1 and 3 hours playing EVOKE each week.

![Graph](image)

**Figure 8**: Average time spent per mission, survey respondents

A slightly larger group of survey respondents also said that they spent between 1-3 hours on the mission that they enjoyed the most.

![Graph](image)

**Figure 9**: Time spent on favorite mission, survey respondents

These graphs suggest that ‘window’ of one to three hours as the most common amount of time spent on a given mission. In addition, responses do not show that spending longer amounts of time on a given mission indicates that such a mission is preferred: The number
of respondents listing three to five hours remained equal across the two questions; the number listing five hours spent on their favorite missions is slightly lower than the number listing five or more hours on their average missions. While these data are inconclusive, it appears that future versions of EVOKE should target one to three hours per mission (and should recognize that changes that require greater levels of effort are not likely to be well received by players, although this inference is impossible to support definitively given the data at hand).

**Player activities**

As the survey results below demonstrate posting blogs was the most common form of players' game input with posting photos being the second most common and posting videos being a distant third. There was also substantial activity related to players friending each other, providing and receiving feedback, and inviting others to join the EVOKE network.

![Graph showing player activities](image)

**Figure 10: Player activities, survey respondents**

According to the players and game runners who were interviewed, players took part in the following activities while playing EVOKE:

- Researching and working on their mission activities (Learn, Act and Imagine) and quests resulting in the submission of blogs, photos and videos; with blogs being the most common form of player input.
- Reading, commenting on and voting on other players game inputs; friending other players; and answering other players questions related to the game.
- Reading the links to additional sources of information provided by the game.
• Posing questions to the game runners related to issues with the game’s platform, clarifying instructions for playing and advancing in the game, and soliciting feedback on game inputs.

Overall, these data suggest that players used many or most of the interactive “affordances” available in EVOKE.

**Computer and Internet access**

![Figure 11: Tools used to play EVOKE](image)

While most players used their own computers to play EVOKE, large numbers of players used computers in cybercafés and in their schools or universities, or they used computers belonging to friends.

A majority of players who participated in the survey said that they used their own computers to access EVOKE followed by using computers at a school, college or university; a friend or someone else’s computer; and a computer in a cyber café or in a public place. Further all the players who were interviewed used their own computer or a computer at the university they are attending to play EVOKE. It should be noted, however, that although a majority of respondents used their own computers to play the game, roughly equal distribution among three other means (friend’s computer, cybercafé, school or university) suggests that a substantial number of players used computers that were not theirs and were not privately owned.

In light of this information—showing that many players access EVOKE using computers that are not their own—formats and bandwidth requirements of future versions should continue to be “bandwidth sensitive” to ensure rapid page loads and, more broadly, to minimize the impact of restricted access to computers and the Internet on participation in Global-South countries.
Annex C:
Additional evidence and findings

Overview
This annex presents additional information, primarily from interviews but also from surveys, about players’ experiences and opinions with regard to EVOKE.

Outcomes
A game runner reflecting on what players got out of the game stated the relationship between participation and benefit for EVOKE players:

If you didn't spend some time on the site there is little opportunity to learn something from the game. Some people went through it as a solo exercise and they learned something but what they learned is limited, but they are certainly acquainted with new information based on the missions. Then there are other players who were challenged by ideas, who engaged in debates and discussions about the ideas, talked about what they had learned and put their ideas into practice.

Survey data suggests that playing EVOKE strongly influenced between 30 and 40 percent of respondents in terms of their:

• Knowledge of global issues
• Awareness of potential solutions
• Ability to connect their own knowledge and experience to global events and issues
• Ability to understand and address local problems and challenges
• Ability to learn about sustainability
Interview respondents also reported that EVOKE led to the development of new knowledge of and perspective on global challenges. Six out of eight said that they were previously aware of the topics covered in the game, however the game helped to provide them with in depth knowledge of these topics, which they lacked. As one player in South Africa commented, “Although these were issues I was mostly aware of I gained a lot of extra knowledge about what is happening currently and in other parts of the world.” Another player said, “The game gave me an opportunity to learn about things that I wouldn’t have thought to research on my own.”

One player summing up what he learned from the game said, “First of all it made me think about all the problems in the world and it made me more aware of things that are going on in the world. It helped me to improve my perspective.” While another player commented, “It changed some of my behaviors in small ways and raised my awareness in larger ways. There was a lot I didn’t know and also that I can do a lot of little things that I didn’t know about.” Another player from South Africa was more specific as to how her learning had been affected, saying,

I felt I gained some new insight and thinking from a different perspective. For example in the crisis management mission I actually hadn’t thought of the extent to which a person has to prepare for a crisis before it actually happens. That made me think much more strategically about issues happening in terms of early reaction and being prepared.
Yet another player from South Africa, commenting on the subject areas covered in the weekly topics, said,

I'm not a person who knows a lot about science, so when they gave topics that were Science specific like generators or solar energy for electricity, it was something new as it was not something I was expecting. I had to do a lot of research and I learned a lot of new things.

The game runners supported the responses of the interviewees in this regard. One game runner said,

I think that even if you didn’t learn anything specifically you were made aware of the issues, and they might consciously and unconsciously start thinking about them more. For the more involved players they learned about what they themselves could do to affect the issues EVOKE talked about.

**EVOKE prompted new global interactions and learning**

Players interacted with and learned from other players around the world, and suggested that the levels and kinds of interaction that they found in EVOKE were new to them and had positive effects.

The interview respondents were unanimous in saying that they interacted and learned from other players around the world. One player from South Africa said, “The nice thing was to interact with other people, reading other people’s blogs and coming up with solutions, commenting on others solutions so you can see the world in a different way. I found myself getting new skills and seeing the world differently.” Another player commented, “I liked the extent to which there was debate among players about different kinds of values informing the research and missions that people were completing.” A third player from South Africa said,

I got to see things from a different point of view, from a different perspective. There were certain missions where you got first hand information from people in other countries, for example the women’s mission you got to hear stories about how women had been treated in their societies and the actions people are taking to alleviate the situation they are in.

These three players all use “different” to describe the points of view and value systems that they encountered in EVOKE; more specifically they suggest that their world views were broadened through their interactions in the game.

Another player from South Africa stated that he or she learned about others and about him/herself: “Every time I went to EVOKE I learned something new whether it was an article put up someone or someone’s opinion, and I know now how people think and it helped me develop my opinions as well.” Echoing this view a player from South Africa who engaged with the game for its entire duration as part of his university coursework summed up his experience by saying:

Yes, it was crucially important as a young person and as person who wants to learn and grow. It is not only about doing research but also interacting with other people and interacting with professionals. Creating a network and interacting with others. So how can you remain as you are after interacting with others? It was just great to
see myself as if I’m doing something new. If I play game again it will be beneficial to my career and also help me develop as a professional.

All of these respondents suggest that the interactions prompted by EVOKE were substantially different than other interactions they’d had previously—even though they were likely to be relatively experienced in terms of computer and Internet use.

Talking about the learning players got from each other one of the game runners, who was based in Uganda, said, “The networking, there was a lot of networking between the players, sharing and collaborating. Basically in my country the collaboration made the game fun.” Another game runner commented, “They learned that there were all sorts of alternative solutions dealing with world problems that they might not have known beforehand. So there were solutions that were coming from people who were from the places themselves. A lot of people also learned directly from other people around the world and that [should not] be underestimated.”

**Global interactions by survey respondents**

Many survey respondents engaged with other EVOKE players in the course of the game, with this generally high level of engagement apparently leading to new thinking. Seventy one percent of the respondents visited another players’ page, 63 percent changed their thinking about an issue, 56 percent gave feedback to another player’s evidence, and 44 percent made changes to their evidence or approach.

Additionally, in response to other questions 38.0 percent of the respondents said EVOKE had a strong effect in enabling them to learn about people in other countries; while 32.6 percent
of the respondents said that they enjoyed and 25.4 percent said they really enjoyed reading other players evidence.

Although lower than responses for other forms of participation, almost one in three respondents (31.8 percent) reported participating in intensive discussion. The sample is undoubtedly biased in favor of active participants, however the proportion of respondents participating in discussions that they felt were intensive is nonetheless quite high. In comparison to friending someone, giving feedback (e.g., as blog comments), changing evidence in response to comments and other indicators of engagement are more common activities and are less demanding activities than engaging in discussion: rates of participation in discussion, and especially intensive intensive discussion, are likely to be lower overall than for these other indicators.

Participation in EVOKE overall introduced agents to new information, new ideas and new thinking, and agents were (or became) receptive to these new facts and concepts. EVOKE provided a mixed array of participation paths (e.g., friending, commenting, blogging [and receiving comments], discussing, etc.) that enabled agents to control their levels of engagement with other agents. While discussion levels were lower overall than other forms of participation, discussions should be seen as complementing less interactive (or less demanding) opportunities for learning, and as a conceptual capstone on the progressively interactive means of participation that agents had at their disposal.

**Players recognized social challenges**

All the six interview respondents who had played the game for its entire duration stated that the playing experience had definitely made them realize that they can do something, however small it may be, to tackle social challenges. This demonstrates that the game was able to realize one of its key objectives relating to players recognizing social challenges and being inspired to act.

As one player who was studying in South Africa commented, “I was able to recognize social challenges especially for issues like food security and gender and women’s equality. But for some topics the connection was not easy to make for example for hurricanes and flooding.” While another player said, “There is one part in the game where we had to improve food security of our community and I did some research and found out that in the place I live there are some people in need of food especially in winter and that made me realize that EVOKE can help locally.”

Another player said, “It made me realize that there are a lot of problems in the world and that an everyday person can make efforts to fix them.” An additional player commented, “It made me realize that I can make a difference in the world by doing simple things like the EVOKE network asked me to.” While yet another player in South Africa opined,

“It was important, in the sense that it made me think more proactively about what’s happening around me. It made me realize that I can’t just be a spectator and I have a role to play in whatever way I can...it made me realize my role in the different problem areas in the world. It definitely did change me because now rather than just being aware of what is happening around me I’ve actually seen that I also have a responsibility to do something... no matter how small it might start out.”
Two of the interviewees from South Africa also said that the game had influenced them to get involved in volunteering with NGOs in their community. One player plans to join a NGO in the summer when he has a break from his university coursework, while another player is going to get involved in volunteering for HIV AIDS related issues.

The four game runners who were interviewed all stated that the game helped the players recognize social challenges globally and locally. One game runner commented, “It was a game where they could do something, it wasn’t just that they were learning about a problem but they felt like they were actually working towards a solution.”

Comments from game runners support the broader conclusion that EVOKE should be seen as a catalyst for thought and action, an event that can help individuals recognize and develop pre-existing interests and skills. All the game runners stated that the game did not inspire all the players to act to tackle global or local social challenges as that mainly depended upon each individual’s motivation and volition. While this observation—in retrospect—is so obvious as to be commonplace, the fact that all game runners made similar statements suggests that they expected that the game would be radically transformative rather than “radically facilitative.”

Within EVOKE several players who were initially very active posted statements attesting to disappointment or disillusionment as the true nature and limitations of the game format became clear. However, it bears observing that even these players’ initial enthusiasm, which was the basis for their later disillusionment, was only brought out by the game, EVOKE was not the sole cause (as evidenced by the fact that posts of this sort were relatively few).

**Players built a sense of community**

All the players and game runners who were interviewed stated that the game did help build a sense of community among the players. One player from South Africa said,

> “Sense of community definitely, you got to interact with people from all over the world and if you’re reading their blogs, making comments and they’re responding to you...it was a two way communication. You see things in a completely different light, you see that there are ways you can help people and they can help you. This is definitely something I took away from the game.”

A game runner summed up his views by saying, “A lot of learning happens when someone talks about what life is like for you based upon where they live. So I think you are connecting certain communities with others.” Another game runner said,

> “The idea that one is not alone in the concerns of the world that there are other people in the world who are working through the same kind of problems and the same kind of issues, and being inspired by them and knowing that it is a large community and being part of a large community that is dealing with these problems, knowing that it exists is a big comfort for the players.”

Regarding getting a sense of confidence from the game the findings were not conclusive. As some players were highly confident and motivated entering the game, others gained

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15 It’s also worth noting that at least in the experience of the evaluators such posts of “grand disillusion” were not made by participants from Africa; one such post, however, was made by an agent from Morocco.
confidence as they realized that they have something to contribute and that their opinions and game inputs are useful to others, while for others the game had no impact on their self confidence. Only three of the players interviewed felt that the game helped them build a sense of confidence. One player from South Africa said, “It did because just thinking of the fact that I can contribute something and when people commented on my blogs and said it is a good idea, it did build up my self confidence and made me feel I have something to contribute.”

The game runners were of the view that the game helped players build a sense of confidence depending on their level of involvement with the game. One game runner said, “Definitely players came away with more confidence...feeling that they are able to contribute, to take action in a positive way to solve problems.” Another game runner commented,

“At a certain level they did. For example when I submitted my own evidence there were many comments about how people in our communities think they cannot make it. Then many other players came and said you can believe in yourself. EVOKE made people tackle what they thought was impossible. Players now believe they can do it, if others believe it is possible you also begin to think it is possible.”

The survey results do not support the interview responses. Only 18.3 percent of the respondents said that the game had a strong effect in enabling them to have self confidence, while 26.9 percent said that the game had no effect in doing so. There are several possible explanations for this situation. First, many of the statements made in interviews suggest that someone else gained confidence by participating. (Game runners of course were asked to describe the game’s impact on others.) Second, the different levels of selection bias—agents who participated effectively, had positive experiences, etc.—possibly result in a survey sample that is biased in favour of people who were self-confident before they began playing EVOKE. For these people, high initial levels of self-confidence reduce the game’s potential effect as a confidence-building process.

**Players learned about social innovation**

Both interview responses and survey data show that the concept of social innovation was new to many of the players and the game did help them learn about it. Seven of the eight interview respondents said they had learned something about social innovation from the game. Two of the eight interviewees responded that they had become social innovators during the game, which at 25 percent of the total is quite a positive indicator of the success of the game. The remaining interviewees said that they did not have time during the game to do any social innovation in their communities.

One player said, “It helped a lot as I had a basic idea but now I know what kind of person it takes to become a social innovator.” Another player in South Africa mentioned, “I did come to an understanding of it but in terms of did I do any social innovation I don’t think I did but that is mainly due to the fact that I am in school and don’t have time to go out and do something.” While another player from South Africa commented,

“At the beginning I did not know what it was but as the game went on I finally got it and I tried to put it into practice whenever I could. Like where I am right now I’m not imposing my ideas but am listening to what people have to say and listening to what they need and to find solutions together.”
All the game runners interviewed felt that EVOKE helped the players learn about social innovation. One game runner said, “Yes I do, the Act portions of the missions were very effective in getting people to go out there and do something. I know that some Evokations came out of people’s Act posts.” Another game runner commented, 

“Social innovation was new to quite a few people and once they were introduced to it they started to recognize what was possible and started to realize that there are not only large infrastructure solutions and there are bottom up solutions. I think people recognized that and saw the value in that. When I think of the evidence submitted by the players I really think they kept that in mind.”

The survey results supported these findings as 54.4 percent respondents said EVOKE had a strong effect in enabling them to think big thoughts about the future, while 42.9 percent said that EVOKE had a strong effect in enabling them to picture myself starting something new.

**Players’ game inputs improved**

The mission activities progressively became harder every week, but there was no unanimity among the game runners as to whether the players’ game inputs improved over the course of the game. The quality of a players’ game input ultimately depends on how much time and effort they put into their submissions and how motivated they were. Some players were definitely self motivated and spent time thinking about and working on their game inputs. Other players clearly did not spend much time on their game inputs but submitted them to get powers and points and to fulfill the criteria for completing the missions and quests.

One game runner said, “The missions became more difficult as they went on. There is a huge question about the time people spent on their submissions, some spent hours and others a few minutes. Clearly the top players are very self motivated players and they would not submit under par work but others were clearly just ripping through the game to get powers and points.” Another game runner was of the view, “The missions got harder every week and I think some players will just put whatever...the idea is your motivation. If you had internal motivation and wanted to challenge yourself and the goal was to put up something that other people would look at then...that’s where those players shined.” A third game runner, however, did not concur saying, “The players’ contributions reduced a bit as the missions kept on getting harder. So it became harder to post evidence for players.”

It’s not possible to accurately determine improvement in the quality of players’ work under the circumstances of the game and within the parameters of this evaluation. In addition, the quality of players’ work is the result of combinations of factors, including factors such as available time for playing that are outside the game itself, as well as of combinations of simple and more complex skills and capacities.

However, the mixed interview responses hint at the different factors that might be at work: players’ improving skills might be reflected as increased efficiency—using less time to achieve similar results—or as more accurate estimation of minimum levels of required effort, rather than increased quality. In addition, the nature of skills that were consistently required over the course of the game were primarily applied, insofar as they involved writing, posting, taking photos and other skills involved in completing missions. Improvement in these skills, once a basic level of competency has been achieved, is both incremental and difficult to assess.
While EVOKE clearly draws on complex capacities—such as collaboration and communication, information literacy (e.g., searching)—and some higher-order thinking skills, such as critical thinking and problem solving, the game itself is not structured to guide players through the steps necessary to improve these capacities. (Such steps would include at a minimum specific and repeated activities, understanding of the types of learning or skill building that are targeted by those activities, guided self-assessment, and formal or informal external assessment.) In the absence of such structure, any gains in relation to complex capacities and cognition are outcomes that are both indirect and un-measurable.

**Players benefitted from EVOKE’s global social network**

All the interview respondents felt that having EVOKE being open to anyone around the world was very beneficial as this enabled the players to interact with and get opinions and view game inputs of players from different cultures and countries. Therefore there definitely was a sense of sharing of knowledge and perspectives between different communities. One player said, “It was definitely a great idea. You can get inputs from everyone around the world. Social responsibility is a global thing so it was good to have it open for everyone around the world.” While another player from South Africa commented, “It was better that it was open to people around the world. Players got to know about the rest of the world from EVOKE and got better ideas from around the world. If it was only open to Africa there would less benefits, as the thinking would be same of the people and we would not getting the different thinking of people from other places.”

The game runners were also of the view that having the game being open to anyone in the world was beneficial to the players. One game runner said, “That was one of its main strengths. Well Evoke is all about social innovation and you have different solutions to problems depending on who you are and where you are in the world. I think having access to all that information really improved the network.” Another game runner agreed saying, “I liked the fact that it was open to the world. One of my favourites exchanges was one student in America was prioritizing putting water first and another African player said if you don’t have your health you can’t carry water. So that was a good example of how those sorts of exchanges mean a lot.”

The survey result showed that 38 percent of the respondents felt that the game had a strong effect in enabling them to learn about people in other countries, while 24 percent said that it has a moderate effect.

However two of the game runners also stated that with all the positives this global openness brought, some players tended to dominate the discussions in the game and this contributed to lessening the engagement of players from Africa and other developing countries. One game runner commented, “The game was sometimes over whelmed by a few players from certain countries and other players felt that their voices were not being heard.”

**Positive reviews of EVOKE’s design, structure and platform**

The game’s design and structure generally received favorable reviews however the game’s technical platform (Ning) was not viewed as favorably.
All the players interviewed viewed the graphic novel element of the game and its artistic quality highly agreeing that it enticed them to engage with game. One player from South Africa said, “It definitely made it more interesting to play the game by having the cartoon strip in the game in the beginning and it did make you want to carry on.” Another player from South Africa commented on the novelty of the game and its design by saying, “I liked the fact that it is new that it has not been done before, so I thought I would give it a try. I liked the features as they were set.”

A game runner based in Uganda also was of this view stating, “The design was really impressive. The design brought out the element of the game. Some players were reading the comic and became interested in the game and wanted to know what will happen next. The only problem here was with low bandwidth Internet so some players could have problems with the graphics.”

Four of the eight players interviewed also stated that they enjoyed the structure of the game which allowed them to take part in different activities. One player was effusive in her comments saying,

“I liked the way each topic was built out so that each of the topics was presented as something for us to learn about and then there were different ways to learn about it so there were specific assignments for each mission and for the Learn one there were links to get you started. So if you knew nothing about the topic you could go to the links. In addition to that there was the comic which was a way to get into the topic and there were the questions for the comic which was another way to get into the topic. I liked those multiple points of entry that made these difficult ideas very approachable.”

A game runner concurred saying,

“They liked the structure of it, the fact that there were missions for them to do and rewards for doing that. The structure was the most engaging thing in EVOKE.”

While another game runner said, “Because of the features and structure that it had...the goal to come up with some good thinking about problems that are very real in the world and that people felt that they could make a contribution and that they could reward the contributions of others... and that is a motivator.”

The survey results also showed that:

- 38 percent of the respondents really enjoyed reading the graphic novel
- 33 percent of the respondents enjoyed reading the investigation files
- 38 percent of the respondents enjoyed doing the missions
- 35 percent of the respondents enjoyed doing the quests
- 32 percent of the respondents enjoyed reading the EVOKE blog
Ning was chosen as the technical platform for EVOKE as the game developers felt that it had built in features that they could develop further, in contrast to the prototype of the game which had no social functionality and was hard to navigate visually. However there were numerous complaints about the Ning-based technical platform by the players and game runners who were interviewed. Nearly all of the players who were interviewed said that they had some technical glitches with the platform related to: posting a game input, assigning points or powers, posing questions, commenting on other players’ game inputs, having messages being removed, logging in, and other issues.

One player said, “The playability was very bad. For example when you had to read up certain mission, but when you started reading it never told you that if you select this...this will happen or this is what you have to do.” Another player commented,

“One of the main things is the system, the Ning system is really hard and throughout the game the game runners and designers did an excellent job of responding to issues and problems as they arose. But I think for people who are not accustomed to using systems like this, Ning is a little hard to get around. Changing the system would probably be a big benefit.”

A game runner concurred saying, “I think the technical platform near the beginning and throughout had a lot of glitches. People were getting accidently banned as they were flagged as spammers, people couldn’t log in, people couldn’t register their evidence and so on and that caused a lot of the bug report that I dealt with.” While another game runner added, “I think one thing is when we’re supposed to go look at people’s evidence...the platform Ning really didn’t have a way that you can look at people’s evidence and how it is tagged. A couple
of us tried to create some custom applications to fix that but that didn’t work and I feel that I missed out on a lot of players’ evidence and activity simply because it was inaccessible.”

Further, 38 percent of the respondents in the survey said that the game’s technology did not always work.

**EVOKE’s content and language**

Most of the content for the missions and quests were originally developed for the first EVOKE prototype and was reviewed by a group of educators and social entrepreneurship specialists. This content was then tested at the game’s beta site, and it was then determined to design EVOKE around an alternate reality game (ARG) format where a real world situation is incorporated as the platform of the game and multiple media and game elements are employed to influence players ideas and actions. The game designers then changed the original 100 original missions and quests that were developed for the prototype, reduced the number and rewrote some of them into into mission activities (Learn, Act and Imagine) and quest activities for a 10-week game with a different topic for each week. These redesigned mission activities and quests were not beta tested again.

There are several provisional findings based on the interviews (a very small sample), that have bearing on the content and language of future versions of EVOKE:

- **Language level and sophistication is appropriate.** All the players who were interviewed did mention that they did not have any issues with the content or the level of English used in the game. The game runners who were interviewed did not report being aware of any complaints about the type of content and level of English used in the game.

- **All Topics are not relevant to developing countries.** Two interviewees from South Africa stated that some of the weekly topics were not relevant to the issues they were facing in their country. While EVOKE does not specifically target issues that are only relevant to developing countries, several factors—association with WBI, aspects of the graphic-novel narrative, and efforts to include participants from Africa—possibly create the expectation that the game will be specially relevant to problems that are currently faced in developing countries.

- **Solutions not adequately informed by current practice.** One interviewee from South Africa also said that the solutions provided in the graphic novel for some of the weekly topics ignored many answers that are already employed in developing countries and relied too much on high end technology solutions. However it should be noted that as the game is set in the year 2020 it purposely incorporated advanced technologies in its narrative.

These assessments, based on a small number of interview responses, do not rise to the level of findings; however they should be considered when future iterations are developed.

**Assigning of points and powers in EVOKE**

The Leader Cloud and points system were important and well-liked features of the game; however there is some possibility that these features obscured the larger goals and objectives of the game. The ten powers that players could potentially earn were not as clearly understood.
Players and game runners who were interviewed stated that the points system was a well liked feature, as it validated players’ opinions and game inputs, and served an incentive for them to play. While another player commented, “The points validate you and your opinion, it makes you feel good that people are valuing what you say and that they agree with you. Definitely it’s a good system.”

The results from the survey also showed that 27.3 percent of the respondents enjoyed voting on powers, while 20.5 percent really enjoyed doing so.

All the players also felt that the changing the Leader Board into the Leader Cloud was a good idea as this demonstrated a shift towards rewarding the quality of players’ inputs and their diverse contributions to the game. One player said, “I think it was a good idea and I’m glad they restructured how the leader board worked.”

Nonetheless many players confused the objective of the game which was to learn about social challenges and to be motivated to act as social innovators and rather concentrated on gaining points. For these types of players the game primarily became a competition to gain the most points to ultimately win a trip to Washington DC.

One game runner commented, “The point stuff was fascinating and I like how it was done. There were always players who confused the rules of the game and it consumed some of the players but most realized that it’s just a measure of the progress of going through the game.” Yet another game runner was of the view, “Giving powers and points was fine, it was encouraging to those who received them. If you got powers you got motivated as you realized that other people think that what you have to say is important.” While another game runner pointed out,

“The points are important to some people, distracting to others and off putting to others. So for example we never said but people thought the most points you have you'll win and you'll get an invitation to DC. But if you don’t have points that actually mean something then people think this is a bogus game.”

Determining the value of the assigning of powers was not as clear. On the one hand players liked to have their power runes lit up once they had been granted a power, but there was no unanimity among the game runners as to whether the players actually got a good understanding of the 10 powers. There were also some questions as to why the 10 powers which were included in the game had been selected, and how well they tied up with the weekly missions.

**Social networking tools used in EVOKE**

A Facebook page for EVOKE was set up and the graphic novel for each weekly mission was uploaded on it. Around 1,500 people became members of the site but the game runners who were interviewed commented that there was no substantial player activity on it that influenced the game in any way. Twitter was used to send updates about the game and the blog posts but it was limited to those who had Twitter accounts.

The players who were interviewed did not make use of Facebook or Twitter. However one game runner commented, “Facebook did get a couple of people in...Twitter was pretty effective in getting the word out well only to the people with a Twitter account and that’s pretty much people in North America and Europe.” While another game runner said, “I
think they were limited. I didn’t visit the Facebook page and the Twitter was a rebroadcast of the blog, they were just not used that much.”

The survey results, however, show that 30.9 percent of the respondents used Facebook to communicate about EVOKE.

**Mobile EVOKE**

The players and game runners who were interviewed generally did not interact with the low bandwidth version mobile version of EVOKE. The one player who did, however, found it too slow, hard to navigate and lacking many features. Overall the players from South Africa and the game runners (who were interviewed) felt that playing the game over a mobile phone would not be the same as it would lack a lot of features, people in Africa would need really advanced phones to access it, and there would be a severe lack of interaction with other players and their game inputs. One player said, “Well I think it would a good idea as more people would have access to it, but I’m not sure people have the technology in Africa of doing that.” Another player commented, “It is a good idea, but I won’t play it on mobile phone as I would prefer to do EVOKE on a computer as navigation would be easier.” While a third player said, “The mobile version is limited and it’s very difficult to read other people’s evidence.”

The game runners raised similar issues with one saying, “One of the reasons Evoke works is the community. What I saw with Evoke light was it only had the missions and quests and it did not have the interface with the community. It would really work if it was tied into the community. People are not going to get something out of it if the community is not there.” Another game runner commented,

“It would be a good idea but the light EVOKE version I saw is no way of playing the game. How do you play the game on the mobile phone when someone goes to the site and posts a video and blogs 10 paragraphs long? How is the person on the mobile phone going to do that? There is no way that is going to be equal unless you change the game.”

Further, as has been noted earlier the survey results and web-traffic data show that accessing EVOKE by mobile phone was by far the least common option.

The effectiveness of the weekly SMS alerts in South Africa is hard to gauge as only 30 players chose to subscribe to it, and none of the players who were interviewed had done so. The SMS service offered very limited features as one message a week was sent to coincide with the site updates, which was an invitation to return to the site to read the new graphic novel episode and investigate the new missions and quests. The only interactive component of the SMS feature was that players in South Africa who were interested in receiving the SMS updates would text "EVOKE" and they were texted a response welcoming them to the network, and their numbers were added to the game’s weekly list.

**EVOKE’s open environment and privacy issues**

EVOKE’s open environment did not seem to be an issue for any of the players interviewed. One player said, “The game is about learning from each other so there were no issues about being in an open environment and it was good to see what other people have to say and not have it like Facebook where you can block people.”
However as the terms of service on the game’s website were not detailed some players did question what the WBI would be doing with the ideas they were submitting. One game runner commented, “Part of it was there were some people who would post inappropriate material and cry censorship. Also there were some people who thought nothing good can come out of the WBI.” Another game runner explained,

“It is a self selecting issue as people who come in and see that they have to provide all this information and see the features of the game. If they’re not comfortable in an open environment they wouldn’t participate. People who continued with the game came to peace with the open environment. But I did see questions about why the WBI is collecting all this information about me and what are they doing with the ideas I’m putting on this site. The terms of service on the site and the legal language did not help that any, it was fairly standard.”

Mentoring EVOKE

The mentoring aspect of EVOKE as it came to be practiced in the game consisted of players providing peer review in the form of comments on other players’ mission and quest inputs. Players also wrote comments on other players pages related to messages of encouragement and there were many cases where players were commenting on off EVOKE topics. Many players also did ask other players questions about how to play the game better when they were confused or needed clarification on some instructions. One player said, “I didn’t do mentoring myself. But I was mentored by one agent, who had a lot more points, and I asked him how to spread the word about different things and how to make my work more attractive to others.” However none of the players and game runners who were interviewed said that they knew of any cases of sustained mentoring between players.

The survey results also show that only 11.3 percent of the respondents said that they had mentored another player while playing the game.

The game runners on the other hand were viewed as people who would answer questions related to: technical issues with the game platform, the awarding of points and powers, clarifying instructions along with providing feedback on game inputs. However with the very high volume of game inputs the game runners were not able to provide feedback on many of the players game inputs hence they could not serve as mentors in this capacity optimally.

Role of game runners in EVOKE

19,386 players registered for EVOKE, but the game had only 11 game runners. The original responsibility of the game runners was to manually approve all players missions and quests inputs, however this became physically impossible due to the extremely high volume of inputs. The game runners therefore provided as much feedback as possible to players’ inputs and questions, facilitated engagement and encouraged players, and provided ideas and activities for increasing participation and collaborations between players. A list of heroes was also identified for each weekly mission by the game runners.

A game runner pointed out, “My biggest contribution was to give feedback to the players, making connections with the game and their own lives and connections with other players. That is where I did the most good and what the players most appreciated.” Another game
runner said, “I helped by talking to people, by encouraging them, by encouraging some of
the less active players to participate a little bit more...also general community management
and fixing the situations where people got over enthusiastic and started attacking other
players.”

Nonetheless, the game runners were in many cases overwhelmed and instead of facilitating
the game they were increasingly answering players questions about the technical platform of
the game which created many glitches as players wanted to know why they had not received
their points or powers, whey they couldn’t upload their blogs and photos, why they had been
shut out from the site, etc. The game runners also had to deal with problematic players and
off topic discussions, while not having the technical tools to moderate the game except for
blocking certain players from accessing the game site. Spam was another issue, as it had to
be dealt with by hand by the technical team and the game runners. Further it is unclear how
many pieces of players’ game inputs were not looked at and provided feedback as there were
just too many inputs to go through.

A game runner summed up the difficulties saying,

“We had problems with the whole moderation angle. The site required moderation
but it did not have the tools to deal with people who made it difficult for other
players to play. We had no way to prevent that or police that so we had a loss of
players as essentially there was no police force present in the game. Also how many
players were challenged by the game and didn’t get a response or any attention or
bad attention...how many of those people left?”

Another game runner commented,

“There were just a lot of problems with the tools that would lead to player
dissatisfaction and players being essentially distracted from the purpose of the game
and rather focusing on the game platform. The game runners wanted to engage with
the players and work with the missions but in the end they found themselves having
to deal with spam by hand and dealing with problematic players because they didn’t
have the tools to counter them.”

While a third game runner mentioned,

“It was a very tolerant community and some players took advantage of that
tolerance. The other thing was that the Evoke game runners would sit back and wait
to see if the community itself would solve some of the problems. In many cases they
did but in some extreme cases it would have been better if we were stricter in the
moderation.”

**Proliferation of activities outside of EVOKE**

Over the course of 10 weeks players generated many outside of EVOKE content and
activities. This demonstrates that the game provided an impetus for players to delve into
issues related to social challenges and social innovation independent of the features and
activities of the game. Some examples of these types of activities that the evaluators were
able to observe include:

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**EVOKE Curriculum for Teachers**  
[http://urgentevoke.wikia.com/wiki/Calling_All_Teachers](http://urgentevoke.wikia.com/wiki/Calling_All_Teachers)

A player from California had an idea that if the teachers who were playing EVOKE could be identified, they could pool together to build something from the EVOKE model and content and transfer it to students around the world. This idea and the subsequent discussions with other teachers on EVOKE led them to decide to develop an EVOKE curriculum. The main project goals they came up with were to: create a curriculum package that teachers can use to run an EVOKE-like experience in their classes (with or without access to the Urgent EVOKE site); and to assist teachers who want help as they run it for the first time.

As they commenced work on their project they wanted the EVOKE curriculum to have three approaches: One, if the teachers had access to EVOKE itself or some other social networking site like EVOKE; Two, if teachers didn’t have access to EVOKE but to the internet; and Three, if teachers didn’t have access to the Internet at all but could access information through libraries or other people. The curriculum will ultimately be developed as a guide in an easy-to-use format and distributed as a PDF document, free of charge, to anyone who might like to use it.

The curriculum guide will contain a description of the process, specific tips to help teachers who are using it for the first time, and suggestions for guiding students as they work on their issues. The teacher will kick off the project and then serve as a mentor or guide as each group of students works through the process of finding solutions. To further develop this project a wiki page was set up independent of the EVOKE website.

**Kiva EVOKE Group**  
[http://www.kiva.org/team/urgent_evoke](http://www.kiva.org/team/urgent_evoke)

A player from England started a Kiva EVOKE group. Kiva’s mission is to connect people, through lending, for the sake of alleviating poverty. The Kiva EVOKE group currently consists of 42 EVOKE players who have made 31 loans for a total amount of $875. The first loan was made to group of teachers at a primary school in Mabonkani village in Sierra Leone. The loan will go to pay for school fees for children, furniture, plots of land, house-building materials and investments.

**EVOKE Forever**  

EVOKE forever was created by another player in England to allow people to come together, share knowledge and make things happen in key areas affecting the world outside of the EVOKE network.

The EVOKE wiki page ([http://urgentevoke.wikia.com/wiki/Urgent_Evoke_Wiki](http://urgentevoke.wikia.com/wiki/Urgent_Evoke_Wiki)) did also have some links for non game related activities, but they were not developed to any large degree.
The Evokation

The Evokation was considered to be a good idea by the players and game runners who were interviewed as it reflected an end product that built on the learning the players had acquired in the game. Further it was considered as a concrete plan which went beyond talk and could potentially make an actual difference in people’s lives. However there was confusion regarding the Evokation among the players. Many players did not know what it was and others were confused about its rules even though many blogs and news feeds had been posted on the EVOKE site about it. The situation was not helped by the fact that the rules for submitting an Evokation were changed during the game. The game runners themselves got a lot of questions regarding the Evokation, but were not able to answer all of them.

One player in South Africa said, “It is a very good idea as it makes people realize that it is a real thing and not only a game and makes them do something about social issues.” Another player commented, “I think it’s a good incentive because a lot of people want to have their work recognized nationally and internationally.” However a third player noted, “For the Evokation there were some issues with the rules and how they changed during the game. For example in the beginning I read the rules of the Evokation and I was not eligible and as I was too old, but then they changed it. So I had no time to submit one, even if I had wanted to.”

The four game runners who were interviewed had different views of the Evokation. One felt that if she was a player she would not submit one, but she did appreciate it as being the ultimate challenge of the game. Another game runner felt that,

“It was a good idea in the way it made people think through what they have to do next. The Evokation came into challenging them and made them compete and to continue learning. Though I’m not sure with the support we have available we could answer all the players who will come up ideas.”

While another game runner said,

“I think the Evokation needs to be clearer up front as to what it is going to be. I just saw tremendous confusion about it and it seemed to be an expectation management problem where the information was there but it was not presented in a user friendly way. So it was a procedural problem but the idea itself...the players understood that they have to take the learning from the missions and take it forward.”

Why Players did not send Evokations

The players who were interviewed said that time constraints were the major reason for not sending an Evokation. One player said, “No I am not and that’s partly because I am writing exams at the moment. It’s mainly due to time constraints. While another commented, “I'm not sending an Evokation as I have no time. I had to prepare for my exams and did not have time.”

Not enough time was also considered by 50.4 percent of survey respondents as being one of the major reasons for not submitting an Evokation. Some other common reasons typed in by the survey respondents included: not knowing what an Evokation is and not finding it fun or exciting.
The survey responses suggest that not having enough time is the most important factor for not submitting an Evokation. However this was still only a factor for about 50 percent of the respondents. Therefore we can also assume that there were also other factors at work such as:

- Incentives not being effective for submitting an Evokation
- The support for the Evokation not being effective (including the support for setting up collaborative efforts to develop Evokations)
- The overall Evokation process not being appealing, or easy enough to attract a lot of players

**Evokation Winners**

A total of 73 Evokations were submitted and officials from the WBI along with the game designers chose winning Evokations based on the following criteria:

- Did it address a social problem
- Was there a sustainable plan
- Was it planted in a local community need
- Was it innovative
- Did the players who sent the Evokation get a certification for their participation and and was their participation in the game positive and productive

A total of 36 winners were declared. The winners got multiple awards:

- 10 Evokations were given seed funding of US$1,000
- 22 Evokations were provided with a post-game mentor
- 15 Evokations were invited to the EVOKE summit in September
- 36 Evokations were invited to participate in the EVOKE Global Giving Challenge in August 2010

The winning Evokations were in the following themes:

<table>
<thead>
<tr>
<th>Theme</th>
<th>Winning Evokation</th>
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<tbody>
<tr>
<td>Food and Livelihood Security</td>
<td>Food Security in the informal settlement of Monwabisi Park, South Africa</td>
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<td>People value company, agriculture, China</td>
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<td>Rural and Agriculture</td>
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<td>Virtual and Digital</td>
<td>Global digital collaboration initiative</td>
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<td></td>
<td>Virtual library center, Global</td>
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Challenges to sustaining play in Evoke

Survey respondents and player and game-runner interview respondents were asked about the challenges to participation in EVOKE; overall, the key barrier or challenge is lack of time to participate. Other factors—primarily identified by the players and game runners who were interviewed—including long response times, a complex interface and generally complex requirements in terms of activities.

In this instance, both the survey data and the game-runner interviews provide information, but do not enable conclusions to be reached. Levels of participation are comparable to those of other online games, and as mentioned participation by agents based in South Africa and sub-Saharan Africa is disproportionately high—especially if factors such as the cost and availability of high-quality computer and Internet access are taken into account. Sustained participation, then, while less than optimal, appears to be in line with expectations and norms. Given the sample bias (few responses from players who were not active and were not playing EVOKE in week 10), barriers identified by survey respondents and game runners appear to be less-than-critical. This does not mean that there are no design-related barriers, or that the challenges cited by game runners are false; the importance of these challenges has not been proven in the current assessment.

The most common reason provided by the survey respondents for not liking EVOKE were not having enough time to play and engage with the game.
Further in response to another question in the survey 40 percent of the respondents said some EVOKE agents were annoying and 38 percent said that the game’s technical platform did not always work.

Overall the six players, who played the game for its entire duration, and who were interviewed had a positive feeling towards the game. However they along with the two interviewees who did not participate in the game for its entire duration provided some opinions regarding what they did not like about the game:

- Not having time to do all the mission activities and quests
- Some of the mission activities and quests feeling too much like a traditional school/university coursework
- Questions not being answered by game runners
- Annoying players and players who tried to take over the game with their own agenda
- Game trying to accomplish too much in 10 weeks

One player specifically commented, “The timeframe of the game caused me to fall behind and once that happened I didn't really have the ability or time to catch up. Most games allow you to move at your own pace. The structure of EVOKE was such that it seemed more like a marathon.” Another player said, “I remember being very interested in the first episode and what the plot line was going to be but by the next episode the first challenge has resolved itself and we were in a new location and I felt that I had to change topics really fast so it felt like more and more like work.” Yet another player summed up her feelings by saying,
“There were some people that had their own agenda and really focused on attacking other people or describing the conspiracy theory of people who created EVOKE. The second thing I didn’t like was that I or someone else would ask a question of the EVOKE help team and they were so busy so the questions got lost and they didn’t get back to you.”

Summing up his opinions about what the players did not like one game runner said,

“We had 19,000 sign up but only a small percentage of those played the game. A lot of the people who came to the site were unable to get any traction with it, to engage with it, it was too much technically for them to handle. There were a large number of people who signed up but didn’t do anything or submitted only a few pieces of evidence and so those people liked the game the least. They couldn’t figure out what to do and if they did they didn’t get any rewards or attention so they never continued.”

Another game runner commented,

“It took a long time to respond to players... some players did not get a response for a long time. Some players were saying they had too much work to accomplish in one week and some said they didn’t have the time. Some players were also trying to disrupt other players.”
Annex D:
Cost of EVOKE

Overview
This annex briefly addresses EVOKE development and operating costs.

Budget
The financial breakdown of the EVOKE project was as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Project preparation</td>
<td>$38,000</td>
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<tr>
<td>Project management and partner outreach</td>
<td>$120,000</td>
</tr>
<tr>
<td>Prototype development and beta testing</td>
<td>$92,000</td>
</tr>
<tr>
<td>EVOKE development</td>
<td>$135,000</td>
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<tr>
<td>EVOKE implementation</td>
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<tr>
<td>Marketing</td>
<td>$45,000</td>
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<tr>
<td>Evaluation</td>
<td>$30,000</td>
</tr>
<tr>
<td>Post-game rewards</td>
<td>$90,000</td>
</tr>
<tr>
<td>Total</td>
<td>$622,000</td>
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</tbody>
</table>

From these budget figures, the following can be inferred:

• Cost per registered player: $32
• Cost per active player: $94
• Cost per South African player: $615
• Cost per evocation developed: $8,520