Leveraging Human-Centered Design to Improve Gender-Equitable Adolescent Programming in DRC and Indonesia: Process Brief & Learnings

Background

Early adolescence is a time of rapid change. Cognitive development accelerates and puberty brings both physical and socio-emotional changes. Social expectations also shift, exposing very young adolescents (VYAs) to more gendered experiences and expectations.[1] Results from the Global Early Adolescent Study (GEAS), a multi-country longitudinal study exploring gender socialization and its implications for adolescent health and wellbeing, demonstrate that these changes influence treatment of boys and girls from a young age and lead to distinct gendered behaviors that can be detrimental to adolescent's health.[2] As such, early adolescence – the time between 10 and 14 years of age – is a critical opportunity for intervention.[3,4] Building VYAs' sexual and reproductive health (SRH) knowledge and skills and fostering more gender-equitable attitudes, behaviors and norms lays the foundation for their future health and well-being.

As part of its efforts to advance innovative social and behavior change (SBC) approaches for youth, Breakthrough ACTION applied human-centered design (HCD) to develop gender-equitable interventions with very young adolescents (VYA) in three of the GEAS multi-year cohort sites: Kinshasa, Democratic Republic of the Congo (DRC) and Denpasar and Semarang, Indonesia. HCD was selected as a methodology that would allow for meaningful youth engagement in designing programs that shape their lives (See Box 1).

BOX 1: WHAT IS HCD?

Human-centered design is a way of thinking that places both the people that programs serve and related stakeholders at the center of the design and implementation process. With emphasis on research, ideation, iteration, and prototyping, this process seeks to achieve novel solutions to complex problems. While there are many different HCD processes, all of them, at their core, are rooted in empathy: a comprehensive understanding of the stakeholder(s) involved in the challenge at hand.

In Kinshasa, DRC, the HCD process was used to iterate and improve Growing Up GREAT!, a multi-level gender-transformative SRH program for in-school and out-of-school VYAs implemented by Save the Children. The HCD process set out to address several challenges in engaging caregivers for the family component of Growing Up GREAT! that emerged during the pilot. In Indonesia, the HCD process was designed to build on SETARA (Semangat Dunia Remaja or Teen Aspirations), a two-year comprehensive sexuality education (CSE) intervention implemented in junior high schools in Indonesia under the Explore4Action project.[5] The HCD process sought to design complementary interventions that cut across the social-ecological level, reaching not only VYAs, but also their caregivers, teachers, community leaders and health providers – to promote more equitable gender and social norms in support of adolescent health and wellbeing. This document shares the key steps in the HCD process and the resulting concepts and prototypes of potential behavioral interventions to foster a supportive equitable environment for VYAs in DRC and Indonesia.

Process

Breakthrough ACTION's HCD process in the DRC and Indonesia leveraged existing data from the GEAS instead of conducting the typical "define" phase, which seeks to use qualitative inquiry to explore and understand the context and formulate insights that uncover new truths. The process therefore began by creating a shared understanding of the objectives for the design phase by engaging key stakeholders to create a shared "intent statement" that guided the work across both sites. The intent statement drew on findings from the GEAS to date to define the current state and establish shared objectives of what we wanted to achieve. In each country, the project then formed a Core Design Team (CDT) - made up of a multi-disciplinary group that coalesces the four voices of design—intent, design, experience and expertise—and the necessary diversity of skills and experience to drive the design process , who created intent statements tailored to each country.

The CDTs established "design challenges", framed as "How might we….?" statements, based on GEAS and other research (see Table 1). In the DRC, the questions focused on addressing parent-child communication, as that was a specific gap identified in the Growing Up GREAT! program. In Indonesia, the design challenges sought to explore opportunities across the social-ecological model, with a focus on the issue of gender norms and gender-based violence and their impact on mental health and sexual and reproductive health (SRH) outcomes.

Table 1: Design Challenges

DRC	Indonesia
• How might we create accessible tools to support parents in SRH and gender equality education in the household? • How might we prepare parents to approach and support their children in the face of the curiosity that characterizes puberty? • How might we talk about sexuality, puberty, gender equality and health in a less intimidating way? • How might we use other key actors and influencers to support parents in educating their children about SRH?	• How might we help VYAs access information about gender? • How might we create opportunities for boys to support each other? • How might we help VYAs and their parents feel comfortable talking with each other about puberty, sexuality, and gender roles? • How might we change the social expectations for how boys and girls should act? • How might we stop bullying and/or harassment based on gender? • How might we work with religious leaders to improve gender equity? • How might we ensure communities support and provide equal opportunities for boys and girls? • How might we increase institutional support for gender equity for VYAs?

The project then held two- to three-day idea generation workshops in each country with those who the issue most affects, bringing together a diverse range of perspectives from adolescents, mothers and fathers of adolescents, and other influential community members to generate ideas or concepts for how to promote a gender equitable environment for VYAs based on the design challenges. In Indonesia, VYAs in the idea generation workshops repeatedly emphasized the impact of bullying related to gender-based attributes and norms on their mental health and well-being. As such, prototypes that could impact this outcome were prioritized.

Following the workshops, the CDT evaluated the ideas generated and prioritized a sub-set of concepts for subsequent prototype design and testing (See Box 2 for definitions). This requires getting tangible as quickly as possible by iterating through possible solutions and scenarios to quickly learn what is desirable (through a low-fidelity test), what is feasible (through a medium-fidelity test), and what is scalable (through a high-fidelity test) (See Box 3 for further explanation of these testing phases and Figure 1 for an overview of the process). During this process there are intentional points of convergence – where we seek to expand our ideas and consider all opportunities – as well as divergence – where we learn from feedback and hone our focus.

BOX 2: CONCEPTS AND PROTOTYPES

A **concept** is an idea that details the way it is foreseen in a tangible reality. It answers the questions: What, how, when and who? Once concepts detail the way ideas should be materialized, prototypes are built.

A **prototype** can take any shape: a song, a poster, a role play, a drawing, a game, or anything else. Prototypes are the means to show, interact and receive feedback from users through a concrete object or activity. They are built quickly with inexpensive materials and iterated upon according to the collected feedback.

The CDTs developed rapid low-fidelity prototypes of each concept and tested them with the intended audience. For example, in Indonesia, the prototypes were tested over the course of six days with 72 VYAs, 87 parents, 33 school teachers/headmasters, two religious and community leaders and nine city representatives (see Table 2). During testing, the CDT debriefed regularly to discuss and analyze feedback and observations. At the end of the testing period, the CDT held a sprint wrap-up session to evaluate the findings for each prototype and make recommendations on which o nes to move forward with.

In Indonesia, the CDT continued with medium-fidelity testing in Semarang, Central Java. This involved an adaptation workshop with a range of participants (see Table 2) to refine the concepts, followed by development of medium-fidelity prototypes, and then testing over a period of three days. At the end of the testing, the team analyzed the results and made recommendations for moving to high-fidelity testing.
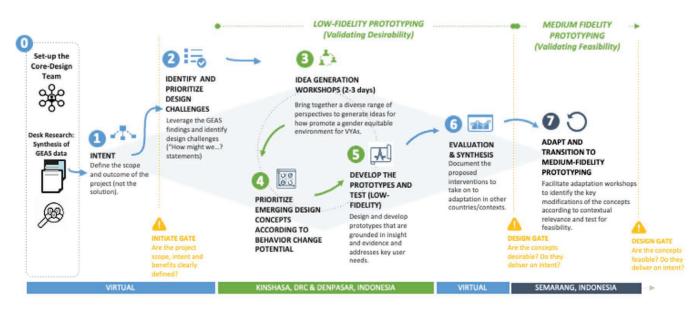
Figure 1: Overview of the HCD process

Table 2: Participants in idea generation and testing in Indonesia

	PRIMARY PARTICIPANTS	INFLUENCERS			
	VYAs (10-14 years old)	Parents of VYAs	School teachers and Headmasters	Religious and community leaders	Subject matter experts and city representatives
RATIONALE	Understand VYAs' values and barriers to gender equity, identifying creative ways to reach other VYAs and maximizing the appeal and relevance of the interventions in their everyday lives.	Parents are one of the primary sources of information and support for VYAs.	Understand barriers and opportunities in the school environment and explore teacher attitudes and practices.	Gatekeepers who can organize or integrate other activities that deal with gender.	Provide technical know-how about gender and SRH.
IDEA GENERATION	12 girls and 13 boys	10	6	6	12
TESTING (LOW-FI)	72 girls and boys	87	33	2	9
ADAPTATION WORKSHOP	16 boys and girls	12	4	1	0
TESTING (MED-FI)	48 boys, 56 girls	53	15	1	7

Results

DRC

In the DRC, six prototypes were developed and tested: three games, two reflection guides, and a monitoring approach. Based on the results of the evaluation and synthesis, each prototype was provided a ranking for potential impact and anticipated effort; results were graphed and four of the highest impact, lowest effort prototypes were prioritized for future testing, as follows:

Church Game

This question and answer game was designed to open conversations and create dialogue between parents and VYAs about personal information, such as their children's interests and memories, as well as puberty and other SRH issues. Designed to be held in a church setting, a place where participants

in co-design workshops identified as desirable, parents and VYAs work together in pairs to take turns answering questions and then discussing the answers together. Participants reported enjoying the game, as it gave them opportunities to learn more about each other, and the game format appealed to both parents and VYAs. However, the CDT found that VYAs were generally shy to share their views, and that stereotypical gender roles were still engrained in parents' behaviors. The CDT recommended reducing the number of families playing at one time, and to identify alternative ways to encourage VYAs to participate more fully and address gender issues.

Card Game

The card game is a standard deck of cards containing additional conversation starter cards around SRH and gender equality. Parents and VYAs play a card game of their choice together and, when a conversation starter card appears, take a pause to discuss. Generally, participants were highly receptive to this format, allowing for rich conversations. However, without a facilitator to guide the conversations, participants would often skip the prompts to continue playing the card game. The CDT recommended making sure the participants were fully informed of the purpose of the prompt cards, that there is a trained facilitator who can support the conversation and prevent misinformation on SRH topics, and to have the information be in the local language, age appropriate, and visually attractive.

Calendar Manaka

This prototype is a package made up of a one-week calendar and 16 accompanying activity cards that suggested ideas for ways that parents could engage with their children in non-household activities. These activities were designed to open conversations around SRH, gender-based violence, and gender equality issues. Participants found the calendar easy to use, but overall the format was more conducive to using at the weekend due to busy weekday schedules. Additionally, the activity cards were often too lengthy, with an excess of explanation that participants found cumbersome. The CDT recommended simpler, less complicated activity cards, and a longer calendar to allow for participants to engage on their own time.

Board Game

The board game prototype uses components from another Growing Up GREAT! board game designed for VYAs, adding parents and caregivers to the game to engage participants in SRH and gender conversations. Participants overall appreciated the game and valued the space to talk, but the family dynamics often made it more difficult for VYAs to actively participate. The CDT recommended having a facilitator who can mediate the participant dynamics and prevent misinformation, as well as prioritizing weekends over weekdays to play.

Indonesia

In Indonesia, participants in the co-design workshops created a total of 27 concepts or ideas. The CDT combined and refined the concepts and selected eight that showed the highest potential to impact the intermediate outcomes based on a set of "design imperatives", or evidence-based attributes that the concepts must possess. The CDT then created low-fidelity prototypes of the eight concepts. Based on feedback gathered during low-fidelity testing, six of the eight concepts advanced to medium-fidelity testing in Semarang, where specific aspects of each design concept were further distilled and adapted to the local Semarang context before testing.

Evaluation and synthesis of the medium-fidelity testing resulted in discontinuation of one concept. As a result, five concepts will move forward to high-fidelity testing, as follows:

Family classes

The family classes emerged out of the need and desire to help parents and children spend more time together and be more comfortable discussing gender, sexuality, and bullying. This concept entails a series of dynamic classes for adult caregivers/parents of VYAs and VYAs that include traditional games, communication skills building activities, and other exercises that surface gender norms and create space for critical reflection and discussion about those norms. Invitations to join the Class could be improved by more clearly explaining what the classes were about, what they will be doing, and what the expected benefits are. The Family Classes may be a natural complement to certain aspects of SETARA, especially if held at schools where SETARA is being implemented.

Interactive video

This concept includes a series of short videos that are intended to expose and initiate collective identification, reflection, and discussion about gender norms. Each video contains several multiple-choice questions that prompt participants to vote on how they think others would respond to different scenarios. The collective, anonymous votes are displayed to reveal how the group voted and a facilitator leads the group through a discussion, which is designed to expose differences between perceived norms and actual norms and create a space for critical reflection. Audiences liked the video because it was novel, entertaining, and realistic and parents lingered long after their session concluded. A trained, dynamic facilitator is needed to work with VYAs. Small group discussions emerged as a favorite part among VYAs, who appreciated getting to express what they feel.

Creative exhibition

The creative exhibition is designed to encourage boys, girls, and families to recognize, empathize, and reflect on how bullying affects others. It is comprised of a four-exhibit journey that leverages technology and interactive digital media to enhance youth engagement and provide a pivotal experience with bullying that catalyzes behavior change. The exhibits include digital polling to capture initial attitudes towards gender-based bullying; an immersive exhibit that allows visitors to experience bullying through testimonials of victims, art and virtual reality; the interactive video (see above); and finally, a self-facilitated reflection space that encourages visitors to express themselves through art (drawing, modeling, writing, etc.) and create public commitments to become agents of change. Attendees valued the opportunity to express themselves through art and generate commitments for the future, while virtual reality headsets and audio testimonials were some of the highest points in the experience.

Safe Schools Toolkit

The Safe Schools Toolkit merged three stand-alone concepts (teacher training, teacher recognition, and reporting system) from low-fidelity testing into a new diagnosis concept designed to involve all the key stakeholders in the school (parents, teachers, students, headmasters and other staff members from the school). The toolkit includes four steps: pre-screening to understand whether the school would benefit from the approach; a self-assessment/diagnosis to evaluate the current state of the school environment in terms of gender equality, bullying and support systems; formulation of a roadmap based on critical areas from the diagnosis; and post-evaluation tools to measure improvement. As this concept was tested at low fidelity in Semarang, further testing is required to get more evidence about feasibility and scalability.

Multi-stakeholder forum

The Multi-Stakeholder Forum convenes leaders from key public departments, including the Department of Health, the Department of Child Protection and Women's Empowerment, the Department of Family Planning, the Department of Education and School Headmasters to leverage and strengthen existing programmatic infrastructure to create gender equitable environments for VYAs. While these departments all have work related to VYAs, they had no existing mechanism to coordinate around the issues of VYA SRH, gender-based violence and mental health. The prototype consisted of a workshop that focused

on uncovering opportunities for collaboration and strengthening existing programs. All participants recognized bullying as an issue that needs addressing and agreed that schools and parents have a significant role. School-based interventions around bullying tended to dominate the discussion, therefore in high-fidelity prototyping there is a need to identify appropriate community-level forums as well.
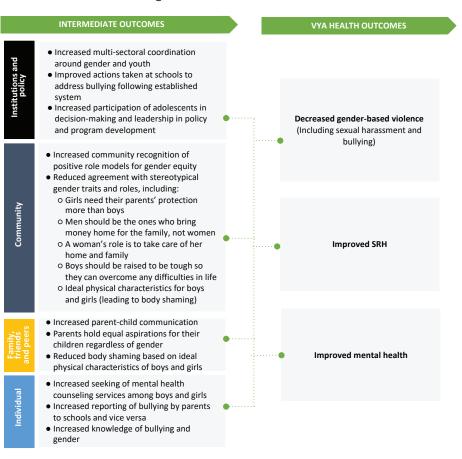
These five concepts are shown in the working theory of change that illustrates how each concept might improve intermediate and long-term health outcomes (see Figure 2).

PROTOTYPED CONCEPTS & DESIGN IMPERATIVES

Concept	Design Imperatives
Family Class	② ④ ⑤ ⑥
Interactive Video	① ② ③ ④ ⑤ ⑥
Creative Exhibition	① ② ③ ④ ⑤
Safe Schools Toolkit	⑤ ⑦
Multi-stakeholder Forum	⑤ ⑥ ⑦ ⑧

DESIGN IMPERATIVES' KEY

① 1. Role modeling
② 2. Diffusing positive social norms
③ 3. Observed social normative decision making
④ 4. Empathy building
⑤ 5. Envisioning alternative futures
⑥ 6. Collective reflection and discussion
⑦ 7. Building supportive regulatory environment
⑧ 8. Involve multiple sectors (Health, education, agriculture…)
⑨ 9. Confront power imbalances

INTERMEDIATE OUTCOMES

Institutions and policy
- Increased multi-sectoral coordination around gender and youth
- Improved actions taken at schools to address bullying following established system
- Increased participation of adolescents in decision-making and leadership in policy and program development

Community
- Increased community recognition of positive role models for gender equity
- Reduced agreement with stereotypical gender traits and roles, including:
  ○ Girls need their parents' protection more than boys
  ○ Men should be the ones who bring money home for the family, not women
  ○ A woman's role is to take care of her home and family
  ○ Boys should be raised to be tough so they can overcome any difficulties in life
  ○ Ideal physical characteristics for boys and girls (leading to body shaming)

Family, friends and peers
- Increased parent-child communication
- Parents hold equal aspirations for their children regardless of gender
- Reduced body shaming based on ideal physical characteristics of boys and girls

Individual
- Increased seeking of mental health counseling services among boys and girls
- Increased reporting of bullying by parents to schools and vice versa
- Increased knowledge of bullying and gender

VYA HEALTH OUTCOMES

Decreased gender-based violence
(Including sexual harassment and bullying)

Improved SRH

Improved mental health

Challenges

Several challenges affected the HCD process. In both countries, the expectation was that the significant existing data from the GEAS could replace the typical HCD "define" phase and therefore be able to dive straight into co-design and testing. However, not including the "define" phase of HCD for this specific design challenge meant that the CDT lacked specific insights – for example in the DRC the design work would have benefited from additional time to specifically gather insights into the household context and dynamics, especially how this influenced conversations and dialogues between parents and VYAs. Furthermore, security and mobility constraints shortened the timeline for activities and the team had to practice flexibility in regard to scheduling planned activities and approaches to testing. In Indonesia, it was challenging to identify "How Might We…?" statements that had the right level of specificity to address issues across the social ecological model without going too broad. It was also difficult to mobilize people for testing so soon after co-design. In both countries, "How might we…?" questions that guided the co-design had to be simplified considerably to ensure understanding among VYAs, parents and other stakeholders.

Lessons Learned

Despite the challenges, the CDT learned many lessons from the HCD process. It is important to leverage local expertise to strengthen the design team. The capacities of local participants should also be trusted and encouraged, and all materials should be translated to local languages if not already in existence. Participants should be comfortable with their groups and the process overall; the CDT should not hesitate to shift groups if people are not participating, or to bring examples of other projects to help participants better understand the HCD methodology. Additionally, security and logistics should be taken into account, especially in the context of COVID-19.

When working with VYAs, it is important to ensure they are comfortable and feel safe. The CDT should take time to ask questions and encourage VYAs to participate at their own pace. Use clear, concise language, use role playing, drawing, and unexpected materials to make them laugh and relax into the exercises. Do not hesitate to ask adults to leave the room if VYAs are uncomfortable, and bring trusted people in as facilitators. Ultimately, the HCD process was successful, and clearly demonstrated the benefits of co-designing interventions for VYAs with them and their communities to create interventions that are desirable, feasible, and scalable.

Next Steps

In Indonesia, the five concepts that passed the medium-fidelity design gate will advance to high-fidelity testing early in 2023 where they will be assessed for scalability. Scalability will largely be assessed by the ability of these concepts to work together as a package, in addition to the level of institutional support and buy-in for this package. This iteration will also seek to integrate some of the DRC concepts and prototypes on improving parent-child communication into the family class in Indonesia. Key considerations for high-fidelity testing include:

- How well does the design deliver on the intent?
- How can we amplify the gender component of each concept and across concepts to most effectively surface and address gender norms?
- How can we expand beyond the very viable school setting and into communities?
- How can we leverage social media to strengthen these concepts as a cohesive package?
- How can we work together with other existing programs and partners to ensure complementarity?

In mid-2023, a suite of prototype packages will be available that can be piloted in Indonesia and adapted to other contexts.

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[1] Blum, R. W., Mmari, K., & Moreau, C. (2017). It Begins at 10: How Gender Expectations Shape Early Adolescence Around the World. Journal of Adolescent Health, 61(4), S3–S4. https://doi.org/10.1016/j.jadohealth.2017.07.009.

[2] Moreau, C. et al. (2021). Gender and Health in Very Young Adolescents. Journal of Adolescent Health, 69(1), S3–S4

[3] Igras, S. M., Macieira, M., Murphy, E., & Lundgren, R. (2014). Investing in very young adolescents' sexual and reproductive health. Global Public Health, 9(5), 555–569. https://doi.org/10.1080/17441692.2014.908230

[4] World Health Organization. (2011). The sexual and reproductive health of young adolescents in developing countries: Reviewing the evidence, identifying research gaps, and moving the agenda. Report of a WHO technical consultation. Geneva. https://apps.who.int/iris/bitstream/handle/10665/70569/WHO_RHR_11.11_eng.pdf.;jsessionid=EBC86DB1A58AB4A2B9BADDCBEE3773F1?sequence=1

[5]   Gender Norms and Adolescent Development, Health and Wellbeing in Indonesia: Results from the Global Early Adolescent Study and the Youth Voices Research conducted in Indonesia between July 2018 and July 2019. September 2019. Available at: https://static1.squarespace.com/static/54431bbee4b0ba652295db6e/t/5da62619aaca7850a9f93f9f/1571169836763/E4A-National-Report-single.pdf