GAME ON: BUILDING CAPACITY WITH A FUN, ENGAGING SCM DIGITAL GAME

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Why Health Gaming?

1. Help health workers, youth acquire or update their supply chain management skills remotely, on their own schedule.

2. Gaming is fun and interactive and can be implemented to build a learning and sharing community.

3. Accessible through mobile phones, tablets, or laptops; skills can be acquired or refreshed outside of traditional classroom-based trainings.
Health Games: Playing, Measuring, Learning

Individual Learning Perspective
- How good am I compared to others?
- Which topics should I learn, which ones not?
- How can I achieve the greatest success with a minimum of effort?

Organisational Impact & Measurement Perspective
- Where do we stand?
- Where are interventions needed?
- Why are there performance differences between teams/departments?
- Are investments paying off? Where should we intervene to make a difference?
Learning Progress is Represented like a Stock Index

Average group performance (benchmark)

Individual performance
Comparing Performance Across Teams or Groups

The Learners are Better in Topic 1

A notable difference between topic 1 (green) and topic 2 (red), suggesting the need for an intervention in topic 2.

The grey curve is the mean index over both topics; at the moment the index is 281.
Extending Learning from Periodic to Continuous

Health Games offers the ability to extend learning from a series of workshops to an entire year (compared to days) and provides impact analytics to measure progress.

Cyclic Learning

Continuous Learning

Gamification with Health Games

self motivated learning based on online games, which predict/show areas for further learning

collective learning curve

Organized Training

Self motivated learning based on online games, which predict/show areas for further learning
Our Gaming Initiatives

How JSI has used gaming
Current games on the yeepa® platform

• **Healthcare Supply Chain Management**
  Supply chain for beginners! An introduction to key supply chain concepts based on JSI’s Supply Chain Manager’s Handbook

• **Your Choice, Your Future!**
  A three-level game of increasing difficulty. Creates awareness around contraceptive choices and helps separate facts from myths

• **Healthy Lifestyles**
  A three-level game of increasing difficulty. Equips you with tips to help make informed decisions to lead a healthy lifestyle
The Supply Chain game has been played to introduce key health supply chain management concepts

- **Health Games launch - Nairobi, Kenya**
  - 15 health workers from counties played the game, identified the potential for linking the skills improvement to CMEs as a way to highlight supply chain as a key skill and motivate health workers to play continuously

- **The SOLVE workshop - Nigeria**
  - The SC game was highlighted as the participants' favourite learning session and created supply chain learning communities across cities

- **IAPHL Nigeria Country Chapter**
  - Participants appreciated the ‘play and learn at your own time’ modality.
  - Participants excited at the potential for game to be introduced in other countries to foster friendly competition on supply chain skills between countries and to include additional supply chain modules to build capacity

- **TechNet, VAN Dakar Conferences**
  - Competition Over 50 gamers from West and Central African Ministries of Health and partner organizations competed during the demonstration
Reproductive Health: Your Choice, Your Future!

- Your Choice, Your Future! is an online game that aims to promote contraceptive awareness among youth
- Game launched October 11th and 12th in two locations in Nairobi, Kenya; gaming ended December 1st
  - 11th October - the Day of the Girl child - at the Kenya Institute of Mass Communication (KIMC)
  - Launch included materials from Bayer, service provider from MOH clinic to address questions from youth

In 2 days, 154 youth registered on the platform and played over 20,000 questions! A facebook page and weekly incentives were provided to encourage continuous gaming over a 6 week period.
Building Health Lifestyles

• Building Healthy Lifestyles is an online game that aims to help learn about non-communicable diseases and wellness in general

• Launched the game November 14th, 2017 on World Diabetes Day

• Flash Games: Kenya Vs. Germany:
  • JSI and GIZ invited 20 of the top gamers to compete with 54 GIZ employees in Germany in a flash game for the Building Healthy Lifestyles game.
  • The Kenya team beat the GIZ employees and prizes were awarded to the top 5 Kenyan winners for most points earned during the 2 hour long competition.
Results Summary

Hitting the Target Population
Gaming allows youth to access & learn at any time.

1,010 players registered

53% are female. The mean age is 24.

244,436 total questions answered over time

LEARNING OVER TIME

Healthy Lifestyles Game
- Week 48: 361
- Week 47: 385
- Week 46: 356
- Week 45: 417

Contraception Game
- Week 48: 379
- Week 47: 448
- Week 46: 385
- Week 45: 383

Number of players with 50%+ success rate increased over time in both games.

295 Followers from 31 countries

LEARNING BY GAME

Contraception had the highest number of correct items answered.

PERCEPTIONS OVER TIME

18% more users reported consuming no alcoholic beverages.

8% more contraception game users did not believe birth control promotes sexual behavior.

Week of Oct 13
- Kenya Institute of Mass Communication (Keyole)

Week of Oct 23
- ICIK, Mwitu
- Kws Njenga
- Undugu
- Family of Hope (Kiira)

Week of Oct 28
- AOWICT (African Center for Women, Information and Communications Technology) (Kileleshwa)

Week of Nov 6
- AOWICT (African Center for Women, Information and Communications Technology) (Pumwani)

Week of Nov 13
- Kenya University

Week of Nov 27
- United States International University-Africa

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244,436 items played in total over 8 weeks

Most active week overall was week 46 (Nov 13-17) with 68,219 items played

- The primary driver was likely the World Diabetes Day Flash Games Event on November 14 both because players needed to qualify to participate and because it included 2-3 hours of intensive gaming.

Most of the items played week 46 were for contraception level 1.
Players received **highest most consistent correct scores** with the Contraception level 1 game (highest mean percent score of 84%; range of 64-93%) which they played for the longest period.

Players received an average of 78% and 73% correct scores for levels 3 and 2, respectively, with much wider ranges for each level since they were played for a shorter duration.
Players DID Learn by playing the Contraception Game

Weekly yeepa-Index: Contraception L1-3
Players > 100 Valid Items and Successrate > 50%

The number of players who achieved a success rate of more than 50% increased over time.

A dip in week 48 may be attributed to a large number of new users who didn’t meet the 50% threshold since they may not have been as familiar with utilizing the jackpot feature or the content as the continuous users.

Oct 9th

Nov 27th
Healthy Lifestyles: Percentage Correct Responses by Level

Level 3 had the highest most consistent correct scores of 89% followed by level 1 of 83% and level 2 of 80%. This is because most users qualified to play level 3 at the end of the gaming calendar. Questions were answered correctly to earn more points for the grand prize.

Performance for all levels were distributed within or around a 16% range:
- Level 1: 69% to 94%
- Level 2: 69% to 92%
- Level 3: 73% to 99%
RH perception questions: Dispelling sexual myths

Do you feel that access to birth control encourages engagement in Sexual Activity?

8% MORE users in the last week of gaming did not believe that birth control encourages engagement in sexual activity compared to the first week of gaming (Week 41).

NOTE: Because data derived is anonymous, the profile of users who played in the first week cannot be compared to those who gamed in the last week. There will be some overlap and some differences, however this can only be implied.
Healthy Lifestyle perception questions: Barriers to Exercising or Seeing a Doctor

Barrier to exercising or seeing a doctor

What would you say are the barriers in your daily life to seeing a medical professional for prevention of disease?

- Clinic/hospital are not conveniently located 24.5%
- I am healthy, I do not need to see a medical professional 22.6%
- The cost of seeing a health provider is too high 28.3%
- Wait times to see a medical professional are too long 24.5%

What would you say are the barriers in your daily life to engaging in physical activity?

- I am lazy to exercise 22.0%
- I don't need to exercise 26.1%
- No safe or affordable places/spaces to be physically active near home/school 33.1%
- Too busy/not enough time 18.8%

In both cases, affordability and convenience were barriers in engaging in healthy behaviours.
Continuous gamers enjoyed the convenience of playing at any time

Usage patterns suggest that the unrestricted access to the game after registration enabled users to play when and where they wanted. This suggests that trying to offer the same learning content during face-to-face workshops or at specific times might restrict engagement and learning. Providing a tool that offers youth the freedom to access, play and learn at any time appears to be a successful route to reaching youth with important content.

Each line represents the number of items played by each continuous gamer over time.
What we learned

• Youth had limited knowledge of contraceptive methods, they found gaming a fun way to learn more and kept playing because the questions kept changing
• The youth preferred gaming to workshops or seminars
• Incentives such as online weekly prizes are important to engage youth and encourage continuous gaming
• Linking gaming with “offline resources” adds value beyond learning
  • Having a nurse at both launches helped address questions about contraceptive methods and access to youth friendly health services in the area.
  • The Health Games Facebook page enables continuous engagement

Students at KIMC interacting with the game. Photo by Edwin Ombasa.
How to Play

• Questions are designed as multiple choice
• You are playing in direct competition with members of your group.
• You can only proceed to the next question if all the members of the group have answered the question.
• You have a maximum of 45 seconds to answer each question.
• To maximize your score use the jackpot feature. If you are certain of your answer, click on the jackpot on the upper right hand corner before you click on the answer, to double your points. Get the answer wrong and lose all your points!!!!
Instructions to Log In

1. www. health-games.org
2. Select Registration Code (once you have created your account, for subsequent logins you will click on the ‘Login tab’).
3. Enter Registration Code 4040
4. Create Account
5. Fill out your account details in particular Nickname, Email and Password.
6. Click on Submit. Your nickname and password are now your login credentials for subsequent logins so please remember them!!
7. Click on the Play tab above and select the Introduction to Healthcare Supply Chain Management game
Questions for Discussion

• What did you like about the game?
• What wasn’t so fun/appealing?
• What are some of the challenges to consider in gaming for health?
• What might be some potential applications for health gaming for your program, country or setting? Why might this type of gaming offer value over a current approach