Creativity, Creative Problem Solving, and Improvisation

Creativity is not the clever rearranging of the known. (Viola Spolin)
Objectives of the IDIA

• to provide a forum for robust, critical, evidence-based, and actionable discussions on how to deal with the *transforming* global socio-technical and political landscape and the concomitant impacts on ICT4D as a field of study and practice

• to *strengthen* connections between the research and the policy world, as well as between the various global and regional collectives and hubs of ICT4D research
How this came about

• First teach a person to develop to the point of their limitation and then-pfft!-break the limitation. (Viola Spolin)

• Part 1:
  • Creative Problem Solving
  • Lateral Thinking
  • Design Thinking

• Part 2:
  • Improvisation
  • Applied Improvisation
A Little History of CPS

- Alex F. Osborn developed a CPS process
  - 1939 concept of “brainstorming” was created (How to “Think Up”)
  - 1948 “Your Creative Power”
  - 1954 started the Creative Education Foundation
    - Co-founder of the CEF’s Creative Problem Solving Institute
    - Developed the Osborn-Parnes (Sidney Parnes) Creative Problem Solving Process

- It is easier to tone down a wild idea than to think up a new one.

- Brainstorming
  - No criticism of ideas
  - Go for larger quantities of ideas
  - Build on each others ideas
  - Encourage wild and exaggerated ideas

- Generate "silly" ideas to create new ideas and to change the way people think
Increase awareness and understanding of creativity individually & organizationally

Develop a more creative attitude curiosity and sensitivity to problems & opportunities for improvement

Develop a balanced, complete approach to problem solving solve problems effectively & develop complete, integrated solutions

Develop the ability to apply this approach group interactions

Develop the motivation and enthusiasm to impart/share this improve upon these ideas

Innovation Quotient quiz can be taken online (free)
Basadur Profile ($20 for academic individual cost otherwise $30)
Definition of Creativity

\[ C = f(K \times I \times E) \]

- \(C\) = Creativity
- \(K\) = Knowledge
- \(I\) = Imagination
- \(E\) = Evaluation

“Creative thinking may mean simply the realization that there's no particular virtue in doing things the way they always have been done”; Rudolf Flesch
Ways of **Gaining** and **Using** Knowledge

"When one door closes another door opens; but we often look so long and so regretfully upon the closed door, that we do not see the ones which open for us.\" *Alexander Graham Bell*
Creative Problem Solving Profile

25 – 37 – 33 – 24
17 – 37 – 33 – 33
22 – 21 – 28 -- 29

COMPUTERS ARE USELESS. THEY CAN ONLY GIVE YOU ANSWERS. PICASSO
Challenge Map Example

Problem Selected For Solutions

HMW get the stock price up?

HMW achieve consistent top-line and earnings growth?

HMW get analysts excited about our future?

HMW adjust our capital structure?

HMW take advantage of current markets to build mass?

HMW improve cash flow to 100% of net income?

HMW communicate our value creation strategy credibly?

HMW purposefully plan for consistent top line earnings and growth?

HMW commercialize products faster & more effectively?

HMW get more product ideas?

HMW work earlier with our customers?

HMW change business mix to assure consistency?

HMW get management to emphasize cash flow performance?

HMW emphasize cash flow incentives and culture?

HMW analyze our SBU cash flow capabilities?

HMW get new product platforms?

HMW prune business to free up resources?

HMW decide on desirable businesses to get into?

HMW improve our product mix?

HMW get more knowledge about new markets and new expertise?

HMW determine the types of businesses we want to be in?

HMW encourage commercialization?

HMW create a process for faster commercialization?
Creative Problem Solving Institute Conference

• CPSI -- the world’s longest-running creativity conference
  • University of Buffalo

• Look, Listen, Laugh, Lead: Get Serious About Funny Business
  • In this session, participants will learn the basic and guiding principles of *improv* and end the day with a clear vision of how they might use them to their advantage in work and in life, creating a supportive and creative climate for themselves and all those around them.

• Cartoon Thinking
  • Learn and Experience the Creative Power of Cartoon Design

• Seeing Conflict Differently

That which is not yet known comes out of that which is not yet here. (Viola Spolin)
Improvisation History

If the environment permits it, anyone can learn whatever one chooses to learn (Viola Spolin)
Spolin family

• Spolin worked primarily with children and recent immigrants to the USA, most of whom knew very limited English so she turned her acting lessons into games.

• I am a son of Viola Spolin, so I was in some of her theatre game workshops at Hull House, Chicago. It was her influence, which led me to read book after book of fairy tales from many cultures. (Paul Sills)

• ... we each (need to) get out of our own cultural sphere and get to know people who are not like us, and try to understand what they need. (Aretha Sills)
Improvisational practice has the power to improve the quality of human lives, communities, and organizational relationships.

- **AIN 2019 Conference** – Stony Brook, NY -- Alan Alda Center for Communicating Science
- **AIN 2020 Conference** – Avila, Spain (July 30 – Aug 2)
Improv in Kazakhstan -- Shared Words

• Art of improvisation included in UNESCO intangible cultural heritage list

• A contest centered on improvised oral poetry spoken or sung to the accompaniment of traditional musical instruments between *agyns* (*improvisers*)
  • Think Rap or Hip-hop music

• 6 principle styles of *aitysh*
  • *Alym sabak* – short exchange (2-4 line verses) of poetic words
  • *Tabyshmak* – starts with riddle question and the opponent gives the answer
  • *Sanat* – wisdom
  • *Checkendik* – eloquence (emotional)
  • *Kordoo* -- insult
  • *Tamalyashaluu* – entertainment

• There is a short and long form as does modern-day improv
What is improvisation (improv)

• In its purest form
  • Dialogue
  • Collaboration
  • Present time

• It is about
  • Relationships
  • Cooperation
  • Creativity

• It’s an adventure in the present

• Involves open worlds
Rules of improv
(Lessons from The 2\textsuperscript{nd} City)

• There are rules in improv???
  • How can that be?
Listening Is a Muscle

Treat every sentence spoken to you as a gift.
Yes, And: How to Make Something Out of Nothing
How to Build an Ensemble
Co-Creation
Change

• You don’t have to be a wizard to change.
Accepting Failure & Taking Risks

• Ahougá (Axyra) moment

• Success consists of going from failure to failure without loss of enthusiasm (Winston Churchill)

• The greatest teacher, failure is (Yoda)

• Do not judge me by my successes, judge me by how many times I fell down and got back up again. (Nelson Mandela)
Follow the Follower
Lateral Thinking

• The term was coined in 1967 by Edward de Bono (6 Thinking Hats)
• Five pieces of coal, a carrot and a scarf are lying on a hill near a remote home. Nobody put them there, but there is a perfectly logical reason why they should be there. What is it?
Is this the answer
Be aware of the box:
--Normal
--Routine
--What we hold true
--It has boundaries
Improv gives us the courage and the means to step out of our boundaries both self-imposed and culturally-imposed.

(Dr. Raquell Holmes – improvscience.com)
If ... then ... else – what are the boundaries

- The Kalahari Desert in Africa
When Artificial Intelligence Meets Applied Improvisation

• Jeff Pressing
  • Improvisation: Methods and Models (1987)
  • AI and jazz improvisation
  • ... the successful application of AI concepts to improvisation rests to a large degree on the appropriateness of considering improvisation to be a kind of problem-solving

• Lara J Martin, Brent Harrison, and Mark Riedl
  • Improvisational Computational Storytelling in Open Worlds (2016)
  • ... the goal is to develop an AI system that can communicate with humans at even some of the more abstract worlds we live in that improvisers are good at creating

• Kory Mathewson
  • Improvised Comedy as a Turing Test (NIPS 2017)
  • Improvised Theatre Alongside Artificial Intelligences (AIIDE-17)
Yes And Thank you

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