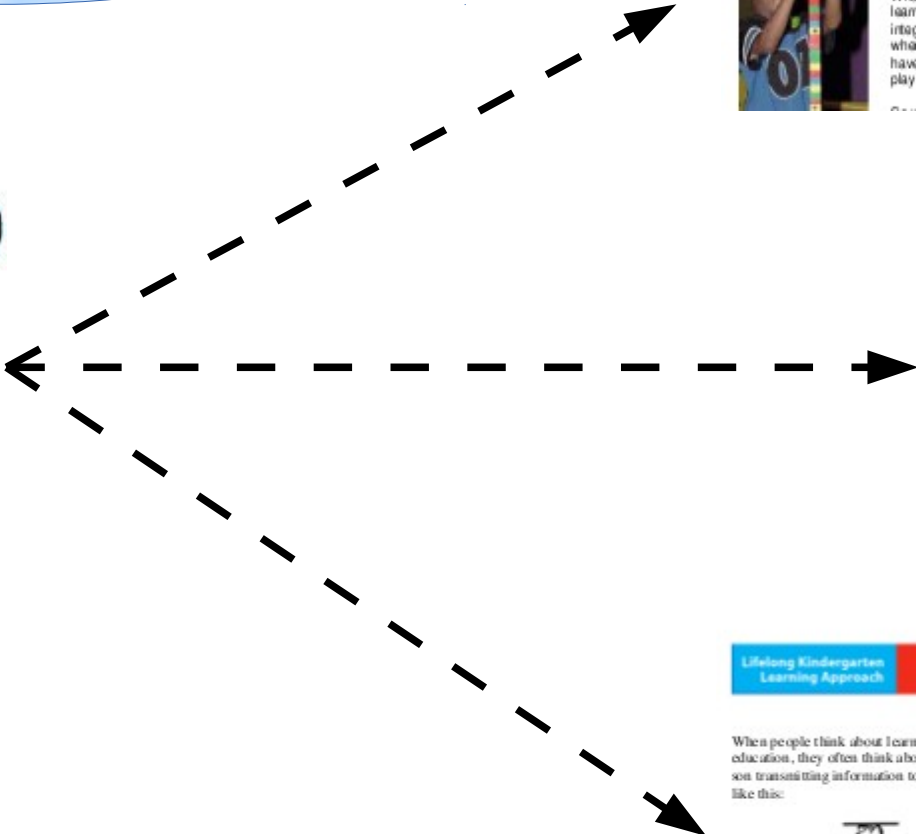
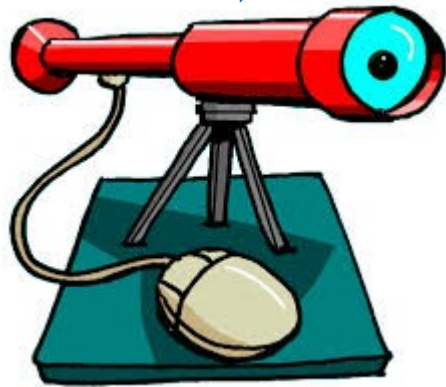


Looking for materials about ICT ...
I found three key documents

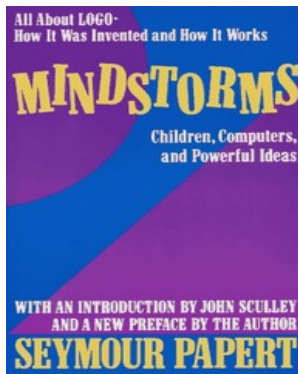


Michal I Resnick
MIT Media Laboratory

Edutainment? No Thanks. I Prefer Playful Learning



Let me start with a contrarian point-of-view: I don't like edutainment. What do I mean by that? Am I a stodgy professor who wants to keep play and fun out of the learning process? Certainly not. In fact, my research at the MIT Media Lab focuses on ways to integrate play and learning. I have found that many of people's best learning experiences come when they are engaged in activities that they enjoy and care about. Based on these ideas, I have helped develop new toys that provide children with opportunities to learn as they play (and play as they learn).



When people think about learning and education, they often think about one person transmitting information to another, like this:



Increasingly, educators are recognizing that this "transmission approach" doesn't work very well. Research has shown that people learn best not when they are passively receiving information, but when

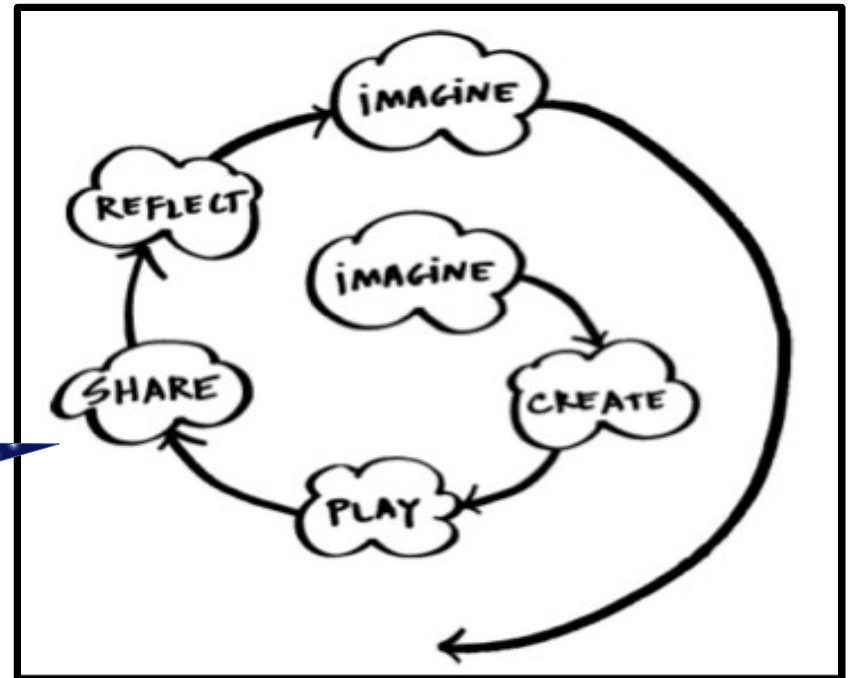
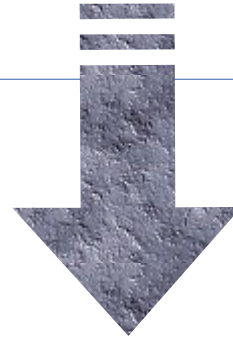
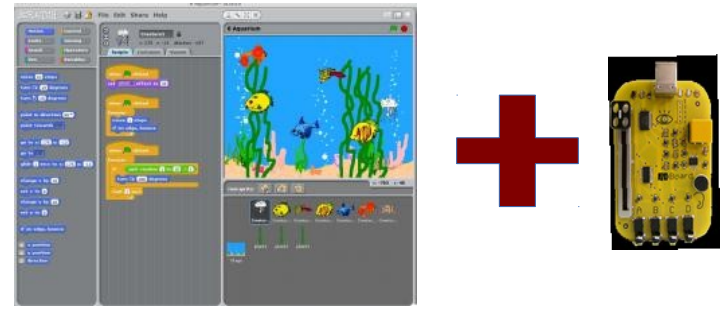
- Why Design?**
- Design projects engage kids as active participants, giving them a greater sense of control and responsibility for the learning process.
 - Design projects encourage creative problem-solving.
 - Design projects are often interdisciplinary, bringing together ideas from art, technology, math, and sciences.
 - Design projects help kids learn to put themselves in the minds of others, since they need to consider how others will use the things they create.
 - Design projects provide opportunities for reflection and collaboration.

First meeting with Scratch

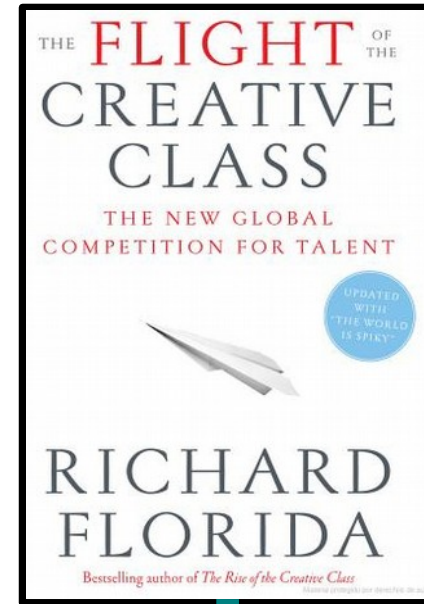
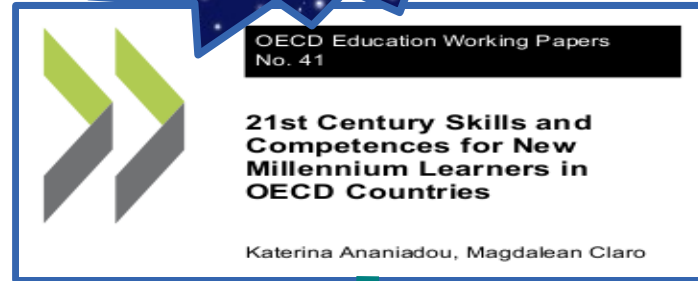
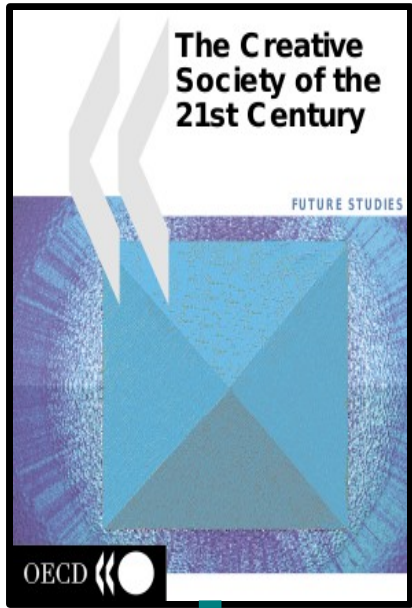
Scratch Workshop
by @txipi (2009)



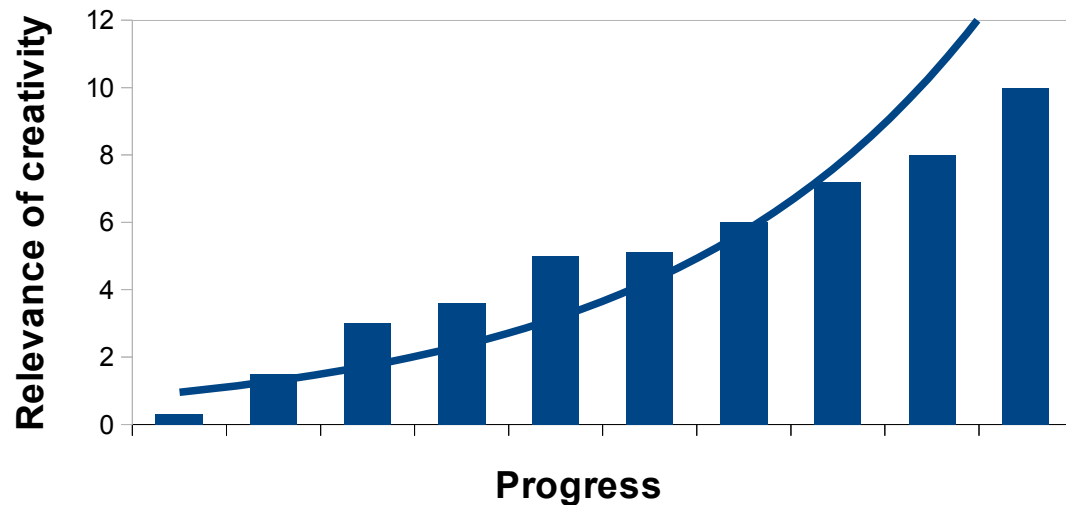
First steps



**CREATIVE
THINKING**



Value of creativity

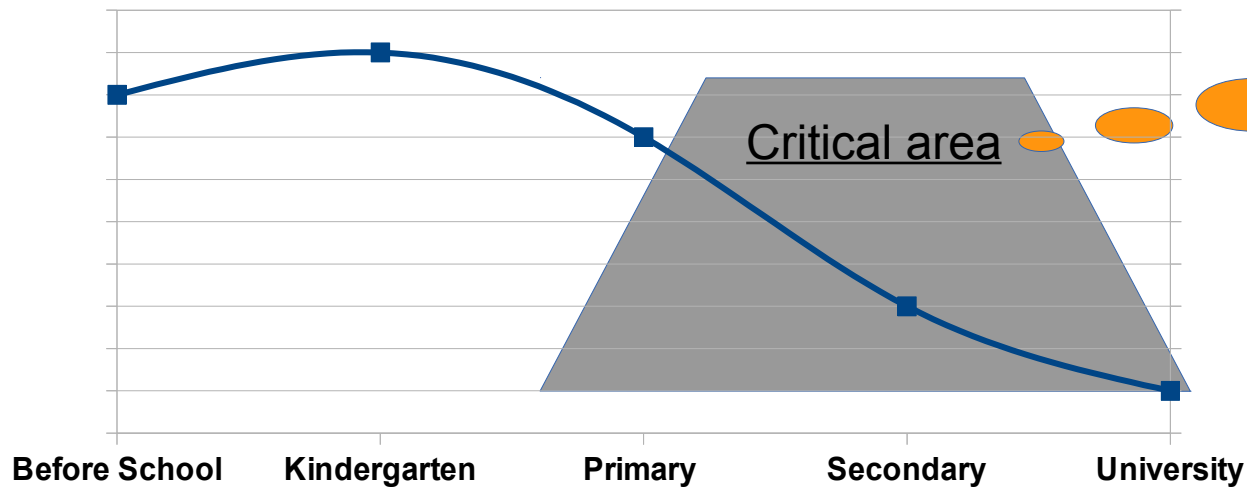


What happens with creativity at school?

Ken Robinson says schools kill creativity



Trend of creativity through educational levels



Can Scratch be helpful?





After several workshops over 2 years.... I did not feel that working with Scratch would improve creativity



A boy who had some difficulties at school worked with Scratch and after two days showed some interesting creative thinking.



Can Scratch really help to improve creativity?

Looking for information, articles, books, researchs,...

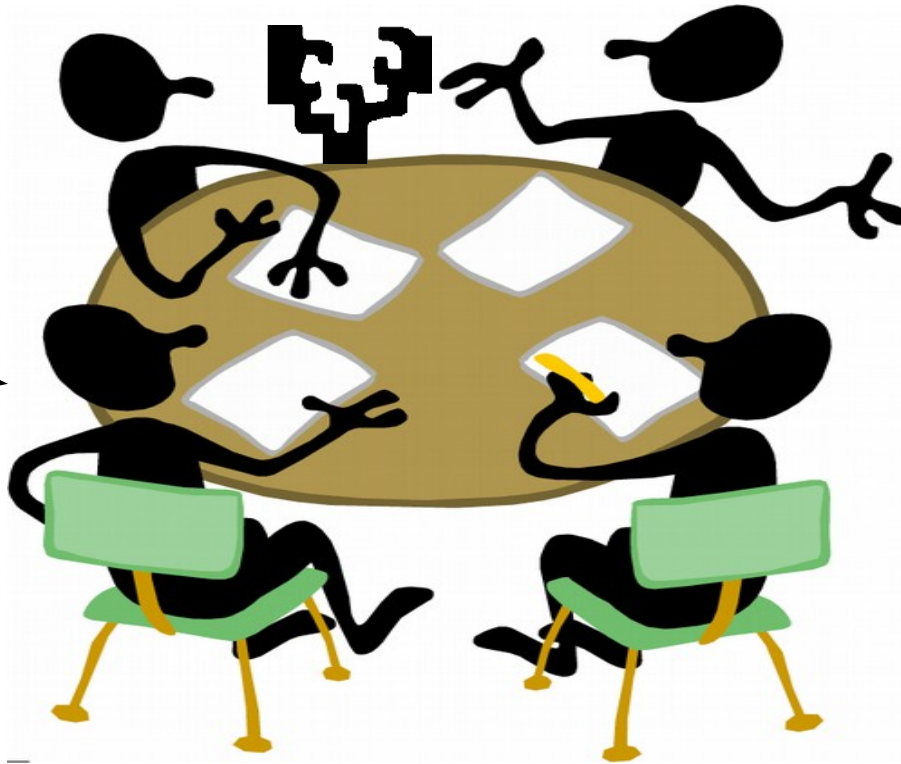


| date | author | title |
|------|--------------------------------|---|
| 2012 | Andres Monroy-Hernandez | Designing for Remixing: Supporting an Online Community of Amateur Creators PhD dissertation |
| 2012 | Gaia Carini | Finding a Needle in a Haystack: New Ways to Search and Browse on Scratch Masters thesis |
| 2012 | Karen Brennan | Best of Both Worlds: Issues of Structure and Agency in Computational Creation, In and Out of School PhD dissertation |
| 2012 | Karen Brennan, Mitchel Resnick | New Frameworks for Studying and Assessing the Development of Computational Thinking American Educational Research Association (AERA) conference |
| 2012 | Mitchel Resnick | Mother's Day, Warrior Cats, and Digital Fluency: Stories from the Scratch Online Community Proceedings of Constructionism 2012 conference |



Communicating with Scratch Team

Can Scratch helps
to improve
creativity?



Research planning

Environment

Type of research

Participants

Data collection
instruments

Design of the intervention

Data analysis

Results

Environment

Looking for a place where....



Highly controlled environment



No photography



No Laptops



No phones



No wireless

No free access to multimedia



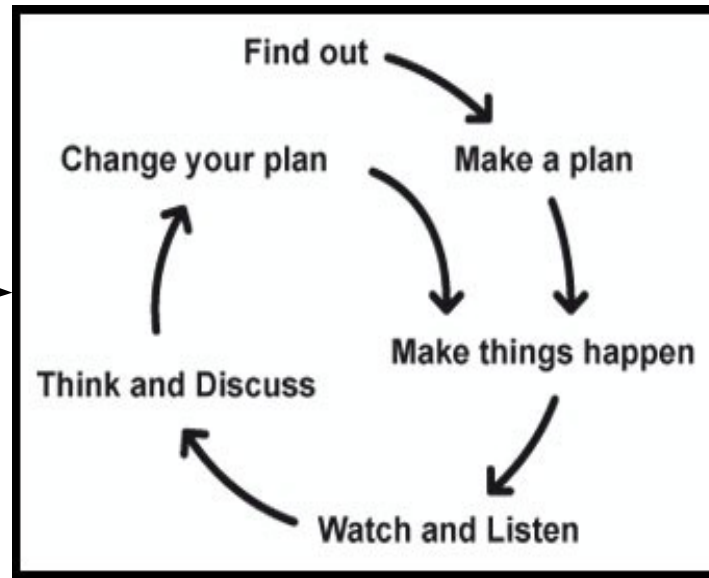
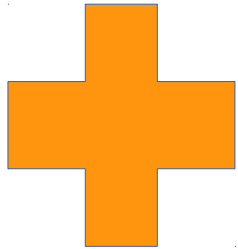
Few opportunities to be creative

PRISON



Type of research

Qualitative



Educational ethnography

Participant researcher (Scratch monitor)

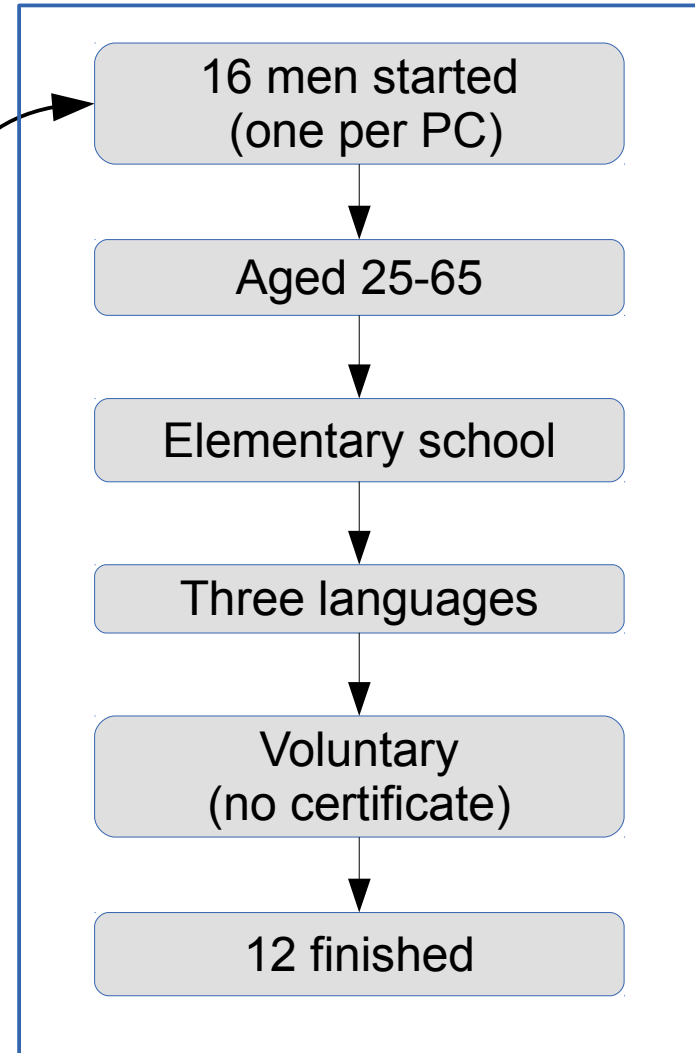
Quantitative



Initial and Final measurement

Standardized test

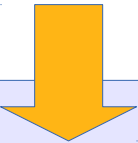
Participants



At first only 20% believed himself capable of creating a video game with Scratch

Data collection instruments

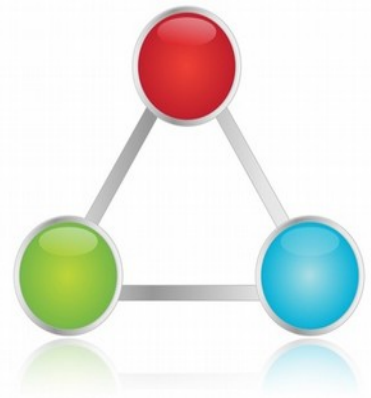
Qualitative



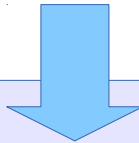
Fieldnotes

Diary of the researcher

Interviews with prison professionals



Quantitative

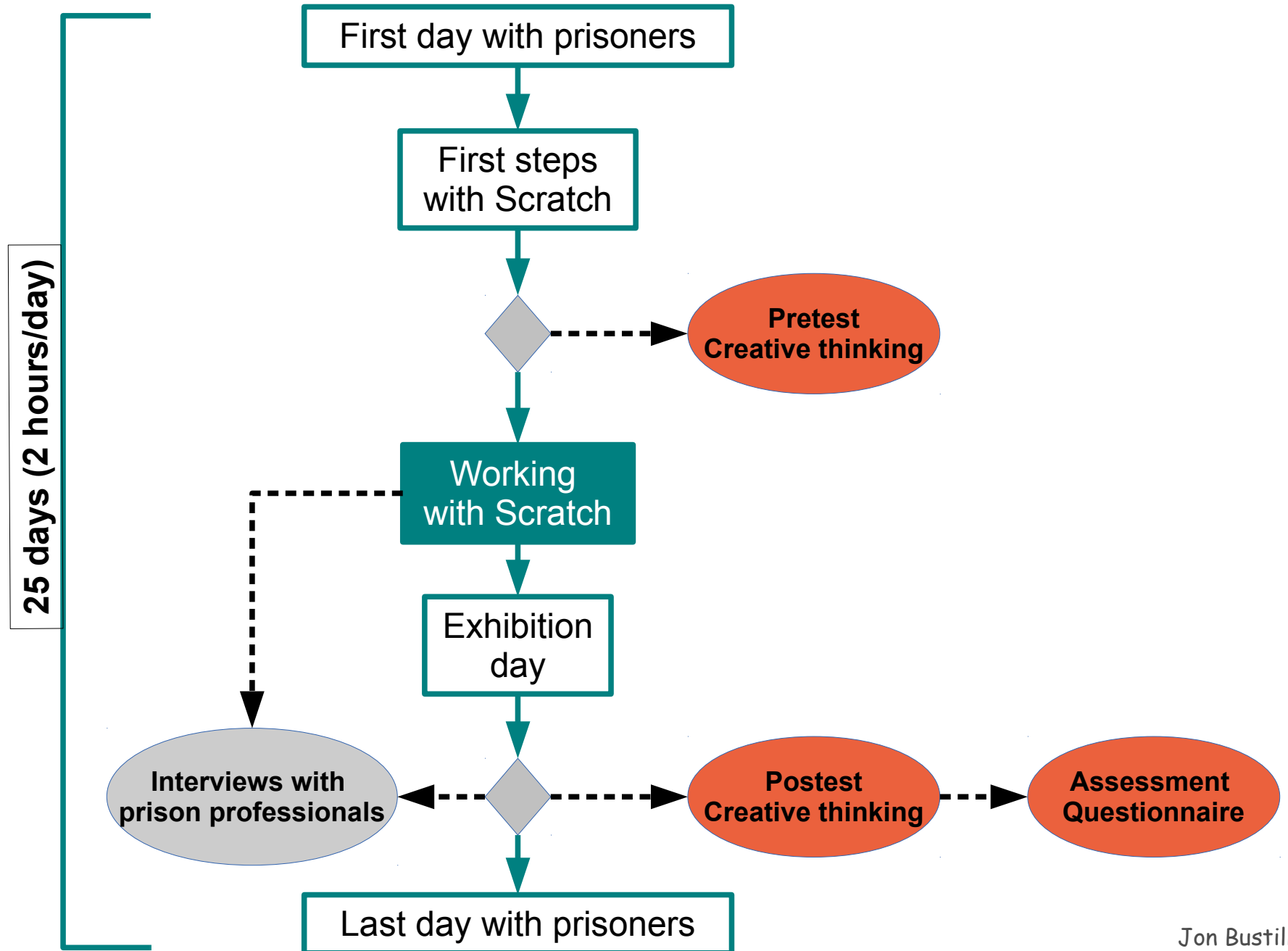


Test (CREA)

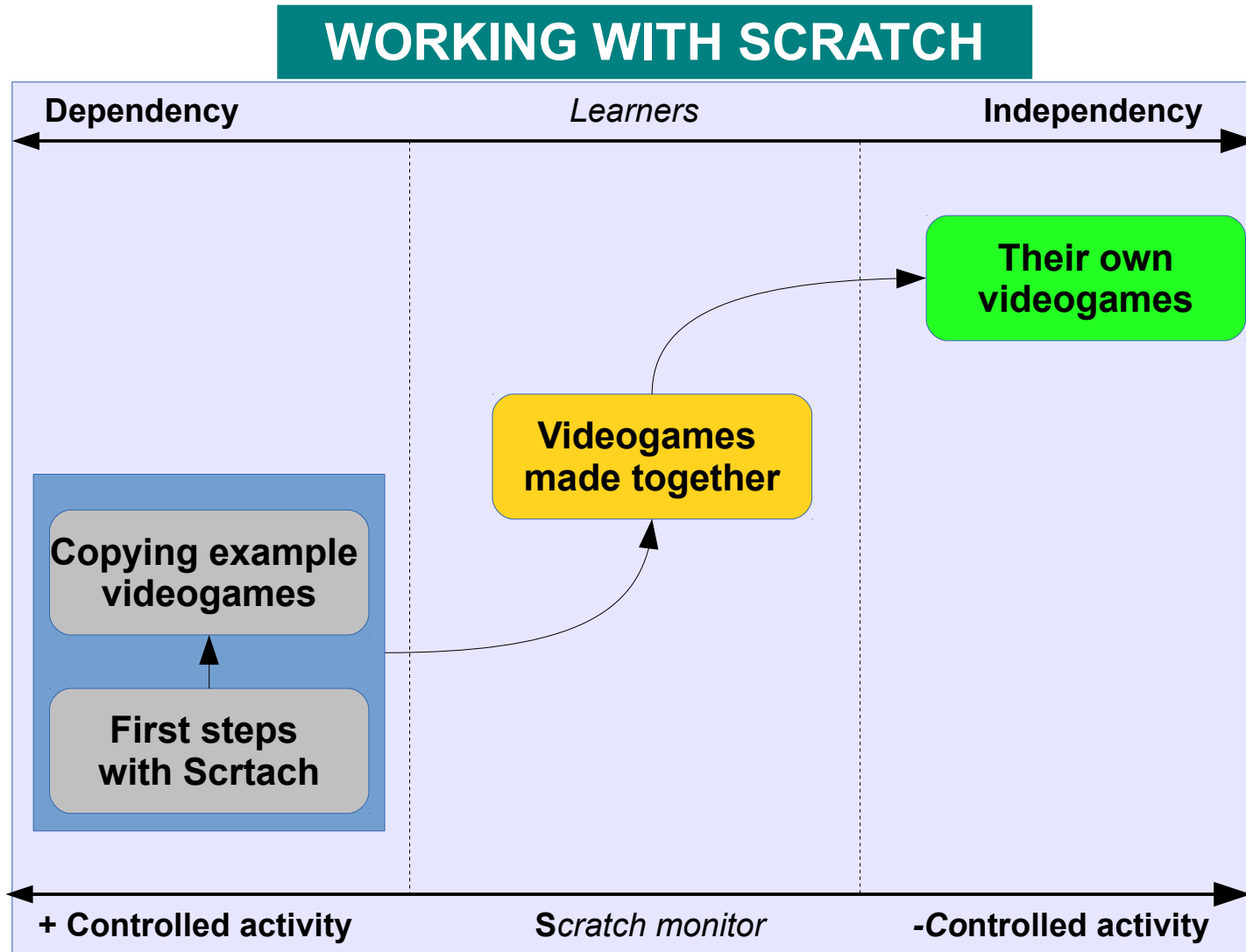
Satisfaction survey (made by prisoners)

Scratch productions

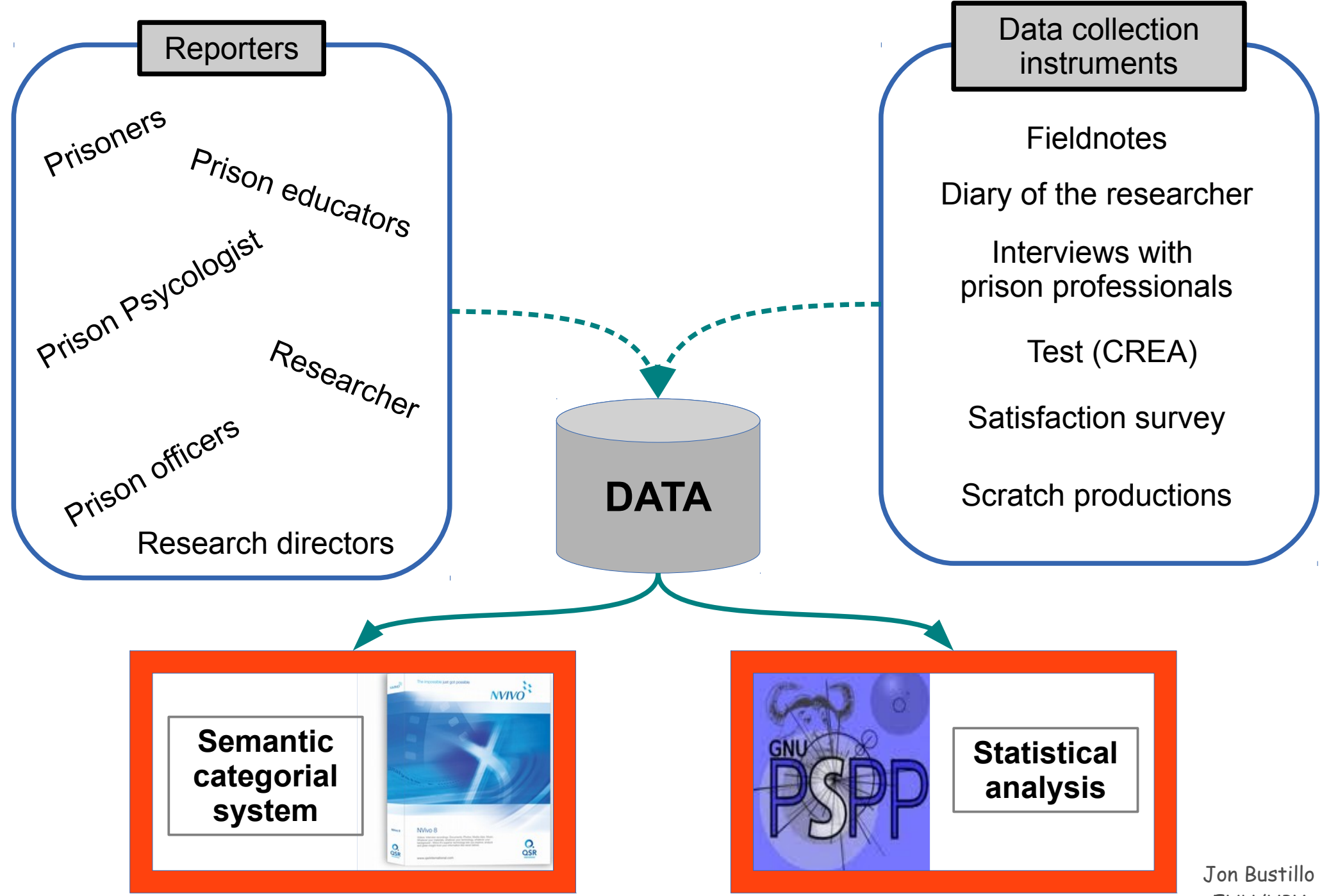
Design of the intervention I



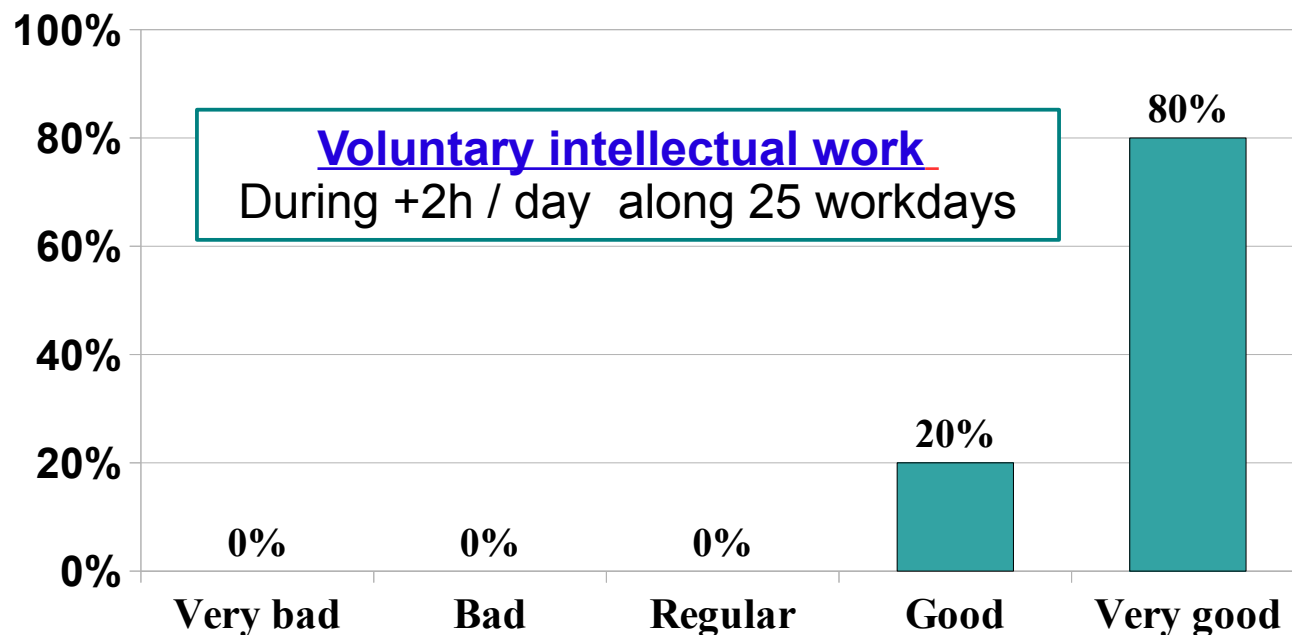
Design of the intervention II



Data analysis



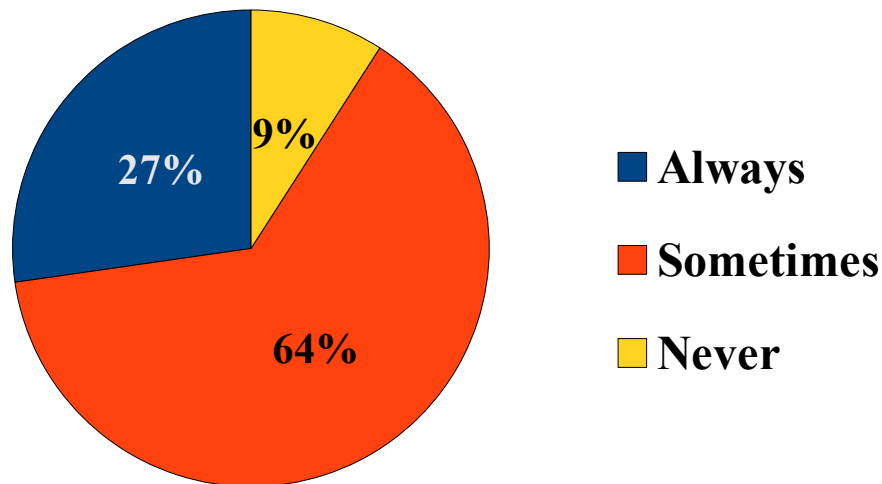
How do you rate the experience of working with Scratch?



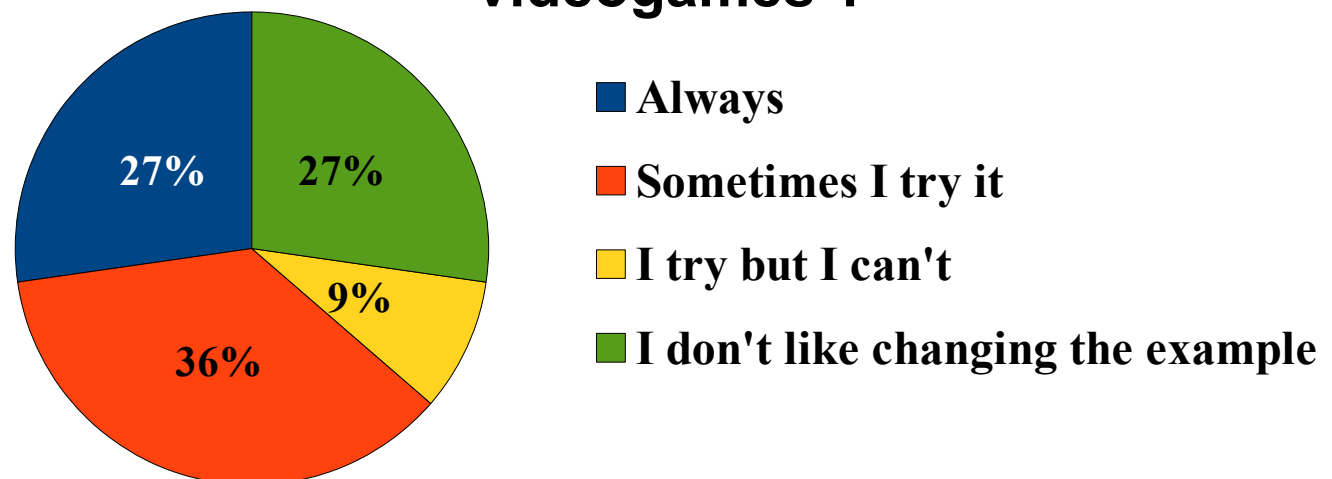
**“I have never thought so much,
my brain hurts after the class is
done”.** Prisoners comment

Empowerment: Focusing on improving and customizing the Scratch programs

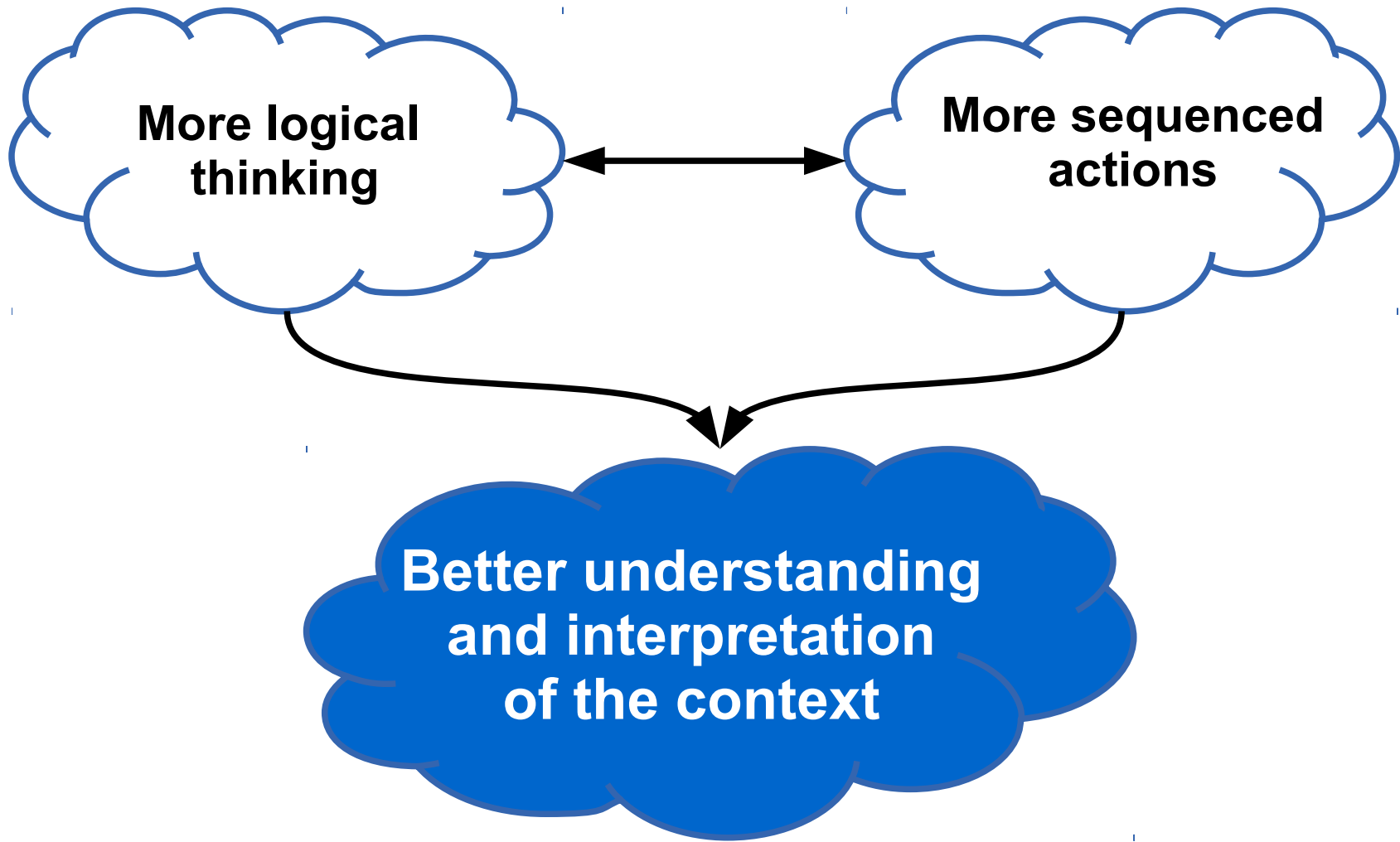
Do you keep on thinking about improving the videogames after the class is done?



Do you customize the sample videogames ?

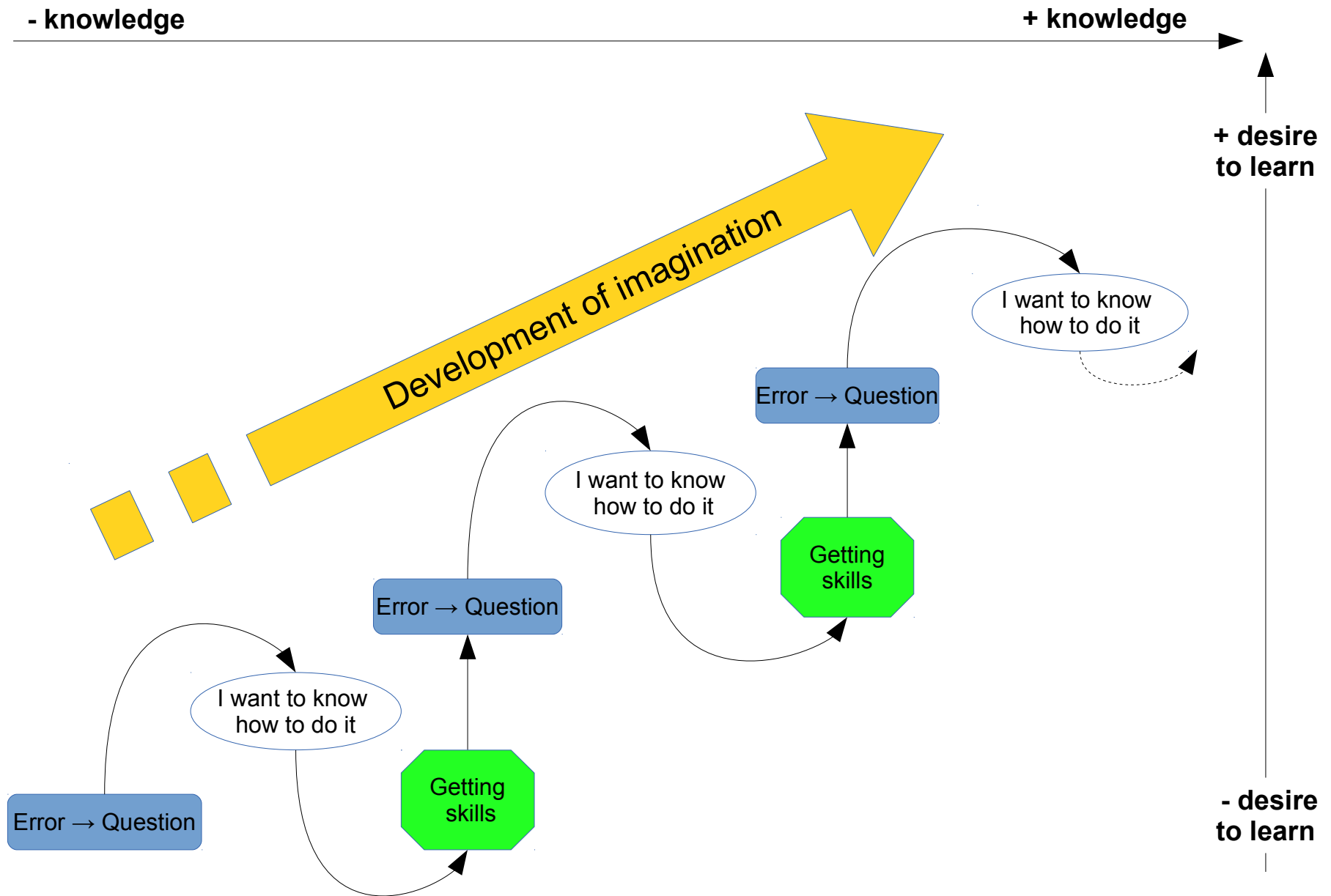


New thinkings patterns



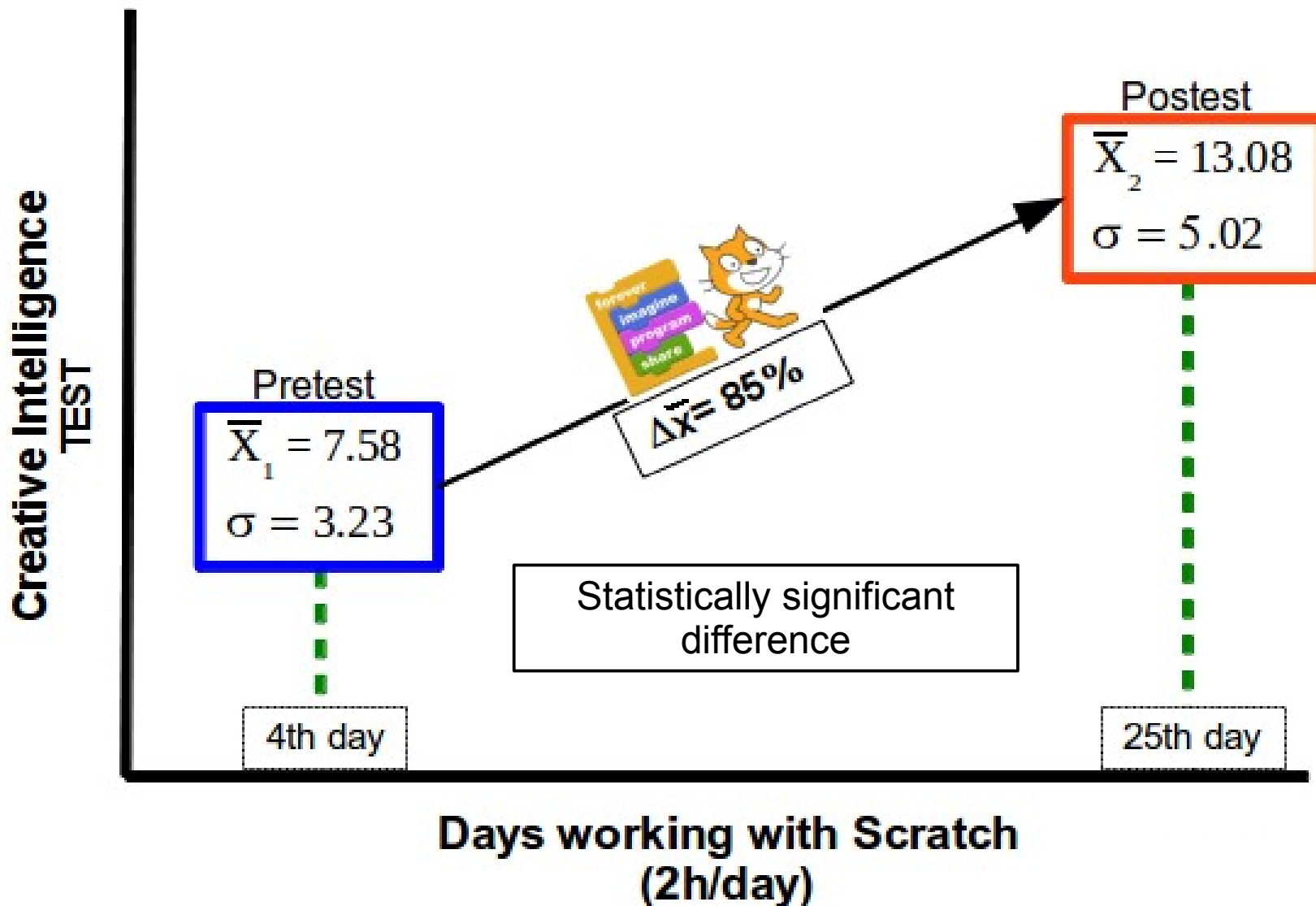
Results

Using “mistakes” as a learning opportunity and imagination developer



Results

Significant increase in the creative intelligence test

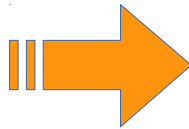


CONCLUSIONS



- Positive influence over creativity and thinking patterns
- Mistakes are an opportunity to improve
- It's stimulating for different kinds of people

NEXT RESEARCHS



Repeat the experience in another prison

In process

Repeat the experience with other adult groups

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