

Strength

- use coding as a tool to achieve "creative"

goals

Weakness

easy-to-learn,

but how to reach

the full potential?

(kids get stuck at
comfort level)

Threat

- ~~now~~ is sometimes not
to "have to become a
coding rockstar"

challenge: reaching more
kids

challenge: dependence
on scratch team

Challenge

Connecting the
of local & the
global
activities.

to expand our
visions and
passions

Weaknesses

The community is
full of good
practices

They have to be
embedded in
ICT Policies.

There are such
ICT Groups in EU
please help!

i)

Galina Momcheva

José - Spain
Munuel

threats

- I think Scratch
Should work in
Smart phones and tablets

The future goes ~~through~~
in that
that direction

S: Creative

W: No physical world.

Internet → Are we prepared?

O: Augmented Reality

Image processing

Remote physical control? → To test wedo / etc.
remotely

THREATS:

NOT DOING

COOL THINGS

LIKE FUTURE DEVICES

AND LOST INTEREST

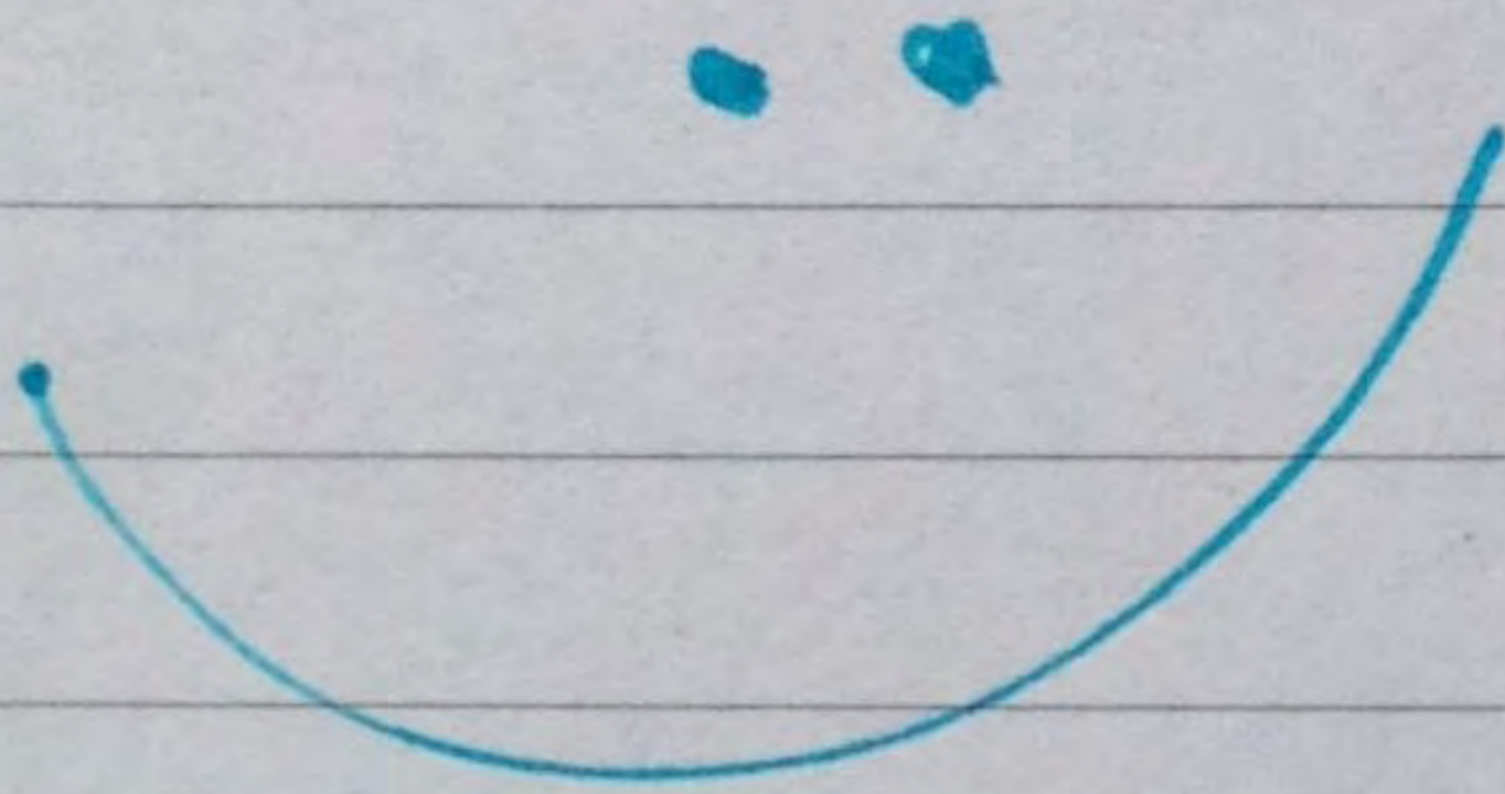
BY YOUNG PEOPLE.

SMALL, LITTLE

WEAKNESSES - SIZE AND ACTIVITY OF
COMMUNITIES (SCRATCHERS & TEACHERS)
AFTER 6 YEARS

We would like:

- Show Java code.
- inter - build your own *
- Stand alone
- Open Badges
- Enlarge font in comment blocks
- * make functions.



Strengths

- Easily accessible
- Adapts to many class levels.
- Encourages peer tutoring/group work.

Opportunities

- Game development
- Sparks interest for other code learning.

Weaknesses

- Lack of awareness amongst non tech educators.

Threats

- Restricted curriculum in schools
- Limited resources.

S

O

W.
[repetition of
simple task,
rare moments
of
insight.]

Weakness.

Tablets! ☹

Thanks for
all ↓

Thread:

multi-device

world (PL,

laptop, tablet,

phone, P1, ...)

O: Making the online repository filled with amazing Scratch projects more easily accessible through the stand-alone client.

Opportunities:

— Make a fusion
Snap! and Scratch

↓
→ go beyond
the coding
possibilities of
Scratch

Weaknesses: Older (15+)
students would like to
see a less kid-like
interface. The Times Co
address this issue.

OPPORTUNITIES

SCRATCH AS A TOOL TO BE USED

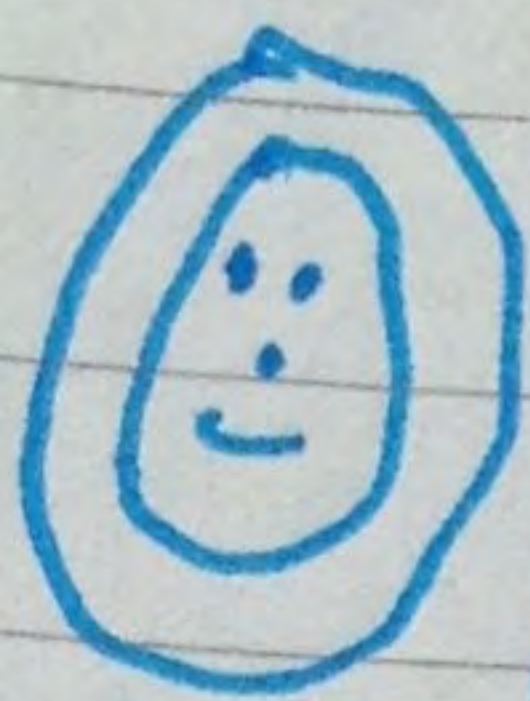
BY THE PUBLIC ADM. TO TEACH

KIDS ABOUT THE CITY'S NEW

PROJECTS ^{AND} GOALS, ~~THE~~ OF ABOUT

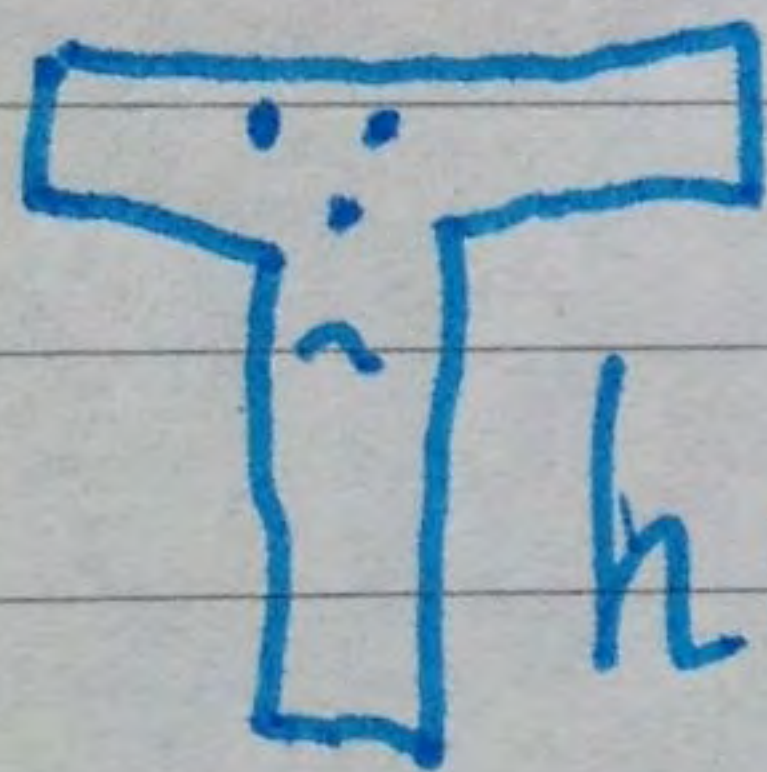
SOCIAL INTERACTION BETWEEN LOCAL

AND FOREIGN PEOPLE.



Opportunities

There is a huge area in education. How could we put it in school even if the curriculum doesn't support coding. Open up new ways of thinking about curriculum. Changing mindset in the educational world.

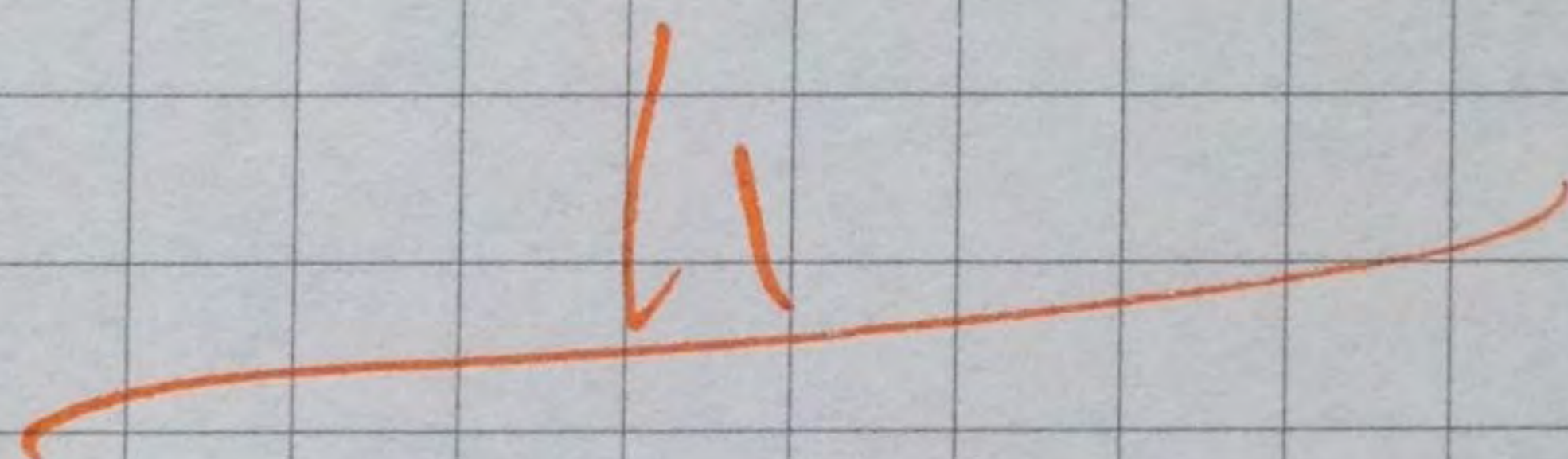


Threats

The standard way of thinking in school

Strength: visually supporting
education, possible
to teach kids about
speed, dynamics at
very early age

THEY UNDERSTAND!



S/ OPEN & FREE

PLATFORM INDEPENDENT

W/ FLASH → HTML5

FACEBOOK

↓ POSTINGS

KIDS LIVE IN
FACEBOOK

①/ LET KIDS
PROPOSE IDEAS
↓

UNLIMITED
IMAGINATION

△/ KIDS GET ON A
PROBLEM AND
STOP

↳ SEARCH ENGINE
INSIDE IDEAS

LOOK AT CORREL CLICK & CREATE - 20 YEARS AGO
MARIO.WITDOEK@GMAIL.COM

WEAKNESS → OPPORTUNITY

→ The stress for supporting 'pathways' into diversity efficiently made me think about in standard CT people tend to learn / refer to 'patterns' maybe there is inspiration in that movement to organize both some

classification / documentation of
types of approaches that finally
can lead to more directed inspiration?

Narc Portier

Strength .

Context for wider
learning . + visually
supporting education
in

E.g.

maths

Weaken →

it is hard to mainstream

it as part of the

curriculum

SUGGESTIONS?

OPPORTUNITY

PARTNER W/ EXTERNAL

SITES LIKE

CURRIKI.ORG TO

PROVIDE STARTER LEARNING

MATERIALS.

WEAKNESS:

NO WAY TO TRANSLATE/

CONVERT TO

PROK. LANGS.

W

Flash

S

Music

T

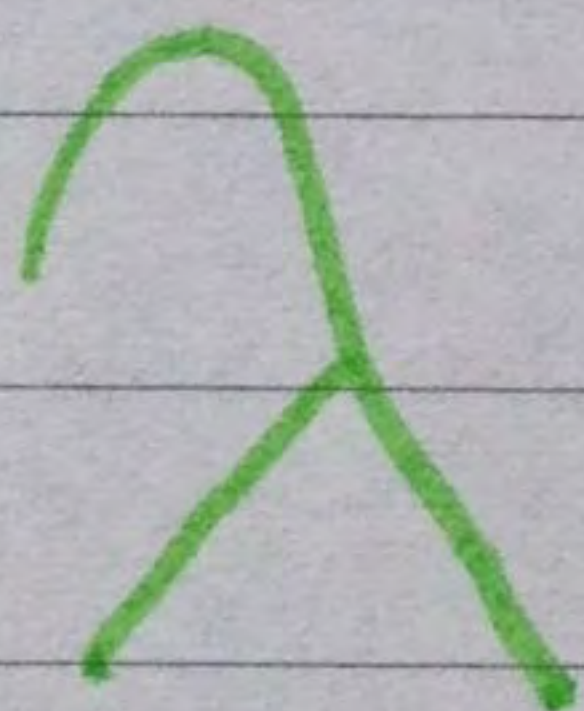
Usage in
schools may
take away
Scratch's intrinsic
fun.

~~W:~~
O:

~~Use extensions~~
~~designed for Snap!~~
S: (cross-platform)

Code + Community

W:



~~First-class lists~~

:P
~~W:~~

w

x

W:

- just merge with Snap!
already

- we want custom reporters!

- people get confused that
boolean block inputs
aren't unevaluated

Weakness

Transition to
other languages.

THREAT

Is there a danger that SCRATCH

could become too ubiquitous?

e. Could Scratch become the "new Power Point".

Drew Boddie

Weakness

Classroom mgmt.

system for
teachers

Resources for

offline use -

not everyone

has the bandwidth

to have students
online

Strengths : Multi language

Weakness : Watch the programs in presentations with any computer and any Operating system ~~and~~ or any mobile without no having Scratch installed: Recode to Linux, Android,

Opportunities : The idea of encoding to children

Threats : Evolution constantly

Need for
Mobile Platform
versions

* Access to other young
people: Kindergarteners.

Resources available
for them.

Weaknesses → the lack of app,
for mobile devices, mainly
for Android devices.

helpful, warm feel

Opportunities

code.org
will have a
HUGE push in 2013
to encourage an hour
of coding for EVERYONE.

Can you provide a
"one hour experience"

more than just your
wonderful website?

IT'S NOT
ABOUT THE

HOW, IT'S ABOUT
THE WHY.

It's not the tools
it's the thinking!!

Scratch for self-expressing -
to be used in online discussion,
blogs with all its possibilities -
- math processing, multimedia,
and Internet access.

A nombre mio y
de otros niños queremos
que scratch sea mas
facil de utilizar.

SCRATCH SWOT

S : MORE THAN PROGRAMMING
LANGUAGE

O : SHARE / CLASSMATE
THROUGH INTERNET

W/T : HOW TO DEAL DIVERSITY

Threat

It's just too good to
be true!

The people in charge
move easily accommodate
to the more expensive
less powerful alternatives

Strength:

Creativity
CS for all
opportunities

Connection to other
people with same
interests

Weakness

Limited in structures

Scratch

{ CREATIVITY
COOPERATION }

Weaknesses

- perception from educators who have not yet seen the strengths/opportunities.

Opportunities

- infinite !!

STRENGTHS

* With Scratch you're not programming alone!

You're part of a community



Keep on Scratching!

Strengths

easy to start!
easy to succeed!

Weaknesses

lack of
starting tutorials
for those who
need guidance

Opportunities

sharing through
Scratch 2 -
international
collaboration ?!

Threats

too easy to focus on
the coding & not
the creativity

Contribution
Communication
Strength

Weakness

~~Analysis~~

Opportunity

Threats

SWOT

Threat - Losing sight of
broader picture - its
only a tool.

Strength

KIDS WHO DIDN'T REALIZE
THEY HAD 'COMPUTATIONAL
CREATIVITY' TALENT
DISCOVER IT EASILY VIA
SPATCHY. LOW FLOOR

OPPORTUNITIES

Running in MORE
ENVIRONMENTS/PLATFORMS

WEAKNESS

Ability to keep into
online / ~~com~~ collaborative
learning in schools.
cultural?

STRENGTHS

SELF MOTIVATION FOR

STUDYING - EASE OF USE

AND OBTAINING RESULTS

VERY DIFFERENT.

Opportunities

① Next versions of Scratch. web based, giving opportunity to web dev community to build add-ons and integrate ^{with} other tools;

②

Opportunity

- Being able to transition from a visual language to a slightly more expressive text based language for those that want to.

~~Strength~~
~~It really~~

Threats

Weakenesses

- Associated with being for young students if they're exposed to it at a young age. ~~by~~ Older students "This is for kids"

Weaknesses.

Teaching/Teacher support with

small/"real" communities. Engage

them in the use of Scratch in
the classroom. How to manage a
big group. How to promote projects.

S the visual impact
is inviting for non-
technical people. It
looks FUN!
E

W

D

T

S

- programming without coding (immediate output & understanding of their relationship)
- only care about logic, not compiling & syntax

W

O

T

Scratch: Strengths

Programming
without coding

Asger

STRENGTHS

support of so many languages → low floor, especially for kids

WEAKNESSES

it's a closed sandbox
→ no way to get out of it, connect to the environment

OPPORTUNITIES

whole world tries to support programming / informatics

Strength: Supporting
more devices and being
online

Weakness: Need to
support after Scratch
i.e. Python

Opportunity: Scratch 2.0

lets me see all projects,
not just the popular
ones.

Scratch getting slower

Threat: Schools will
community and make
it boring.

Weakness

→ Flash - Based

- Proprietary
- no (more) support by iOS, Android etc.

Strength

- Scratch could make a start for more relevance of visual programming languages in general

THREATS

"Political ones"

back to
past ideas

economic
crisis

↳ Portugal - there has
been a decrease in
investing on everything
related to ICT on education

→ One Laptop for children
program STOPPED

→ decrease in investment
in ICT centers (future
still ~~unknown~~ obscure)

→ "saving" in education
(less teacher, unemployment
bigger classes no ~~growing~~
upgrading resources

→ changes in curriculum
reducing ICT on programs



Opportunities

→ motivated
teachers and
institutions
are trying
to go against
the flow
investing
on ICT on Schools

STRENGTH

Scratch is the only programming language I know of that translates into ~~a~~ languages other than English. So it doesn't force people to learn English and then learn to code - they can continue to explore ideas in their own language. This supports different ways of thinking about similar themes.

S

- Focus on logic and algorithm without having to care about compiling
- Sharing and community learning

W

- better way to find things in scratch in projects & studios
-

O - Hardware extensions, connecting with the real world

T

- scratch 2.0 not working with Raspberry Pi; since Pi doesn't support flash
- Scratch not working on Tablets

Opportunities:

1) Neuroscience \longleftrightarrow Scratch

Threats: Scratch always a way for learning / creating
not a objective

Threats

~~Threats~~

- Possible backlash
(as happened w/ Logo)
- must avoid overselling
- Too much "Success"
in ~~the~~ educational policy
leading to uncreative
uses - all kids doing
the exact same
assignments.

WEAKNESSES:

- IT SHOULD BE A PUBLIC AND STANDARD WAY ("PROTOCOL") TO INTERACT WITH SCRATCHM.T.EDU AND 3rd-PARTY ENVIRONMENTS COULD FLOURISH (A-LA TWITTER)

STRENGTHS:

- THE SEE INSIDE BUTTON

ENCOURAGES SHARING SOURCE,

NOT ONLY IDEAS OR

FINISHED PROJECTS → REMIX

STRENGTHS

- Remix

WEAKNESSES

- The cloud variables are too slow in order to be a good interaction between users.

WEAKNESSES

SUPPORT FOR NON-ENGLISH
LANGUAGES IS INSUFFICIENT.

FOR INSTANCE, FEATURED
PROJECTS SHOULD
BE LOCALIZED, THAT
IS, SELECTED BY LOCAL
TEAMS. OUTGATE
RESPONSIBILITY!

Opportunities

SCREDIT SHOULD BE
GLOBAL. FOR ALL
ANYWHERE, AT
ANY TIME.

INCLUDING WITH
PROPERTY
SPECIAL
NEEDS

1. joining open source To engage developers around the world
2. MOOC (Massive Online Open Courses)
3. Think parallel

ABILITY OF EXTERNAL
DEVICES INVOLVEMENT AND
OTHER CODING REALITIES

COMMUNITY:
THOUSANDS OF PARTICIPANTS
MILLIONS OF PROJECTS

— | SER 2.0 : ~~NO~~ ONLY WEB
BASED Σ
(OK, IT'S GOING TO BE FIXED!)

OPPORTUNITY:

Scratch on

Mobile devices →

potential to assist

learning in developing

countries due to low

cost!

Weakness:

Potential to pick up bad programming habits which may make learning other languages / working with code more difficult in the future.

helpful

harmful

3

W

Int.

0

T

Int of things
(connected)
series

dent from a
one device.

6x

arduino
+ pi board
+ rasp pi

Threats

- once Scratch goes (went) to school:

→ who is "certified" to teach

.... computer science

... how do we measure

what students are learning

... if every student is not doing the same thing, how does the teacher make

sure everyone is learning

... what "we want them to learn"

worry - Why can't schools trust students?

Can Scratch "change" school?

✱ Does Scratch have to change school to survive school?

Is Scratch the "problem child" in school?

- Susan F

Opportunities

Open the ~~students~~ students' mind on a new world where they can be protagonists and say "I can do it"!

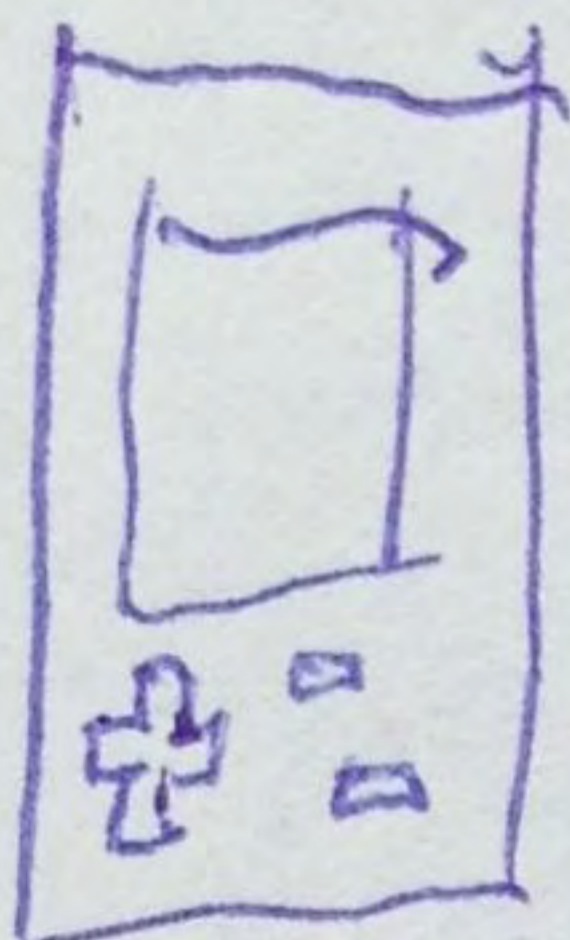
The goal is giving them more confidence in what they can do and start to believe in themselves.

Opportunity :

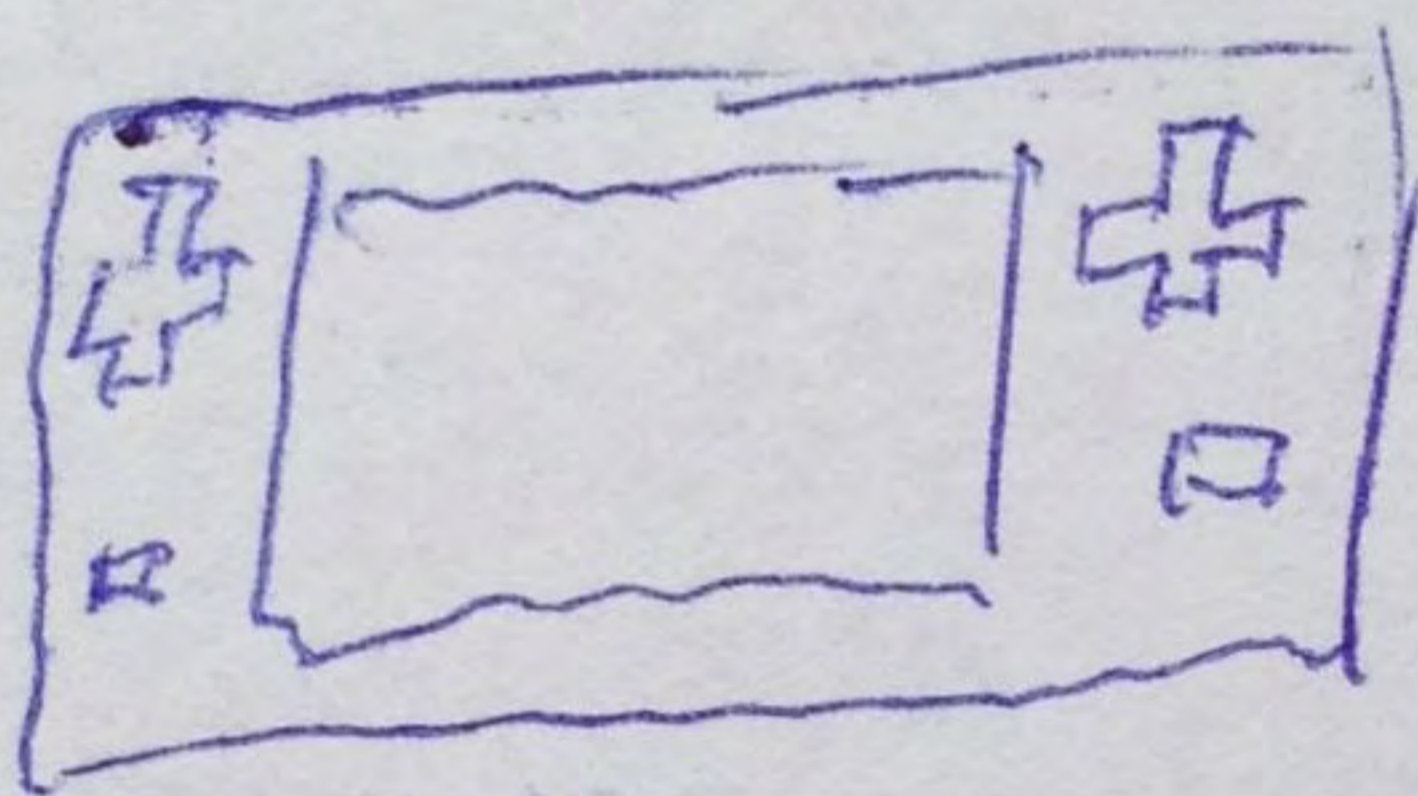
Block Views : Less

Blocks for starters + young
kids. Sort of Starter view,
Medium + Expert view.

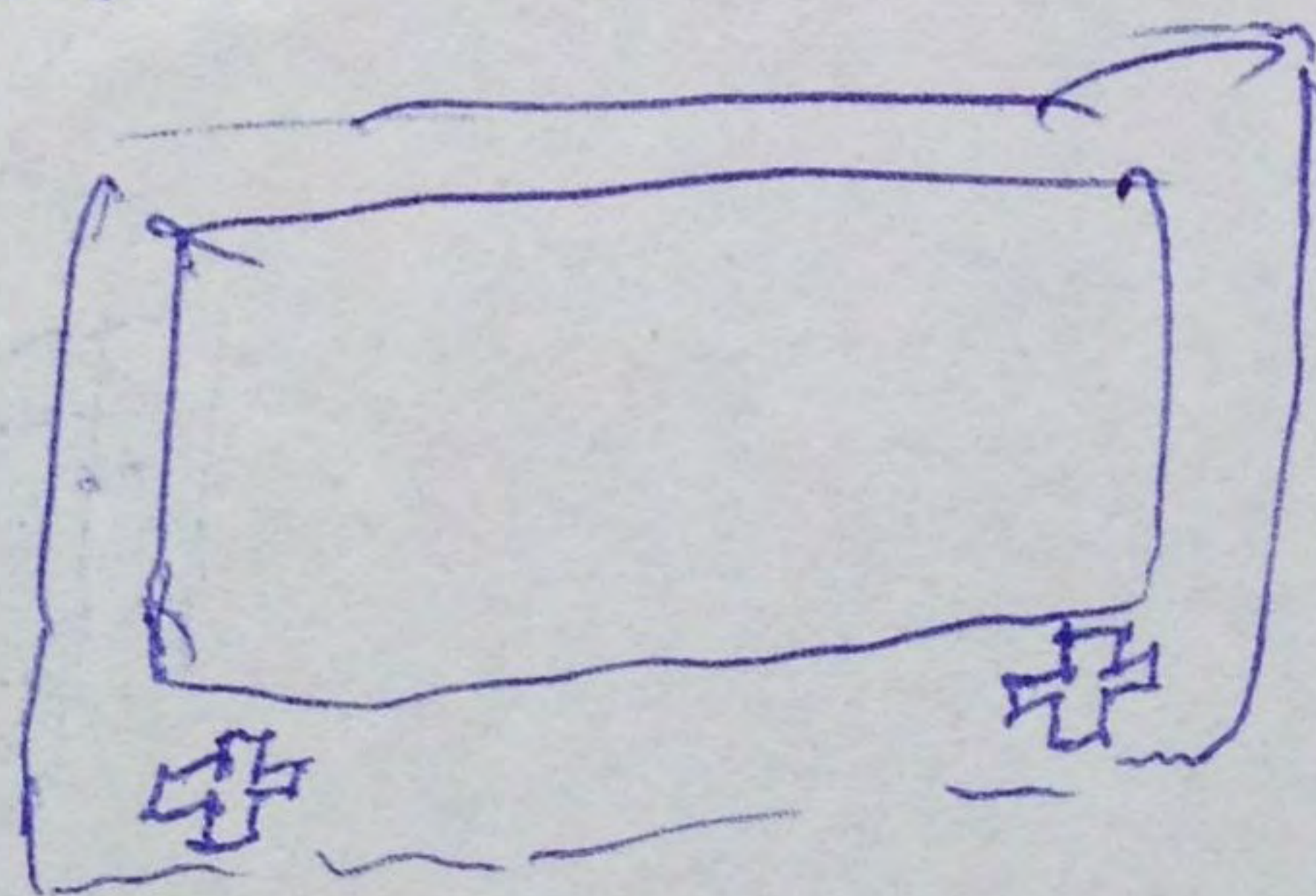
Scatch-Bag



Snap-Station - Portable



Scatch-Pad



uwe@geisler.de

Threat

* long term fragmentation of computing (tablets, glass, etc.) may lead to fewer personal computers that are well-served by current Scratch. May need to radically alter user interface to stay relevant

Opportunity

* Third-party hardware/software Scratch as a way of programming things like drones, smart houses

OPPORTUNITIE

Adolescent students ($\pm 17, 18^+$)

think Scratch is childish

BUT IT'S NOT!!

try make a boring skin possibility
for 16, 17, 18 year old
students!

1. Supporting
Computer
Science in
School

1. recursion
concept
2. modularity
(procedure and
FUNCTION)

1. interfacing
Web and
mobile
devices
(web development
and programming
for
mobile device)

1. relation
with Alice
and Greenfoot
(~~export~~/import)

Samin Saidani

Saidani @ tuxfamily.org

W1: Sharing \neq Collaborating

Scratch is good for \nearrow Not good for \nearrow

W2: Scratch is MIT driven

\Rightarrow big T1: big Scratch fork

\rightarrow see how Scratch is fragmented \rightarrow Enchanting
Snap
...

W: weakness
T: threat

LOSS OF
ENERGY

\uparrow \hookrightarrow

Weakness (how to support creativity) stated
during the presentation is in my view
a strength : - need tutors in real life
- training in real life.
- connect virtual / on line
to real training

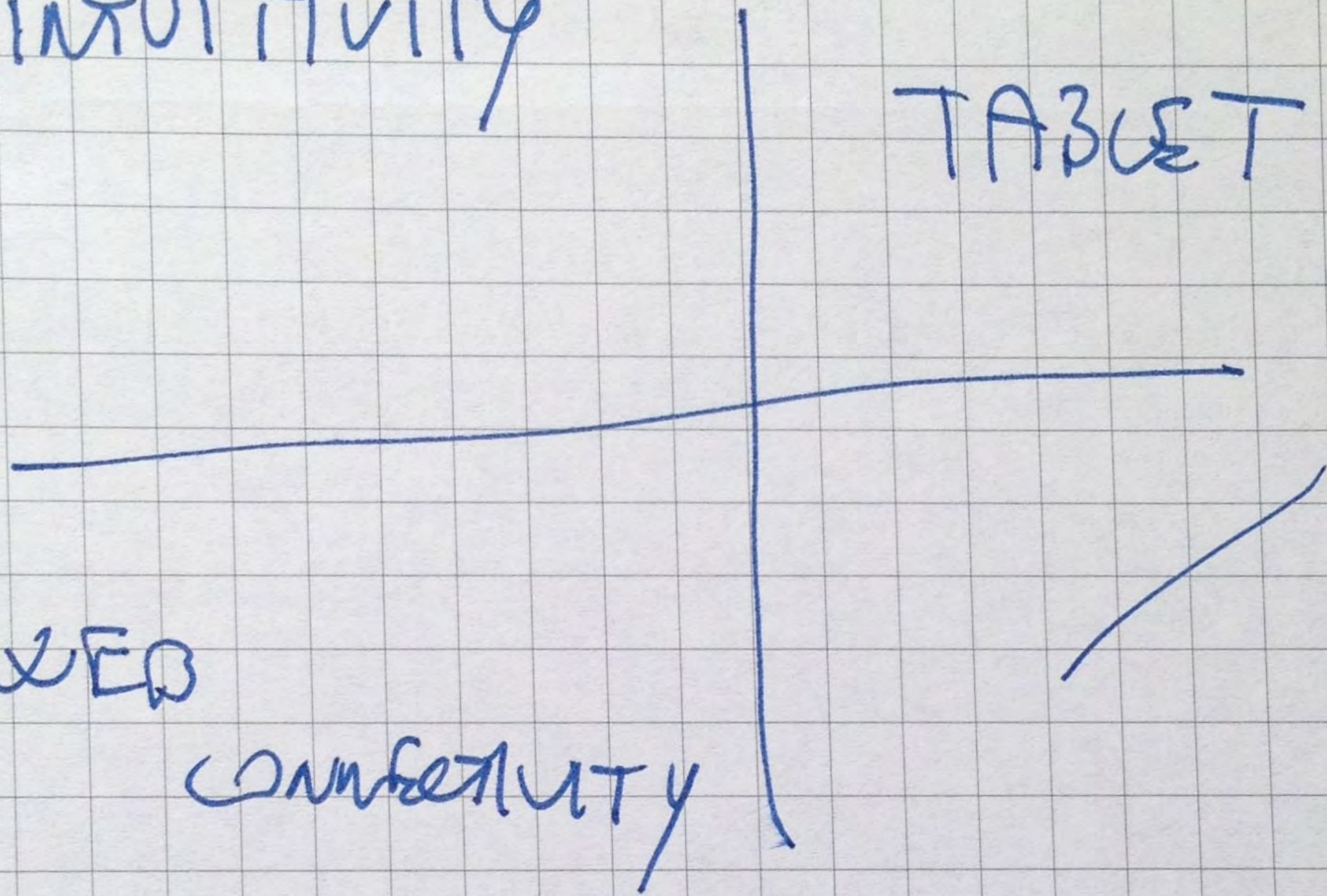
→ See Junior Studio

INTUITIVITY

TABULET

WEB

CONNECTIVITY



WEAKNESSES

* EFFICIENCY :

E.G. - LACK OF MULTI-DIMENSIONAL
ARRAYS
- WORKING WITH LARGE DATA

Threat

Other ~~programming~~ programming tools that look like Scratch, but do not support/encourage a constructionist theory of learning. The average teacher may be more comfortable with these kinds of tools.

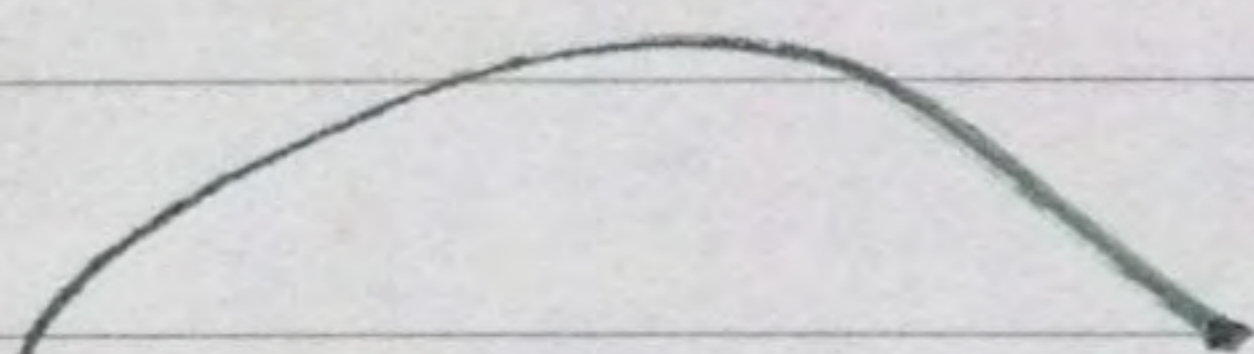
What units?

To obtain the young ^{people} to
the science ... ?)

THREAT:

NO MORE
UNIVERSAL
COMPUTATION
DEVICES IN THE
FUTURE
(CLOSED
SANDBOXES)

OPPORTUNITY
BRIDGE



VISUAL TEXTUAL
PROGRAMMING

I think

- strengths: it's free and easy to learn at the beginning
- Weaknesses: Minds team it's a ~~serious~~ seriously competence.
- opportunities: Useful tool to ~~another~~ areas.
- threats:

THREATS

— WITH THE INTEREST
IN PHYSICAL COMPUTING

WE THINK THERE IS A
DANGER OF LOCKING
SCRATCH INTO PROPRIETARY

SYSTEMS & TOOLS

S

Amazing
successful
VIRAL
nature

W

O

empowering
kids to
control the
physical
world, like
MAGICIANS

T

WEAKNESS

STRENGTH

SAME ~~FACE~~
FACES OF
THE SAME ~~FACE~~ COIN

ORDER /
DISORDER OF BLOCKS
ON THE WINDOW

Threat → What is the best things
of Scratch ~~fe~~ than other programming
languages?

Weaknesses → What is the application
of Scratch in Android devices?

THREATS:

ADAPTATION TO

MOBILE SYSTEMS

(S)

(W)

lack of
teachers

(O)

(T)

* use gc
for
modelling