Makerspaces in public libraries

Education, innovation and maker culture in the library

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Book

Theresa Willingham, Jeroen de Boer: Makerspaces in Libraries

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MAKERSPACES IN LIBRARIES

LIBRARY TECHNOLOGY ESSENTIALS | NO. 4

ELLYSSA KROSKI SERIES EDITOR

Library Lab

Makerspaces or FabLabs are creative, DIY spaces where people can gather to create, invent, and learn. In libraries they often have 3D printers, software, electronics, craft and hardware supplies and tools, and more.

Activities in Library Labs

TABLE 2
The 16 Most Common Technologies and Activities in Academic Library Makerspaces

Technology or Activity	# Libraries	% of All Respondents
Computer workstations	25	67%
Photo editing	20	54%
3D printing	18	49%
Creating a website or online portfolio	18	49%
Video editing	18	49%
Scanning photos to digital	15	41%
3D modeling	14	38%
High quality scanner	13	36%
Computer programming/software	12	33%
Digital music recording	11	31%
Animation	8	23%
Creating apps	7	21%
Game creation	7	21%
Prototyping	7	21%
VHS conversion equipment	7	21%
Electronic music programming	7	21%

TABLE 1
The 15 Most Common Technologies and Activities in Library Makerspaces

Technology or Activity	# Libraries	% of All Respondents
Computer workstations	73	67%
3D printing	50	46%
Photo editing	49	45%
Video editing	47	43%
Computer programming/software	43	39%
Art and crafts	40	37%
Scanning photos to digital	39	36%
Creating a website or online portfolio	37	34%
Digital music recording	36	33%
3D modeling	34	31%
Arduino/Raspberry Pi	33	30%
Other	33	30%
Animation	31	28%
High quality scanner	31	28%
Tinkering	28	26%

John Burke: http://www.ala.org/acrl/sites/ala.org.acrl/files/content/conferences/confsandpreconfs/2015/Burke.pdf

Where are we coming from?

Lawrence Lessig

"The importance is that technique has been democratized. These tools of creativity have become tools of speech. It is a literacy for this generation. This is how our kids speak. It is how our kids think. It is what your kids are as they increasingly understand digital technologies and their relationship to themselves."

David Lankes

"The mission of librarians is to improve society through facilitating knowledge creation in their communities"

Doug Belshaw

"My belief is that the concept of 'remix' is at the heart of digital literacies."

Research National Library of the Netherlands on library makerspaces

Findings:

102 participating libraries, 42 with a fully fledged makerspace

A library makerspace is appr. 30m2

Key activities are coding, robotics, 3D printing

Main challenges:
Financing
Skills development
Collaboration with schools

Expertmeeting public libraries at Maker Faire Eindhoven 2018, discussing the outcomes of the research

STAFF
Not all staff should have to be involved
Organizational support is essential
It all comes down to daring to ask questions

COLLABORATION
Is required, but not necessarily with educational institutions
Working together with schools is not necessary, but desired
Working together with local communities fits the character of public libraries

SKILLS DEVELOPMENT
"Kill your darlings"
Public libraries are about making people more literate. Maker education is beneficial to reach that objective.

How do we do it in Friesland?

FryskLab: a mobile library makerspace

2017 ALA Presidential Citation for Innovative International Library Projects

1.100+ FabLabs globally

2D — 21st — 21st Century Skills / digitale geletterdheid

3D — </> — Programmeren

Maken — 🔨 — ⚡ — Electronica

FryskLab

▸ **EDUCATIEF AANBOD VOOR SCHOLEN**

het kennis maken en delen van de toekomst

FryskLab

A mobiele FabLab van Fryslân
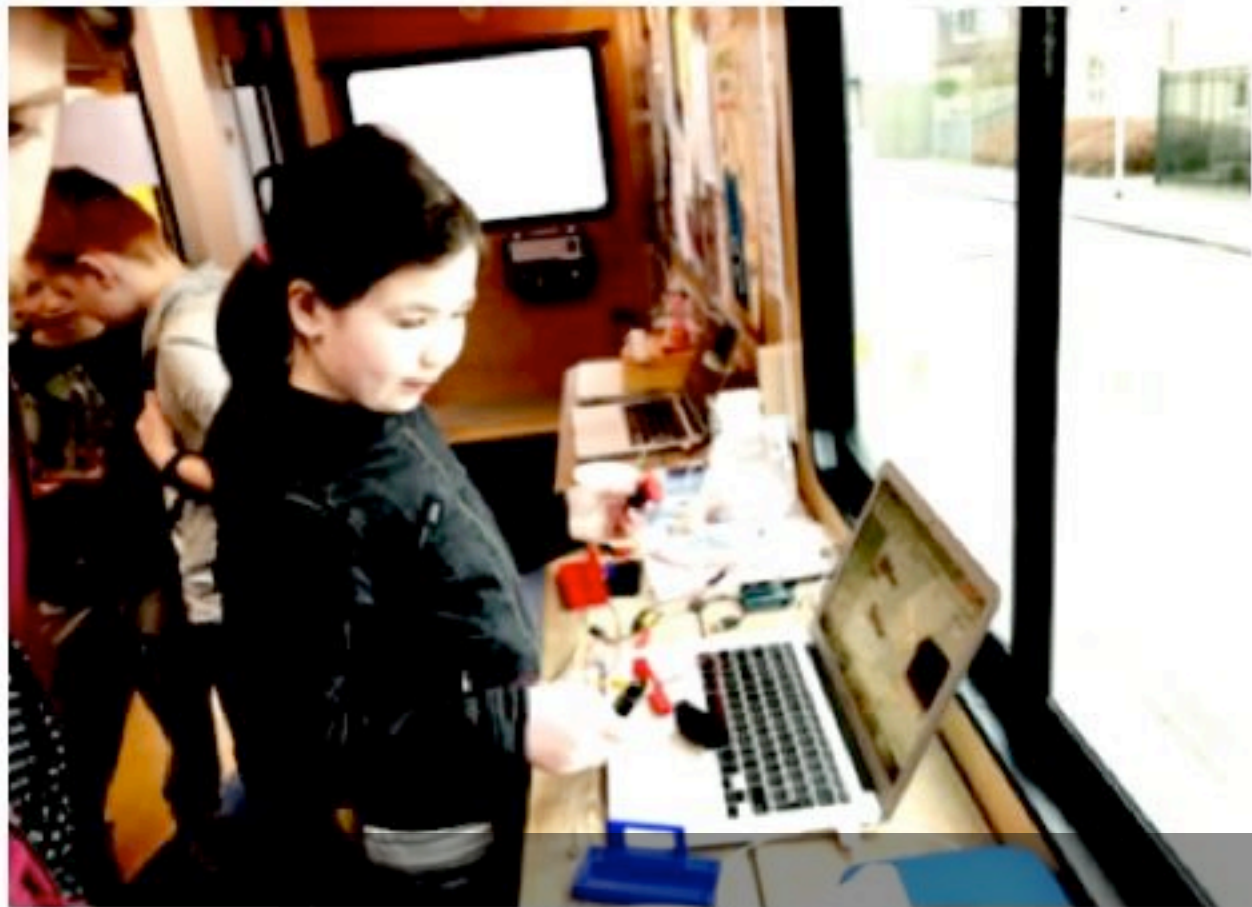
www.frysklab.nl/educatie

FryskLab

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Two project examples

MediaLiteracyMakers & MakerBoxes*:
Unpacking digital literacies

Cultural (Makerbox 1)
Cognitive (Makerbox 2)
Constructive (Makerbox 3)
Communicative (Makerbox 4)
Confident (Makerbox 5)
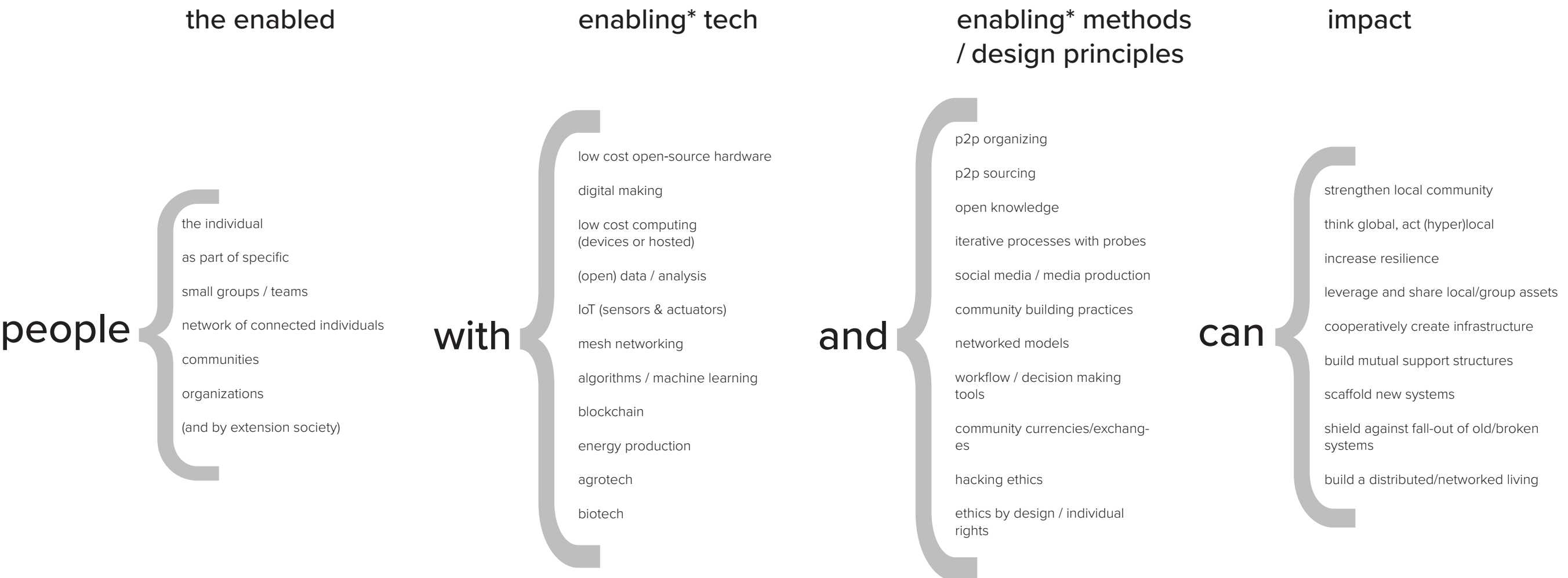Creative (Makerbox 6)
Critical (Makerbox 7)
Civic (Makerbox 8)

a concept of Ake Nygren: https://mymakerboxes.tumblr.com/

Impact through Connection at School

The Agency Map

the enabled

enabling* tech

enabling* methods / design principles

impact

people {

the individual

as part of specific

small groups / teams

network of connected individuals

communities

organizations

(and by extension society)

with {

low cost open-source hardware

digital making

low cost computing (devices or hosted)

(open) data / analysis

IoT (sensors & actuators)

mesh networking

algorithms / machine learning

blockchain

energy production

agrotech

biotech

and {

p2p organizing

p2p sourcing

open knowledge

iterative processes with probes

social media / media production

community building practices

networked models

workflow / decision making tools

community currencies/exchanges

hacking ethics

ethics by design / individual rights

can {

strengthen local community

think global, act (hyper)local

increase resilience

leverage and share local/group assets

cooperatively create infrastructure

build mutual support structures

scaffold new systems

shield against fall-out of old/broken systems

build a distributed/networked living

*enabling is only that which is distributed, within my trust/control and can be deployed by me / my groups.

minder vervuiling
in de natuur.
minder afal in Het water
zoals taken, oakjes, Blikjes.

In welke groepen zit ik?

voet Bal team | visteam
jeppeen
erza

gezin

school

vamielie

dzammen

Wat heeft de persoon in het
idden nodig?

een slootopruiming
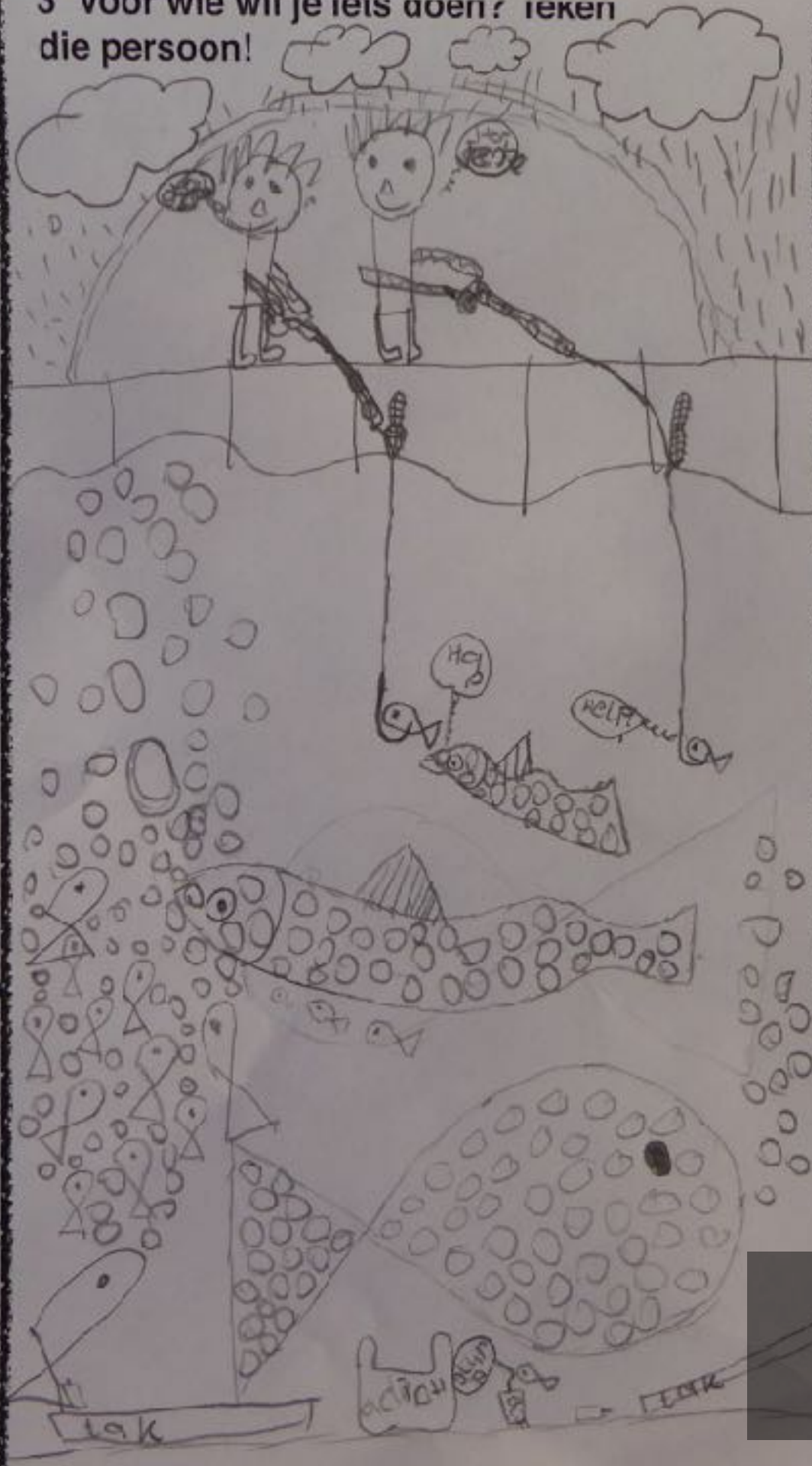
een Bestuur-
Baz
die andere water
kijken en
Baz
ID.

6 Wie zou je willen dat je helpt?
Denk aan de groepen die je bij 2
noemde!

klas

jesse

en jezoen
en dzagan

Underwater
Viewer

Underwater Viewer

Some reading recommendations

- John Burke: *Makerspaces: A Practical Guide for Librarians*
- Chris Anderson: *Makers*
- Sylvia Libow Martinez & Gary Stager: *Invent to Learn*
- Cory Doctorow: *Makers*

- selected articles here (Google Drive)