

Experiences in vocational education and lifelong learning (LLL)

– problem solving perspective

Croatian Forest Research Institute and partners

VETS4BioECONOMY

Professional training in forest bioeconomy in Austria, Slovenia and Croatia – experiences, lessons learnt and looking ahead



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Content (12 slides)

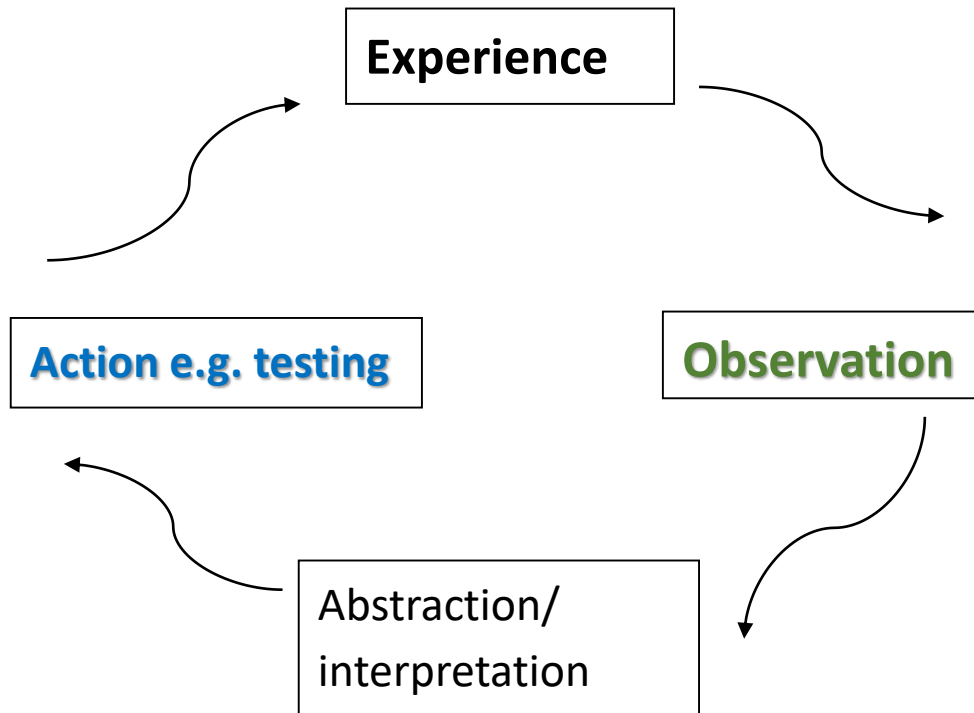
- Lifelong learning & adult education build on experience & aim to transform

(see UNESCO Agenda 2030/ Goal 4; https://www.dvv-international.de/fileadmin/files/Inhalte_Bilder_und_Dokumente/Materialien/Analysis/DVV_International_Analysis_Financing_Popular_ALE_Web2.pdf)

- 3 types: formal (= institutional, top-down) goals, content, non-formal  informal 
- Actors: private/ state/ intermediary; individual/ group; stakeholders/ shareholders
- THE CASE of PROBLEM SOLVING in technology rich environment AT WORK – comparison of best and worst group (data from 2014, analysis 2020, 7 slides)
- CONCLUSIONS
 - *feedback, reciprocity, dialogue, cooperation as principles and processes are to key to success*
 - *Dichotomies (old-new, private-public, market-state, etc.) are artificial as an intermediary level provides diversity, flexibility, adaptation, resilience*

Essential elements are

1. NEEDS (of participants)
2. FEEDBACK (LOOPS)



LLL & AE basics

NEEDS Maslow: safety, power, freedom, fun, sense

LEARNING is a **response** to sth; is a **change** : intentional or not, organized or not

EDUCATION is an ***organized* competence & skills building**

institutionalized activity → *apriori* defined goals, structures,
mediators consider needs (or not)

An input, investment of an individual is based on

- **Emotions** (feelings; e.g. response of a child),
- **Emotions+motives** (benefits > input; e.g. response of a teenager)
- **Emotions, motives, cognition** (interpretation, iznajdljivostjo, memorizing, comparison, analyse+ syntetize)

Positive experience supports continued learning (use, development of knowledge)

Negative experience „prevents“ learning.

Problem solving in technology rich environments (OECD, 2009)

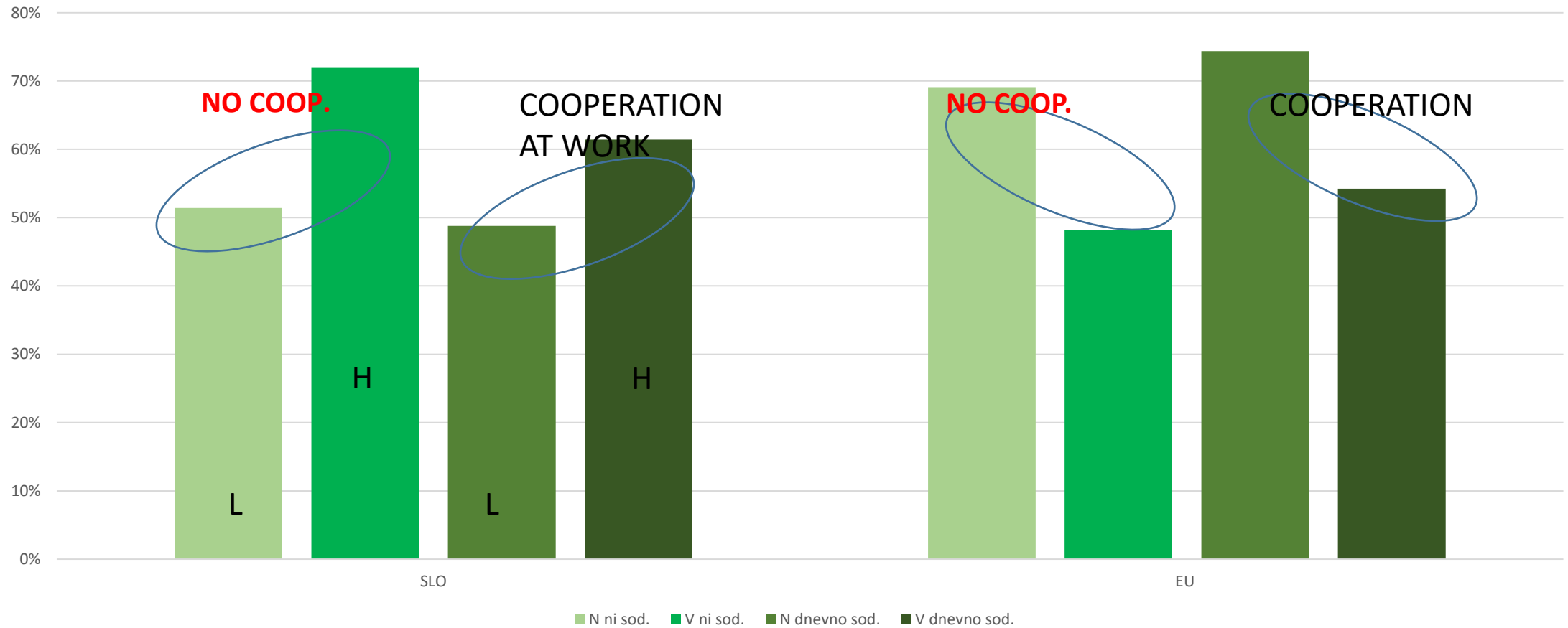
- A problem excludes routine response (PIAAC, 2009) – a case of problem solving in technology rich environments
- An example of employed participants; inquiry 2014, SLO; N=200.000
- RQ:
 - Do **they cooperate at work, exchange information, communicate, learn** (attend training events, compare ideas, search for information) ?
 - Is there any **difference btw groups „the best achievements“/ „the lowest achievements“** in PBL solving in technology rich environments ?
 - Is there any difference btw **Slovenia and Europe** ?

Source: BOGATAJ, Nevenka. Delovno sodelovanje pri reševanju problemov v tehnološko bogatih okoljih - primerjava med skupinama z visokimi in nizkimi dosežki. V: JAVRH, Petra, MIRCEVA, Jasmina, BOGATAJ, Nevenka. *Delovno aktivni prebivalci z nižjimi spretnostmi : študija podatkov raziskave Spretnosti odraslih - PIAAC*. Ljubljana: Andragoški center Slovenije. 2020, str. 59-74 https://www.acs.si/wp-content/uploads/2020/11/Delovno_aktivni_prebivalci_z_nizjimi_spretnostmi.pdf

Trust is a learning precondition - cooperation at work in Slovenia and EU

Cooperation at work	Achievements (groups L, H)	TRUST („Generally we can trust people“ % of those who disagree & strongly disagree	
		Slo	EU
NO COOPERATION	LOW (L)	0	15,8
	HIGH (H)	10,9	13,4
DAILY COOPERATION	LOW (L)	3,7	15,0
	HIGH (H)	19,6	14,9

Groups L & H

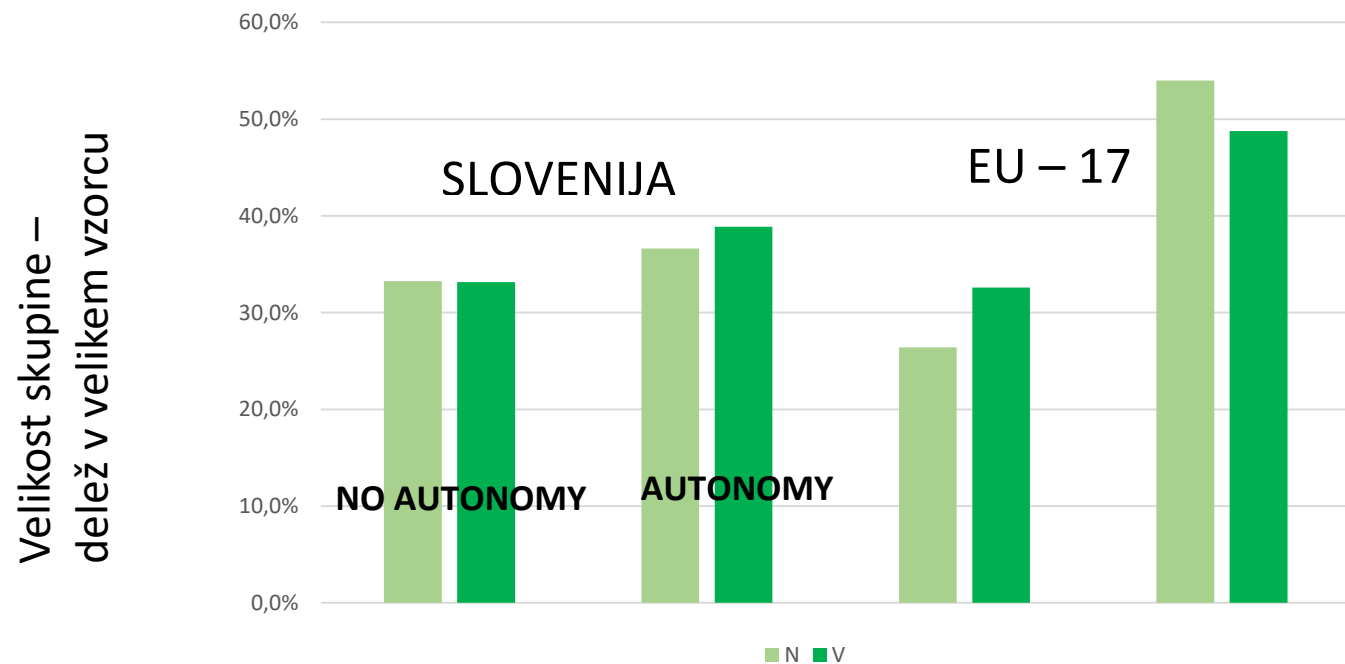


L ... (LIGHT GREEN) Group with the lowest achievements
H ... Group with the highest achievements

No cooperation

No **autonomy**, L and H in SLO are relatively similar

Autonomy: Slovenia – low difference, EU - more L



L ... (LIGHT GREEN) Group with the lowest achievements

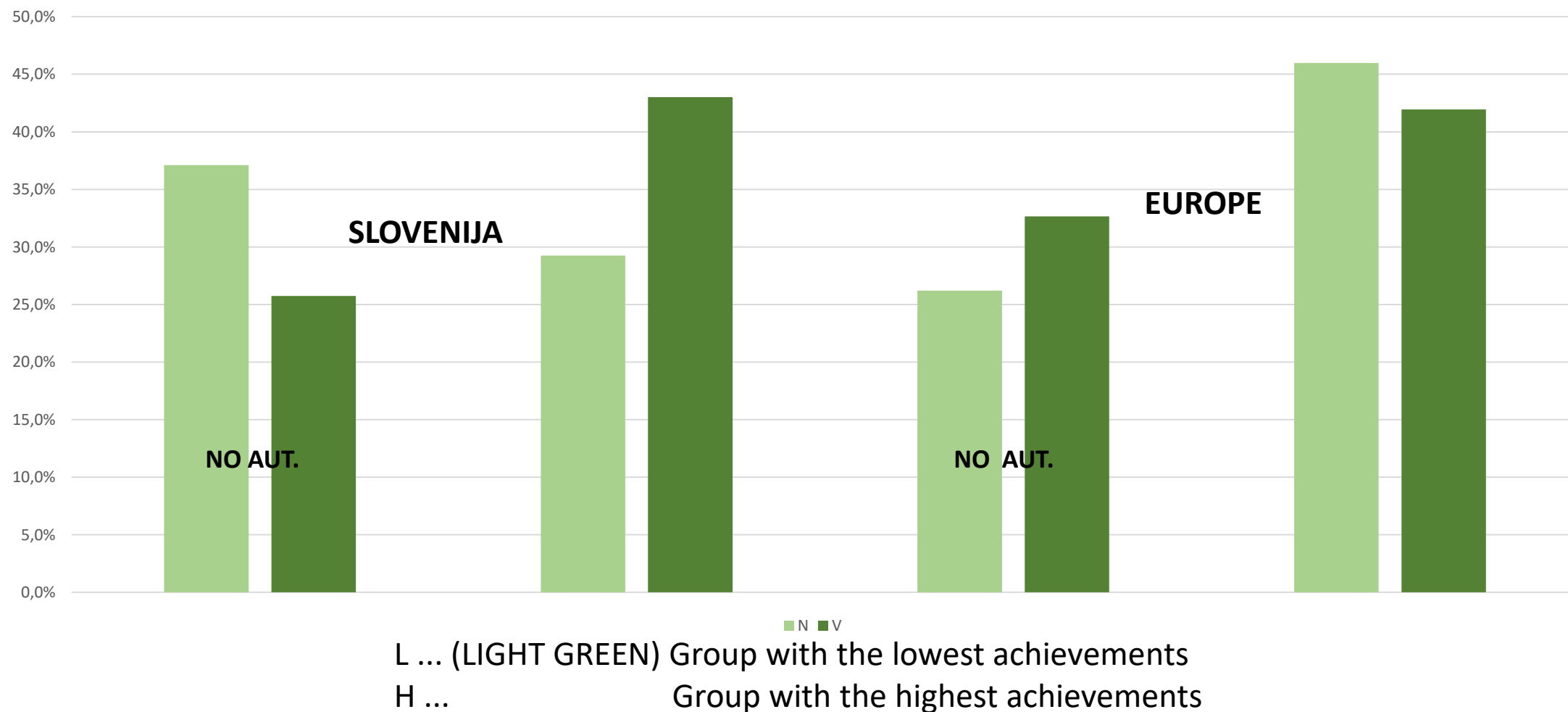
H ... Group with the highest achievements

Daily cooperation

No **autonomy**: SLO: L > H, EU: opposite

Autonomy: SLO – huge difference, EU – more L

Patterns differ. Autonomy in SLO stimulates H. H is probably more adaptable.



Characteristics of the group LOW ACHIEVEMENTS

- Low trust
 - 0% »high, very high« trust (H: 10,9%)
 - 3,7%, when cooperation at work is high; (H : 19,6%).
- Poor autonomy at work (sequence of tasks, type of work)
- Poor learning at work 15% (H 65%); if cooperation → L = H !
- Do not search for additional information (H: 75%); at daily cooperation L: 12,3%, H 85,1%;
- Low attendance of learning events in 2014 (L: 13%, H: 15%) BUT at daily COOP. AT WORK HIGH ATTENDANCE L: 30,9%, H: 43,2%)

SLO vs. EU comparison

- **Less autonomy in Slovenia (30-40%; EU 50-55%).** In EU regular cooperation results in lower share in both groups while in SLO **the difference becomes significant (share of L drops from 37% to 29%, share of H rises from 39% to 43%).**
- Learning at/ by work is lower in SLO (15,1%) than in EU 25%
- **Group L lags behind**
 - **No-coop. at work** 51%; EU: 69%),
 - Daily cooperation 49% (EU: 74%);
- **Daily cooperation → more learning (SLO 63,9%, EU 29,8%);**
- **Group L does not search for new information (SLO 0%, EU 69%)**
- **Group L does not compare ideas with reality (23,7%, EU 64,1%)**
- **SLO: high participation at educational events**
 - **Daily cooperation** (30,9 % L in 43,2% H); EU (18% L, 14% H).

CONCLUSIONS

Group L can be stimulated with cooperation at work, because ...

- ... of its curiosity and potential of activation (incl.technical equipment);
- ... Of existing high attendance of educational events;



ATTENTION TO PRECONDITIONS FOR LEARNING

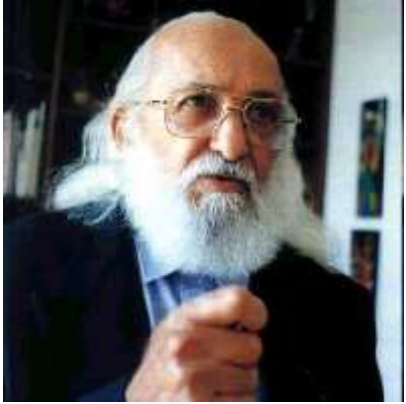
- Building of the general trust (instead of social engineering)
- **Learning WITH instead EDUCATION FOR**
- INVEST INTO LEARNING STRATEGIES: making sense, positive learning experience

Key elements of community learning

- **Feedback** provides two-way flow; balancing through communication/ dialogu & co-creation of meanings, interpretations;
- Actors can build sharing, joint vision (through conflicts)
- Examples:
 - intergenerational transmission (at home, in the local groups/ community),
 - study circles,
 - collective sports,
 - village communities

e.g. LAWRENCE, Anna, GATTO, Paola, BOGATAJ, Nevenka, LIDESTAV, Gun. Forests in common: Learning from diversity of community forest arrangements in Europe. *Ambio*, ISSN 1654-7209, 2021, vol. 50, str. 448-464. <https://link.springer.com/article/10.1007/s13280-020-01377-x#citeas>

Take away message for VET4BioEconomy?



Paulo Freire

Avoid “banking” approach to education



THANK YOU 😊
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