

Encounters with opportunities for learning in open schooling designs: what to look for in students' own texts

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Science Education for Action and engagement towards Sustainability

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The call for transformational change – a school challenge

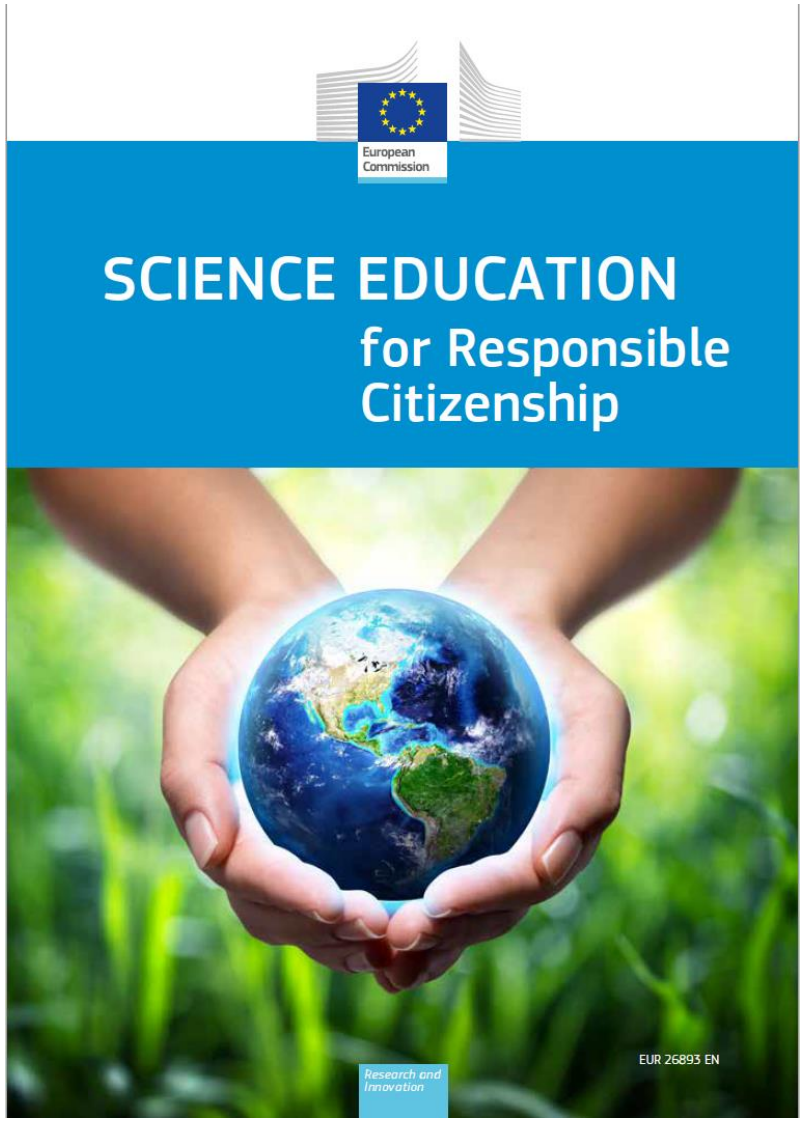
Only a system-wide transformation will achieve well-being for all within the Earth's capacity to support life, provide resources and absorb waste. This transformation will involve a fundamental change in the technological, economic and social organization of society, including world views, norms, values and governance

- UNEP (2021). Making Peace with Nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies (p. 15).

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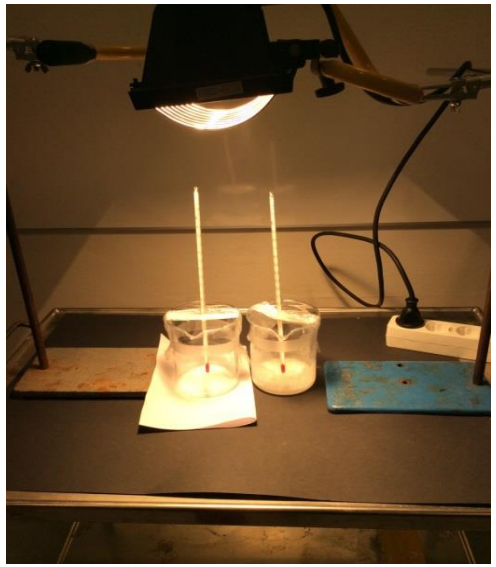
The Open schooling concept

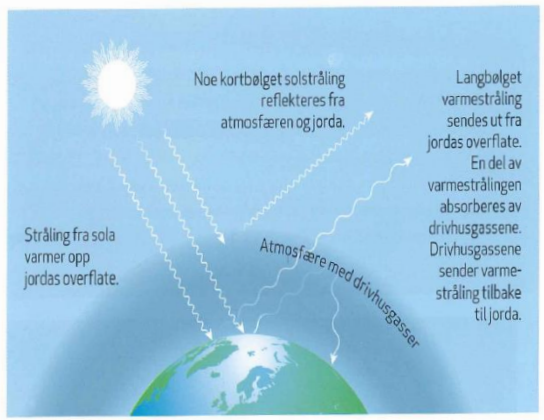
- Open schooling means *"Institutions that promote partnerships with families and the local community with a view to engaging them in the teaching and learning processes but also to promote education as part of local community development"* (EU, 2015).



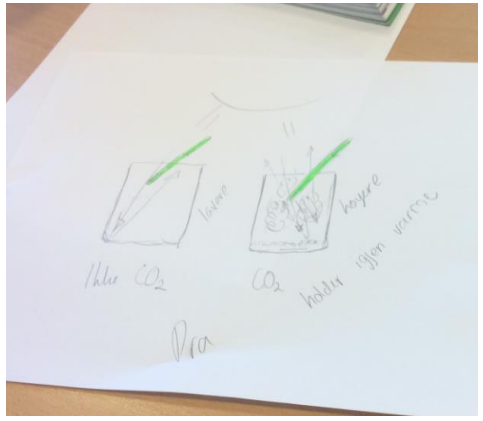
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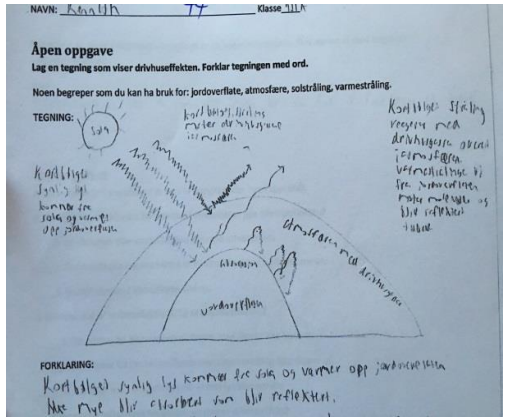
EC (2015). Science Education for Responsible Citizenship. Report to the European Commission of the expert group on science education. Luxembourg: Publications Office of the European Union.











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Knain, E., Fredlund, T., & Furberg, A. (2021). Exploring Student Reasoning and Representation Construction in School Science Through the Lenses of Social Semiotics and Interaction Analysis. *Research in Science Education, 51*(1), 93-111



Illustration: Colourbox.com

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Encounters in learning trajectories









INE BERG
18.11.2018

Dag 18:

Denne uken har det egentlig gått ganske greit. Jeg har ikke handlet så mye, men jeg var på butikken i går og klarte å ikke kjøpe noe...



Photo: Lynn Delbeecke (Instagram: @lynndelbeecke_photography)



We need to ask ourselves how science education may support in building societies characterized by flexible, adaptive and sustainable communities (photo: Pexels.com).

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Example, upper secondary school

- In my challenge I have chosen to reduce the consumption of meat. What makes it difficult is that my parents don't particularly agree with my choice, but I have vegetarian friends who are supporting me, so I'm happy. To tell the truth, it doesn't seem like a particularly difficult choice to make, my friends have lent me some books and reading them I inquired about how to have a balanced diet even reducing meat... I have made a food culture thanks to these books are not books by radical people ... I liked them and they gave me a lot of confidence because they are books by university professors who are experts in nutrition, all balanced people who made me find a way to approach a diet with little meat. .. in the end it is not such a difficult challenge.
- The only doubt I have concerns the fact that I don't know if acting on food is really an effective choice... something that really has an impact on the environment ... well, I have doubts about this.

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Taking an interest in what goes on in students' texts

- What encounters with texts, places, people, ideas and practices can be found in students' texts?
- What are foregrounded and explicit, and what are backgrounded and implicit in their encounters?
- Looking into what encounters students have chosen to include, and the way they construe the encounters into their own text, what does it say about students' learning?

Intertextuality: "The explicit and implicit relations that a text or utterance has to prior, contemporary and potential future texts"

(Bazerman, C. (2004). Intertextuality: How texts rely on other texts. In P. Prior & C. Bazerman (Eds.), What writing does and how it does it: An introduction to analyzing texts and textual practices (pp. 83-96). New York: Routledge.

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Connections to textual resources

A. Connections to texts:	Example
1. Hyperlinks that involve connection to specific texts, written and visual, in various media	Here is the recipe for today's dinner: https://www.tine.no/oppskrifter/ndag-og-hovedretter/pizza-og-pai/italiensk-pai
2. A prior text is drawn on as a source of meaning in a prominent way, for instance by citation or by reiteration, content referred to etc.	By the way, check out this article on item placement. These are quite interesting things... https://www.klikk.no/kvinneguiden/penger/derfor-star-varene-der-de-gjor-2626642 Maybe not so strange that several of them may be tempted to buy both one and the other?
3. A prior text may be used as background, support and contrast (not focused but present)	I have made a food culture thanks to these books.
4. Beliefs, issues, ideas, statements circulated within culture regarding the practices and values of that culture	Some just throw those «left-overs» away even though those are clean and still edible. That's called food waste. Imagine how people are starving in some parts of the world and while here you are, just taking for granted the grains and pieces of food you have.

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Connections to social events

B. Connections to social events	Example
a. Referring to explicit statements, utterances from social events	"But, it's not long now, and I'll do it!" so does that mean you go back to eating nougat when the challenge is over, Anita?
b. Referring to an explicit social event	On Monday I had lunch with Heather, you see one of the reasons I chose this challenge was the social aspects of it, even though we often talk during lunch it was even better when we took out the food mixed our salads, talked and laughed like crazy all throughout our lunch.
c. Referring to explicit social events – generalized	I don't understand why I have bothered to spend so much money on salads that is so simple to make at home. I believe that when I have completed this challenge, I will buy something in the store once a week at most. I plan to test other packed lunches next week that I will share with you!!
d. Connections to "implicit" social events or discourse as vague associations.	Great, Bryan! There has been a noticeable improvement! Nice to see your face more and that your gaze does not disappear into the mobile as soon as the opportunity arises. I hope you continue like this! It is not always the change itself that is so difficult, but the surroundings - like when your family drinks soda with you on the weekends.

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Example, upper secondary school

- In my challenge I have chosen to reduce the consumption of meat (**Bc**). What makes it difficult is that my parents don't particularly agree with my choice (**Bd**), but I have vegetarian friends who are supporting me (**Bd**), so I'm happy. To tell the truth, it doesn't seem like a particularly difficult choice to make, my friends have lent me some books (**Bb**) and reading them I inquired about how to have a balanced diet even reducing meat (**A2**) ... I have made a food culture thanks to these books (**A3**) are not books by radical people ... I liked them and they gave me a lot of confidence because they are books by university professors who are experts in nutrition, all balanced people who made me find a way to approach a diet with little meat (**Bc**). .. in the end it is not such a difficult challenge.
- The only doubt I have concerns the fact that I don't know if acting on food is really an effective choice (**Bc**) ... something that really has an impact on the environment ... well, I have doubts about this.

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Possible follow-up for this particular student

- Are there resources that should or might be included that is not present?
- Would re-framing or shifts in foreground/background configurations enhance student's learning by bringing some elements to the forefront? I.e., are there some traces of a particular idea or practice that could be made more important?
- Questions to pose to the student:
  - Knowledge: What are the important ideas in the book? Are they reliable, what does other sources say on the matter?
  - Politics: What makes it easy/difficult to make a choice?
  - Different interest groups: Could the student find other groups where support could be gained?
  - Ethical and values positions: Why do the parents disagree? Are there others that think similarly (e.g., among your peers)? Why do they?

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