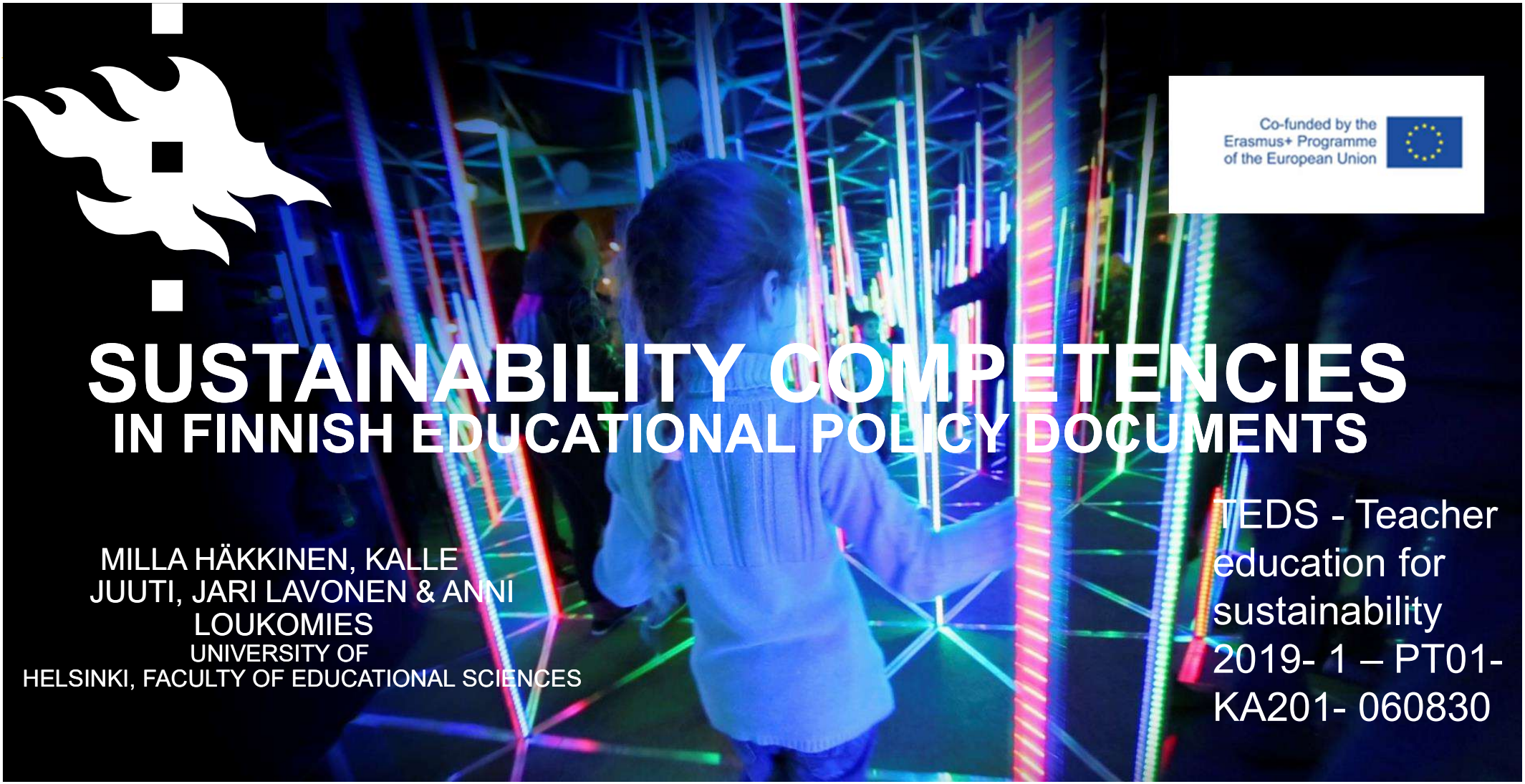

SUSTAINABILITY COMPETENCIES
IN FINNISH EDUCATIONAL POLICY DOCUMENTS

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HOW SUSTAINABILITY COMPETENCIES CONTRIBUTE TO EDUCATION FOR SUSTAINABILITY?

- The concept of sustainability competencies represent the future competence required in overcoming global sustainability crisis

- Sustainability competencies have potential in providing a basis for explicit and more specific teaching, learning and evaluating framework that differ from more general future competencies such as creative thinking and critical thinking

(Wiek, Withycombe & Redman, 2011a, p. 204; UNESCO 2017)

SUSTAINABILITY COMPETENCIES:

- **"Competence in sustainability research and problem solving means having the knowledge, skills and attitudes necessary for succesful task performance and problem solving *with respect to real-world sustainability challenges and opportunities"* (Wiek, Withycombe, Redman & Mills (2011b, p. 5)**
- **"Transversal competence refers to an entity consisting of knowledge, skills, values, attitudes and will. Competence also means an ability to apply knowledge and skills in a given situation" (FNBE, 2016,p. 33)**

Systems-thinking competence:

- **Holistic thinking ability, analysing skills to comprehensively understand complex systems**

Anticipatory competence:

- **Systematic and analytic thinking about future and future generations with respect towards intergenerational equity**

Strategic competence:

- **Individual's (latent) capacity to act for sustainability (strategic knowledge and skills)**

Normative competence:

- **Actualizes as thinking and acting with respect to nature and sustainability, as promoting intergenerational equity, and as willigness to collaborate towards social inclusion**

Interpersonal competence:

- **Social knowledge and skills, closely connects to all other sustainability competencies and is recognized as one of the key competencies for change agents (appreciation of cultural diversity)**

SUSTAINABILITY COMPETENCE ANALYSIS

- Analysis of sustainability competence appearance in Finnish educational policy documents
- Method: deductive content analysis
- Analysed documents:
  - **The National Core Curriculum for Basic Education 2014**
  - Finland's Stability Programme (The General Government Fiscal Plan 2020-2023)
  - Guidelines for Development (Teacher Education)
  - Basic Education Evaluation Plan 2020
  - Finland's National Reform Programme 2019
  - Basic Education Act 628/1998

EXAMPLES OF ANALYSIS I

- Thinking and learning to learn (T1): *Capabilities for systemic and ethical thinking develop gradually as the pupils learn to perceive the interactive relationships and interconnections between things and to understand complex issues* (FNBE, 2016, p. 33).

Underlying values of basic education: 1) Uniqueness of each pupil and right to a good education, 2) Humanity, general knowledge and ability, equality and democracy, 3) Cultural diversity as a richness, 4) Necessity of a sustainable way of living (FNBE, 2016, p. 23). **T1 + VALUES-> SYSTEMS-THINKING COMPETENCE**

- Cultural competence, interaction and self-expression (T2): *Preconditions for a culturally sustainable way of living and acting in a diverse environment are possessing cultural competence based on respect for human rights, skills in appreciative interaction and means for expressing oneself and one's views* (FNBE, 2016 p. 33) **-> INTERPERSONAL COMPETENCE**
- Taking care of oneself and managing daily life (T3): *-Managing daily life requires an increaingly wide range of skills. This are covers health, safety and human relationships, mobility and transport, acting in the increasingly technological daily life, and managing personal finance and consumption, all of which are elements of a sustainable way of living. -In basic education, pupils have opportunities to practise making choices and acting in a sustainable way.* (FNBE, p. 35) **-> ACTION COMPETENCE**
- ICT Competence (T5): *They learn to assess the impact of ICT from the perspective of sustainable development and to be responsible consumers* (FNBE, 2016 p. 39). **-> STRATEGIC COMPETENCE**
- Participation, involvement and building a sustainable future (T7): *The pupils understand the significance of protecting the environment through their personal realtionship with nature. – – The pupils are encouraged to consider proposals from the perspectives of equality of the different parties, fair treatment and a sustainable way of living. -> NORMATIVE COMPETENCE During their year in basic education, the pupils consider the links between the past, the present and the future and reflect on various alternative futures. They are guided to understand the significance of their choices, way of living and actions not only to themselves bt also to their local environment, society and nature,* **-> ANTICIPATORY COMPETENCE.** *The pupils develop capabilities for evaluating both their own and their community's and society's operatinfg methods and structures and for changing them so that they contribute to a sustainable future ->* **STRATEGIC COMPETENCE** (FNBE, 2016, p. 39.)

EXAMPLES OF ANALYSIS (EXTRA)

- **Key content areas related to the objectives of environmental studies in grades 1–2:** "*C6 Practising a sustainable way of living: the contents are selected diversely from different areas of sustainable development. The pupils practise taking care of their own belongings and shared items. They learn to reduce the amount of waste they generate, to recycle and to sort waste. The pupils learn about their home region and its significance. They participate in improving the state of their surroundings and in promoting the well-being of the school community. The pupils consider the significance of their own actions for themselves, other people, and their surroundings."* (FNBE, 2016, p. 225.) **ACTION COMPETENCE + NORMATIVE COMPETENCE**

- **Key content areas related to the objectives of ethics in grades 3–6:** "C4 Nature and sustainable future: The pupils familiarise themselves with different conceptions of time and different ways of explaining the world and reflect on their impacts on people's lives as well as different conceptions of knowledge associated with them. They examine different conceptions of nature, the future of nature and the humankind as well as sustainable development. They practise analysing their views and justifying them in relation to their worldview and a sustainable future" (FNBE, 2016, p. 429.) **LOW LEVEL SYSTEMS-THINKING COMPETENCE + NORMATIVE COMPETENCE**

- **Objectives of instruction in biology in grades 7–9, Objectives related to attitudes and values in biology:** *"O12 to inspire the pupil to deepen the interest in nature and its phenomena and to strengthen his or her relationship with nature as well as his or her environmental awareness"* (FNBE, 2016, p. 655) **NORMATIVE COMPETENCE**

- **Knowledge and skills for the grade 8 (O12):** *"Using examples, the pupil is able to describe how to act in nature in a sustainable manner while preserving biodiversity"* (FNBE, 2016, p. 661) **ACTION COMPETENCE**

SUSTAINABILITY COMPETENCE APPEARANCE IN THE CURRICULUM

	Systems-thinking competence	Anticipatory competence	Normative competence	Strategic competence	Interpersonal competence
Transversal competence	Interpretation with "underlying values": T1= 409 Interpretation: T1+T7=96	242	242	659	419
Content areas related to the learning objectives	Grades 1–2: 0/68 Grades 3–6: 3/99 Grades 7–9: 6/132	Grades 1–2: 0/68 Grades 3–6: 0/99 Grades 7–9: 1/132	Grades 1–2: 5/68 Grades 3–6: 7/99 Grades 7–9: 16/132	Grades 1–2: 1/68 Grades 3–6: 1/99 Grades 7–9: 7/132	Grades 1–2: 0/68 Grades 3–6: 0/99 Grades 7–9: 0/132
Objectives of instruction	Grades 1–2: 0/175 Grades 3–6: 0/300 Grades 7–9: 3/386	Grades 1–2: 0/175 Grades 3–6: **0/300** Grades 7–9: 2/386	Grades 1–2: 7/175 Grades 3–6: 6/300 Grades 7–9: 8/386	Grades 1–2: 1/175 Grades 3–6: 2/300 Grades 7–9: 8/386	Grades 1–2: 1/175 Grades 3–6: 3/300 Grades 7–9: 1/386
Assessment criteria for good / numerical grade 8	Grades 1–2: - Grades 3–6: 0 Grades: 7–9: 2	Grades 1–2: - Grades 3–6: **6** Grades 7–9: 4	Grades 1–2: - Grades 3–6: 6 Grades 7–9: 10	Grades 1–2: - Grades 3–6: 1 Grades 7–9: 10	Grades 1–2: - Grades 3–6: 1 Grades 7–9: 4

EXAMPLES OF ANALYSIS II

Assessment criteria for religion at the end of grade 6 for a verbal assessment describing good knowledge and skills/numerical grade eight:

Objectives of instruction: *"O10 to guide the pupil to evaluate the choices he or she makes and to reflect on the values underlying his or her actions from the perspective of ethical principles and a sustainable future"* (FNBE, 2016, p. 419). -> NORMATIVE COMPETENCE

Assessment targets in the subject: *Ethical reflection*

Knowledge and skills for the verbal assessment good/numerical grade 8: *The pupil is able to give everyday examples of building a sustainable future. The pupil is able to apply the ethical principles of the studied religion to his or her personal reflection.* (FNBE, 2016, p. 419). -> ANTICIPATORY COMPETENCE

(Content areas related to the learning objectives: anticipatory competence / Grades 3–6: 0/96)

In addition, there was no connection between O10 to transversal competence *"Participation, involvement and building a sustainable future (T7)"* in the curriculum.

CONCLUSIONS AND RECOMMENDATIONS

- Identifying and developing (future) competence is mentioned in educational policy documents, but not in sustainability context
- Transversal competence includes topics or contents from sustainability competencies presented, but many parts are not linked to sustainability. Underlying values of the curriculum enables the interpretation that transversal competence, content areas and learning objectives could be interpreted in the context of sustainability.
- The Finnish educational policy for teaching sustainability is open to different interpretations and implementations.
- ***Sustainability competencies could add conceptual understanding about sustainability education targets and increase internal consistency between learning objectives and assessment criteria. In conclusion, findings from the analysis support the value of competence-oriented teaching in the education for sustainability.***

THE CONCEPT OF SUSTAINABILITY COMPETENCIES

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