Key competencies for life long learning

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Education structure in Finland

National Board of Education Finland
Key competences for lifelong learning are

1. Learning and problem solving
2. Interaction and cooperation
3. Vocational ethics
4. Health, safety and ability to function
5. Initiative and entrepreneurship
6. Sustainable development
7. Aesthetics
8. Communication and media skills
9. Mathematics and natural sciences
10. Technology and information technology
11. Active citizenship and different cultures
LIFE LONG LEARNING

Time spent in formal and informal learning across a typical lifespan

<table>
<thead>
<tr>
<th>0-5</th>
<th>K</th>
<th>GR 1-12</th>
<th>UG</th>
<th>GRAD</th>
<th>WORK</th>
<th>RETIREMENT</th>
</tr>
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<tbody>
<tr>
<td>9,25%</td>
<td>18,5%</td>
<td>7,7%</td>
<td>5,1%</td>
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Formal learning environments (16 waking hours)

Informal learning environments

(Assessment and Teaching of 21st Century Skills project draft White Papers Draft White Paper 4 New assessments and environments for knowledge building)
ASSESSMENT OF KEY COMPETENCES FOR LIFE LONG LEARNING IN FINLAND

The student demonstrates his/her vocational skills by working in tasks in the electronics field. Work is performed to such an extent that vocational skills may be deemed to meet the vocational skills requirements.

*In a vocational skills demonstration,* the following are demonstrated:
- The mastery of work processes
- The mastery of working methods, equipment and tools
- The possession of underpinning knowledge
- The key competences for lifelong learning

If vocational skills required by the module cannot be demonstrated in full in a vocational skills demonstration, they must be supplemented by some other type of competence assessment, such as interviews, assignments or other methods.
Theoretical framework: Gardner’s Multiple Intelligences Theory (1983)

(1) Linguistic intelligence
(2) Logical-mathematical intelligence
(3) Musical intelligence
(4) Spatial intelligence
(5) Bodily-kinesthetic intelligence
(6) Interpersonal intelligence
(7) Intrapersonal intelligence

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(8) Spiritual intelligence
(9) Environmental intelligence

**GIFTEDNESS = top 10%**

**NATURAL ABILITIES (NAT) DOMAINS**

- **Intellectual (IG)**
  - Fluid reasoning (induct./deduct.), crystallized verbal, spatial, memory, sense of observation, judgment, metacognition.
- **Creative (CG)**
  - Inventiveness (problem-solving), imagination, originality (arts), retrieval fluency.
- **Socioaffective (SG)**
  - Intelligence (perceptiveness), Communication (empathy, tact), Influence (leadership, persuasion).
- **sensoriMotor (MG)**
  - S: visual, auditory, olfactory, etc.
  - M: strength, endurance, reflexes, coordination, etc.

**TALENT = top 10%**

**SYSTEMATICALLY DEVELOPED SKILLS (SYSDEV)**

**FIELDS**
- (relevant to school-age youths)
- **Academics**: language, science, humanities, etc.
- **Arts**: visual, drama, music, etc.
- **Business**: sales, entrepreneurship, management, etc.
- **Leisure**: chess, video games, puzzles, etc.
- **Social action**: media, public office, etc.
- **Sports**: individual & team.
- **Technology**: trades & crafts, electronics, computers, etc.

**DEVELOPMENTAL PROCESS**

- Informal/formal learning & practicing (LP)

**ENVIRONMENTAL (EC)**

- Milieu: physical, cultural, social, familial, etc.
- Persons: parents, teachers, peers, mentors, etc.
- Provisions: programs, activities, services, etc.
- Events: encounters, awards, accidents, etc.

**CATALYSTS**

- Physical: characteristics, handicaps, health, etc.
- Motivation: needs, interests, values, etc.
- Volition: will-power, effort, persistence.
- Self-management: concentration, work habits, initiative, scheduling, etc.
- Personality: temperament, traits, well-being, self-awareness & esteem, adaptability, etc.

**CHANCE (CH)**

Positive/negative impacts
Theoretical framework: Causal order of components in DMGT
(Nokelainen & Ruohotie, 2009; Tirri & Nokelainen, in press)
Assessment challenges

Young people (16 – 19) are not familiar with key competences for life long learning

How to motivate them to think LLL competences for their future life?

Slide 4 shows how many hours youngsters have formal and informal education. In Finland VET students have formal education 35% every week during school year (16 hours waking time). 65% is time for informal education. 2/3 of time learning is happening outside of the school.

How we can/will pay attention to informal learning? In future more and more education will happen informal environments. Slides 7 and 8 show learning process toward systematically developed skills. The process the student goes through is many times more important and educational than the result.
Assessment of learning (Formative)

The objective of assessment of learning is that the student knows what he/she knows and what there is still to learn. When performing assessment of learning, the teacher and workplace instructor must use methods that motivate and activate the student. They are used to support and motivate the student to reach the skills requirements or objectives as well as to develop his/her self-assessment skills. The student assesses his/her learning based on the skills requirements, objectives and assessment criteria of the module.

Learning is assessed during the whole training period or duration of studies by giving the student oral or written feedback on the progress of learning. Numerical assessment is not needed when assessing learning. Feedback is used to support and guide the student to achieve the best possible performance by bringing out the student’s strengths.
Assessment of competence (Summative)

The student receives the grades shown in the qualification certificate based on assessment of competence using the assessment scale 1-3. When competence is being assessed, the assessment methods are chosen so that they measure reaching the skills requirements and objectives set, suit the study methods used and support the student’s learning process. The students must have an opportunity to show his/her competence in various ways and also assess his/her competence him-/herself.

Skills in vocational modules are assessed using a skills demonstration and other ways of assessing competence. A skills demonstration is used to assess the competence determined in vocational skills requirements as widely as possible but at least what the qualification requirements state. If necessary, other forms of competence assessment supplements the competence necessitated by skills requirements.
Recognition of prior learning

The student’s competence and its level must be investigated for the identification of his/her strengths and for the recognition of prior learning. Recognition of prior learning forms the basis when setting his/her personal objectives, but also to be able to determine the amount of guidance and support needed.

Recognition of prior learning calls for an assessment discussion in which the student and teacher or teachers participate. To promote recognition of prior learning different facilitating assessment methods must be developed.
Validation of prior learning

If the recognition process shows that the objectives set for the module in question, or part thereof, have been reached, such prior learning is validated. Validation of prior learning is recorded in the student’s personal study plan.

Validation of prior learning is part of student assessment and it is subject to the same statutes as other forms of assessment. Studies in the qualification to be completed can be substituted or accredited by validation of prior learning. The modules substituted by the validation of prior learning are marked in the qualification certificate. The teacher or teachers in charge of the studies in question decide on the validation of prior learning.

No general time limit can be set before which the acquired competence could not be validated, but the validity of the competence can be checked. If necessary the student must demonstrate the correspondence of his/her competence with the skills requirements and objectives of the qualification concerned.
E-Learning

E-learning is good way to motivate students and give them more information also key competences for life long learning.

Globally we have lot of different research projects running and the main interest is to improve teaching and learning of future skills = LLL. Many of big IT-companies are sponsors of those projects, ITL research, Innovative Teaching and Learning and ATC21S is an international research effort aimed at empowering students with the right skills to succeed in the 21st-century workplace. Finland and Australia are members of both research projects.

Some examples how we use e-learning platform Moodle to give our students some Ideas what kind of skills and competences they’ll need to succeed in 21st-century workplace.


www.facebook.com/Amisto.ammattiopisto
The way from the school to the living network

Existing system

Steering systems of education (Minedu & NBE)

Schools

Future development

Recognition and validation of prior learning

Practical training

Entrepreneurship

Civil service

Voluntary work

Interactive games

Heavy and professional student counselling

Schools

Vocational schools

General education

Virtual peer-to-peer networks

Kuosa, 2007
Ruohotie 2012
Summary

Do we have to speak formal/informal or e-learning anymore in future?

Kuosa, 2007
Ruohotie 2012
Practical, Global, Languages, Culture

THANK YOU

amisto
Learning By Doing