The importance of digital literacy on the labour market

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Introduction

• In many countries, the digitisation of the economy causes the polarisation of the labour market. (increase of opportunities for high-skilled with cognitive and digital skills, and decrease for low-skilled)

• Not only by automation, but remaining tasks change so that digital literacy turns out to be a indispensable qualification.
The goal of the paper is to examine relationship among digital skills and employment and in this way accentuate importance of policy interventions for improving digital literacy for disadvantaged part of labour force.

Introduction

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– 1. The importance and definition of digital literacy
– 2. Measurement of digital literacy
– 3. Relations between digital literacy and employability
– 4. Digital skills and employment rate (statistical correlation in EU countries)
– Conclusions and recommendations
The importance and definition of digital literacy

• Digital literacy, skills and competences have become crucial terms in the discussion on the kind of skills needed by citizens for successfully participation in the society.
• In the world of work they have become transversal competence that can be easy transferred from one specific professional field to another.
The importance and definition of digital literacy

• Digital literacy and competence must continuously be modernised, to avoid or minimise the risks of digital exclusion.

(As digital exclusion is largely related to a lack of digital literacy and competence, rather than access to technology and services.)
The importance and definition of digital literacy

• The literature on the phenomenon and importance of digital skills is very rich (Dolphin, 2015; European Commission, 2016; Eurofound, 2017, 2018), but there is no common or official definition of this phenomenon.

• Much research dedicated to the definition of digital skills has been particularly oriented towards the skills needed by the workforce and employment as factors of employability, economic growth and international competitiveness.
Measurement of digital literacy

• The OECD Programme for the *International Assessment of Adult Competencies* (PIAAC) survey enables a direct measurement of adult digital skills and competences.

• It shows clear generational gap among non-users of modern technology. Thus, more than a half of those who do not have prior computer experience are in the age group 55-65.
Measurement of digital literacy

- The Digital Skills Indicator is a composite indicator based on the European Commission's digital competence framework.

- It shows that in 2016 almost one fifth of the EU population had no digital skills.
Measurement of digital literacy

• *The Annual European Digital Progress Report* contains benchmarks developments in digital literacy and skills

• There are huge differences across Member States, with the share of people without adequate digital literacy and skills ranging from 3% in Luxembourg to 41% in Bulgaria and Romania.
Relations between digital literacy and employability

- Employability is more than the capacity for getting a job.
- It includes that people can relatively quickly adapt to the changing working environment, meet their professional goals on the current job and secure another job if she/he so wishes or has been dismissed.
Relations between digital literacy and employability

• With the intention to improve the situation, the European Commission has launched *the Digital Skills and Jobs Coalition*, to ensure that the labour force in Europe is appropriately equipped with adequate digital skills.

• However, a holistic action is still limited in a significant number of Member States.
Digital skills and employment rate

• Eurostat data on digital skills and employment rates in EU member states allow for testing for correlation between these two variables.
• In all countries older generations tend to have lower level of digital skills
• So cohort 55-64 is shown separately, as there are large differences both in digital skills and in employment rates among EU countries for them.
Comparing generations of prime age cohorts at labour market of age 25-54 shows as expected high employment rates and high percentage of those that have at least low digital skills (low, basic or above basic). There are no outliers and the correlation is positive but not very strong. Pearson’s coefficient of correlation is $r = 0.59$ statistically significant with $p = 0.00078$. 
Graph 2: Digital skills and employment rate of population aged 54-65 in EU 2017

- The Graph 2 shows more dispersion in older generations, but also a higher correlation between digital skills and employment rate. Pearson’s coefficient of correlation is $r = 0.62$, statistically significant with $p = 0.0003$, but with Luxemburg as atypical outlier with very high digital skills 90% and very low employment rate 40%. Without this outlier Pearson’s coefficient of correlation rises very high to $r = 0.77$ statistically significant with $p = 0.000002$. 
Digital skills and employment rate

• It is a vicious circle: people without any digital skills have low employability, so will remain inactive and while not employed, will be deprived of income and their chances to acquire necessary digital skills will remain low.

• From the other side, while higher employment rate means that more people need to use computers every day so they will have at least low digital skills, as well as that people with at least some digital skills have more chances to be employed.
Social exclusion is related to digital exclusion

• As lack of employment is main source of social exclusion, this strong correlation between digital skills and employment rate supports policies oriented to promote digital literacy in population
• That will help them to avoid the trap of digital exclusion and raise their chances to be active on labour market.
Conclusion and recommendations

• Digital skills are desirable qualifications for potential employers.
• Not only digital competences for ICT professionals are important.
• Strong correlation between at least low digital skills and employment rate shows that broad action to achieve at least minimum digital literacy for population in population aged 54-65 is an important mean to avoid digital and social exclusion as digital skills have become one of main factors of employability.