youth SKILLS

POLICY BRIEF

The ySKILLS Research Network: Charting Pathways to Digital Youth Wellbeing

This project has received funding from the European Union's Horizon 2020 Research & Innovation programme under Grant Agreement no. 870612. The information in this deliverable reflects only the authors' views and the European Union is not liable for any use that may be made of the information contained therein.

Policy Brief 4

The ySKILLS Research Network:

Charting Pathways to Digital Youth Wellbeing

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22 December 2023

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The EC-funded network ySKILLS research network aims to identify the key actors and factors that either bolster or undermine the wellbeing of children aged 12-17 in our digital age.

A New Model of Digital Literacy

The ySKILLS research network presents a novel model of digital literacy designed to revolutionise our understanding of this crucial domain. This theoretical framework promises to reshape the landscape of digital literacy as we know it. Digital literacy emerges as a multifaceted phenomenon, which is the combination of digital knowledge and digital skills, further distinguishing four key dimensions: technical/operational, information navigation, communication and interaction, and content creation and production skills. These dimensions are **unequally distributed**; they vary across individuals and are influenced by social and contextual factors within different countries. Recognising the indispensable nature of all four dimensions, this model underscores the imperative for individuals to cultivate a comprehensive digital literacy skill set to enable full and active participation in digital societies.

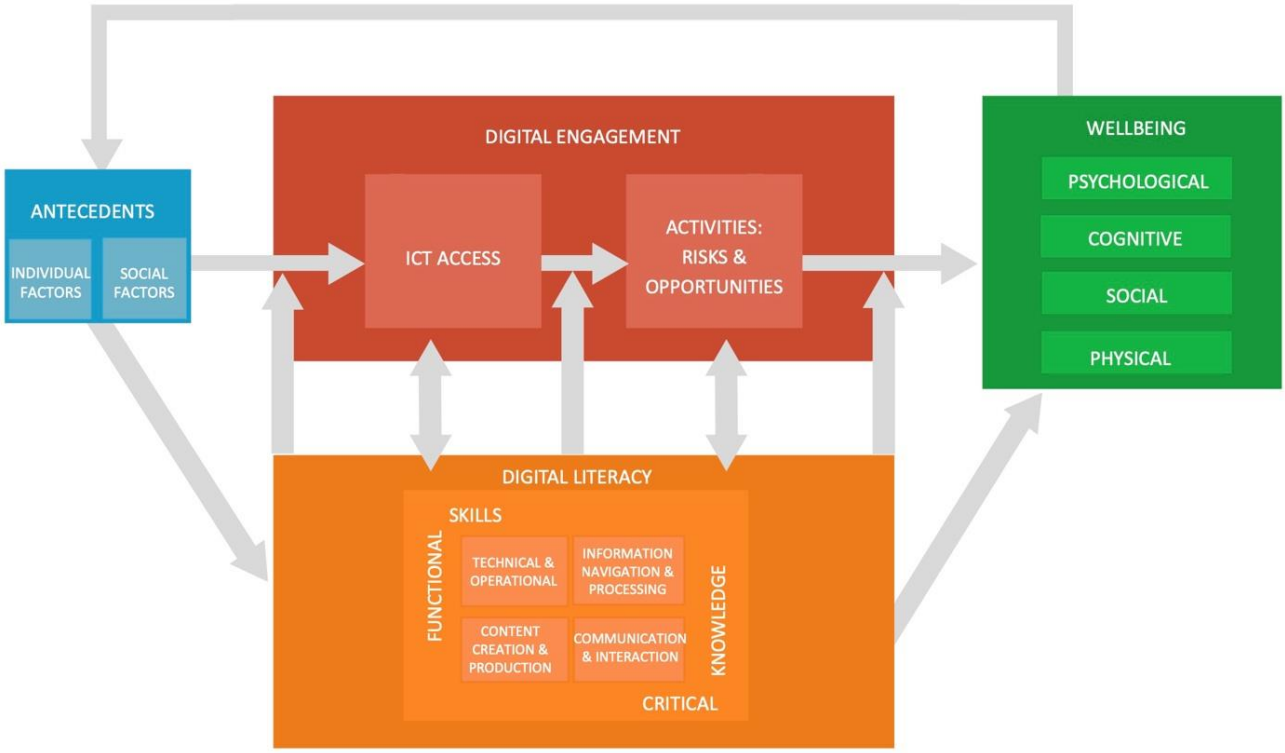

Figure 1: New theoretical model of ySKILLS (Smahel et al., 2023)

Insights from Empirical Research: Digital Literacy Development among Youth

Our **longitudinal survey**, conducted across six European countries, has unveiled **distinct developmental patterns** within the various dimensions of digital skills. While technical operational, programming, and digital knowledge skills have exhibited notable progress over time, information navigation, communication, and content creation skills have shown limited growth, prompting a need for deeper investigation into the factors influencing these trajectories.

The intricate landscape of digital skills is intimately connected with individual, social, and country-specific factors. Notably, **age** has displayed a positive correlation with most digital skills, emphasizing the vital role of experiential learning in skill acquisition. **Gender** disparities have surfaced across various digital skill dimensions, underscoring the necessity for gender-

inclusive approaches. Moreover, **self-efficacy** has emerged as a robust predictor of digital skill proficiency.

In the sphere of social interactions, our research has pointed at the negative impact of **parental restrictive approaches** on the technical and operational skills of children and young people. Additionally, the accessibility of digital technology and daily online activities has been closely intertwined with the acquisition of digital skills, highlighting the **continued pivotal role of digital access** in our increasingly interconnected world.

We have also examined the complex relationship between digital skills and **online risks**, identifying both direct and indirect links. While most digital skills did not directly influence risky online experiences, an exception was observed in the case of content creation and production skills, emphasising the nuanced relationship between skills and online risk.

While digital skills have displayed limited direct effects on psychological and social **wellbeing**, communication and interaction skills, as well as information navigation and processing skills, have modestly influenced perceived school performance (i.e. cognitive wellbeing) positively. In contrast, content creation and production skills were associated with lower school performance, revealing the complex interplay between digital skills and academic success.

Through interviews with **vulnerable groups**, such as adolescents grappling with mental health challenges, we have uncovered the complexity of digital skill development. Our findings have illustrated that advanced digital skills do not necessarily guarantee improved mental health and wellbeing. In some cases, skilled internet use has even led to riskier online behaviours, underscoring the importance of comprehensive digital literacy education that addresses both skill acquisition and responsible digital citizenship. The ySKILLS project research has also underscored the necessity of considering the **psychosocial context and individual developmental needs** of children and young people. This necessitates urgent attention to education and support in this area to ensure their confident and responsible navigation of the digital world.

Our **performance testing** has cast **doubt on the overall digital skill levels** of children and young people in Europe. Specifically, we observed challenges in Information Navigation & Processing skills, including difficulties in assessing the credibility of online information and discerning the motives behind online posts. In the domain of Communication and Interaction skills, we noted a lack of clear, appropriate, and polite online conduct, suggesting the need for improvement in this aspect of digital behaviour. Additionally, our testing indicated limited success in adhering to guidelines for effective presentation slide design in the realm of Content Creation and Production skills.

Insights from Computer Simulations: Assessing the Impact of Targetted Interventions

In the absence of costly real-world experiments, computer simulations with artificial agents serve as a practical means to assess intervention outcomes. These simulations allow us to model and test the impact of various intervention programmes, offering valuable insights for evidence-based policymaking. The findings raise important questions about the **timing and focus of interventions** and underscore the importance of tailored strategies to address disparities. We also aim to determine whether these interventions could effectively bridge the gap between less digitally skilled and more proficient youth, particularly those from vulnerable backgrounds. The key findings can be summarised as follows:

Cognitive Wellbeing: The cognitive wellbeing of youth generally follows a stable trajectory with a slight dip observed after the age of 18. However, socioeconomic disparities become evident in later years. **Long-term interventions show potential** in mitigating these negative trends but fall short of completely closing the socioeconomic gaps. In contrast, short-term interventions yield modest, temporary improvements, suggesting that sustained, long-term strategies, especially those targetting lower socioeconomic groups, may be more effective in promoting cognitive wellbeing.

Physical Wellbeing: A **persistent gender gap** is observed, with boys consistently outperforming girls in terms of physical wellbeing. Long-term interventions are effective in mitigating the negative trend among girls but do not completely eliminate the gender gap. Surprisingly, short-term interventions have minimal impact, emphasising the need for sustained efforts to address gender disparities.

Social Wellbeing: Social wellbeing experiences initial declines but shows a clear upward trend in later years. Socioeconomic gaps emerge to some extent, with long-term interventions playing a significant role in enhancing this positive trend after the age of 16. However, they do not fully eliminate the socioeconomic gap. Both long and short-term interventions lead to **slightly higher levels of social wellbeing** in later years, underscoring the potential for digital skills to positively influence social wellbeing.

Psychological Wellbeing: Psychological wellbeing, specifically self-efficacy, exhibits a strong upward trend, further amplified by interventions. A gender gap is evident in later years, with females reporting lower wellbeing than males. This highlights the importance of targetted interventions to address gender-specific challenges in psychological wellbeing stemming from digital skills.

These findings raise important questions about the **timing and focus of interventions** and underscore the importance of tailored strategies to address disparities. We also acknowledge that the relationship between digital skills and wellbeing is likely indirect and influenced by specific online activities or increased resilience to avoid harm from risky experiences, as suggested by Livingstone et al. (2023).

From Research to Actionable Points

With the following actionable points, we aim to guide EU policymakers in their efforts to promote and enhance children's digital skills and safety in the digital environment, aligning with the goals of ySKILLS.

Enhancing Digital Skills Coordination: Consider appointing a youth Digital Skills Coordinator responsible for overseeing initiatives across policy areas, directorate-generals, and instruments. This appointment can foster a more cohesive and effective approach to youth digital skills development and online safety.

Diversity-Centric Policies: Emphasise the diversity of children and the multifaceted nature of digital skills in policies. Prioritise the development of critical thinking, communication, and content creation skills alongside existing efforts.

Education Collaboration: Promote collaboration between the EU and Member States in the realm of digital education and skills. Facilitate the sharing of best practices and encourage whole-of-government approaches to digital education.

Monitoring Regulatory Impact: Monitor the impact of legislative instruments such as GDPR and DSA on children's digital experiences closely. Ensure that regulatory authorities responsible for enforcement are proactive in fulfilling their responsibilities.

Stakeholder Engagement: Actively involve diverse stakeholders, including media and industry actors, in shaping and disseminating policies related to children's digital skills. Encourage industry stakeholders to consider children's digital skills when designing services, particularly with the forthcoming Age-Appropriate Design Code.

Invest in Research: Consider investing in more comprehensive and longitudinal research projects that utilize the youth Digital Skills Indicator (yDSI) to measure children's digital skills over time and across different regions. This will provide valuable insights into the evolving landscape of children's digital skills and inform future policymaking.

Nurturing Digital Literacy for Children's Rights in the Digital Age

This policy brief underscores the profound significance of **digital literacy in the context of children's rights in the digital age**, as revealed through the extensive ySKILLS research. It is evident that digital skills and literacy are not merely incidental but fundamental to the realisation of various children's rights. As we have seen, these skills empower children in their education, enhance their participation, and fortify their protection in the digital realm.

Moreover, our analysis underscores the intertwined nature of these rights, emphasising that they are interdependent and indivisible. Any deficiency or inequality in children's digital skills can impede the full realisation of their rights across the spectrum. Therefore, it is not only a priority but also a legal obligation for governments and stakeholders to **ensure the equitable development of digital skills** among children.

Our recommendations focus on **promoting digital equity through targetted interventions** that address the unique needs of different groups of children. We also advocate for nurturing children's self-directed learning and participation in online activities, recognising the value of peer interactions and personal agency in building digital literacy.

In a world where children's rights and digital skills are intricately entwined, a comprehensive approach is imperative. We must **continue to prioritise the structural factors that enable and hinder children's digital literacy**, striving to create an environment where all children can fully realise their rights in the digital landscape. It is through these concerted efforts that we can truly empower the digital citizens of today and tomorrow, ensuring that they thrive in a digital world that respects and upholds their rights.

Further information:

The ySKILLS website: https://yskills.eu/

For ySKILLS evidence, see: synthesis of ySKILLS results and longitudinal survey findings.

For more about ySKILLS conclusions and recommendations, see: recommendations for policy and practice, action points for EU policy and theoretical integration.