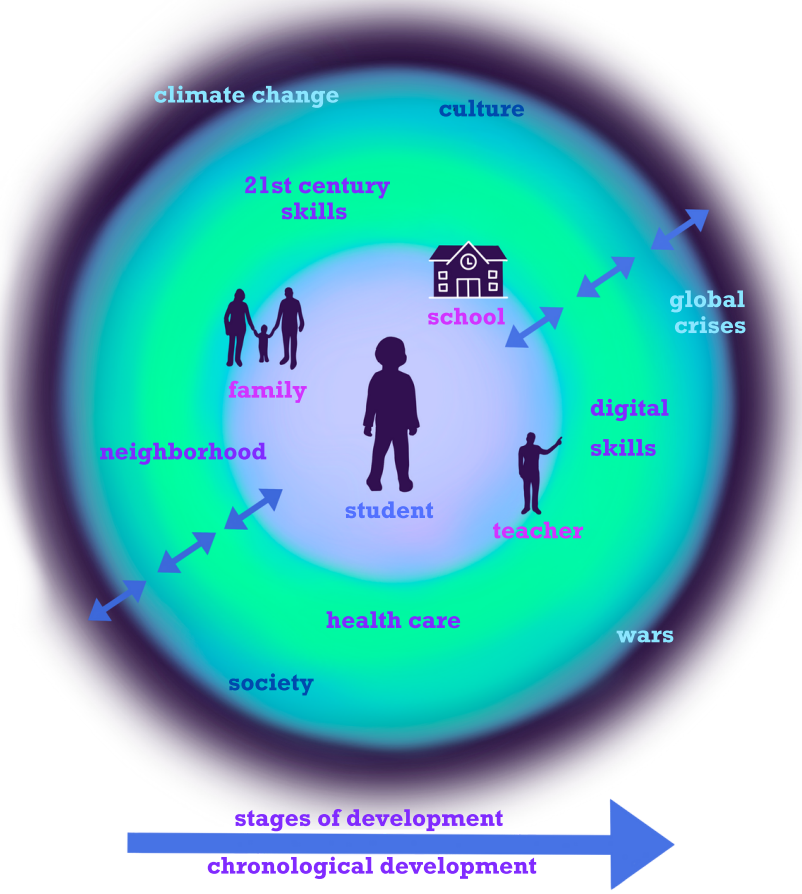
Balance between school community's well-being and digitalization

School is a part of a wider social system [1]. The systemic development of schools can be influenced at the interfaces of students, parents, teachers, principals, the school community, and the education system.

As society is changing at an accelerating pace and global crises are affecting school communities, schools are also changing and are in need of reform. Schools' crisis preparedness needs to be strengthened.

Teachers' work must be made meaningful and emphasis should be placed on its essentials. In addition to teaching content, schools should focus on supporting learning skills and well-being in school communities throughout the students' schooling.

The developmental phases of children and adolescents together with the opportunities offered by digitalization should be considered in today's schools. Teaching should develop socio-emotional skills [2, 3] and other 21st-century skills without which students will not be able to cope in our rapidly changing societies.



School as part of a wider social system (ecological systems model) [1].

Based on our multidisciplinary longitudinal studies, we recommend that the following issues should be considered in school development:

Developing teachers' digital skills

Comprehensive digital infrastructures for schools

Balancing well-being, social interaction, and digitalization

Developing teachers' digital skills

Greater use of digital technology in schools can support motivation and attention skills [4]. The meaningful use of technology can also contribute to teachers' well-being and motivation, and possibly even reduce fatigue [5, 6].

Teachers need support, social resources, and time to develop interactive digital pedagogies along with the entire school community. Teachers' digital skills need to be developed to make widespread use of technology for learning support [7, 8].

The rest of the school community (pupils, parents, principals) may also need support in digital literacy.

Recommendation:
Targeted support for teachers' digital skills and new training opportunities.

Comprehensive digital infrastructure for schools

Recommendation:
A comprehensive national digital infrastructure that reaches all students throughout Finland.

Greater use of technology in schools can increase the motivation to learn and prevent school fatigue [9, 10]. Well-designed video games can engage and even 'hook' their users. Video gaming also develops players' attention skills and performance in attention-demanding tasks [11].

High-quality pedagogically designed educational games and apps developed with the support of public funding could increase students' motivation and well-being and improve learning outcomes. To prevent gaps in digital skills, practices should be aligned across schools [12].

Digital preparedness for future crises needs to be developed. Platforms for distance and hybrid learning must be built to support genuine seamless interaction [13]. Long-term hybrid readiness can use advanced technologies such as robotics and virtual reality [14].

A digital infrastructure that reaches all schools and all students in every Finnish municipality should be created.

Balancing well-being, social interaction, and digitalization

In addition to the potential negative effects that are often discussed, research shows that digital media also have many positive effects, for example, on young people's learning, sense of community, and well-being [15, 16]. In fact, academic pressures and doing homework too late at night may exhaust students more than interacting through social media in the evening [17].

Digitalization and social interaction skills should not be seen as opposites but as intertwined [18]. Instead of banning the use of digital devices, children and adolescents should be taught how to use them in a meaningful way to support learning and well-being [19].

Young people should be offered support to regulate their digital activities in relation to other aspects of their lives [17], especially social relationships [20]. This will enable them to make appropriate use of digital solutions and find a balance between the different aspects of their lives.

Recommendation: Educational games and apps to support students' study motivation and well-being.

References

[1] Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge Harvard University Press.
[2] Guo, J., Tang, X., Marsh, H. W., Parker, P., Basarkod, G., Sahdra, B., Ranta, M., & Salmela-Aro, K. (2022). The roles of social–emotional skills in students' academic and life success: A multi-informant and multicohort perspective. Journal of Personality and Social Psychology. Advance online publication.
[3] Salmela-Aro, K., Upadyaya, K., Vinni-Laakso, J., & Hietajärvi, L. (2021). Adolescents' longitudinal school engagement and burnout before and during COVID-19—The role of socio-emotional skills. *Journal of Research on Adolescence, 31*(3), 796–807.
[4] Chiu, T.K.F., Lin, T-J., & Lonka, K. (2021). Motivating online learning: The challenges of COVID-19 and beyond. *The Asia-Pacific Education Researcher 30*, 187–190.
[5] Lammassaari, H., Hietajärvi, L., Salmela-Aro, K., Hakkarainen, K., & Lonka, K. (2022). Exploring the relations among teachers' epistemic theories, work engagement, burnout and the contemporary challenges of the teacher profession. *Frontiers in Psychology, 13*: 861437.
[6] Salmela-Aro, K., Upadyaya, K., Ronkainen, I. A., & Hietajärvi, L. (Accepted/In press). Study burnout and engagement during COVID-19 among university students The role of demands, resources, and psychological needs. *Journal of Happiness Studies.*
[7] Ranta, M., Kruskopf, M., Kortesalmi, M., Kalmi, P., & Lonka, K. (2022). Entrepreneurship as a neglected pitfall in future Finnish teachers' readiness to teach 21st century competencies and financial literacy: Expectancies, values, and capability. *Education Sciences, 12*, 463.
[8] Korhonen, T., Reinius, H., Tiippana, N., Lavonen, J. & Hakkarainen, K. (2021). *Opettajien digiloikasta jatkuvaan ammatilliseen oppimiseen.* Suomen akatemia.
[9] Hietajärvi, L., Lonka, K., Hakkarainen, K., Alho, K. & Salmela-Aro, K. (2020). Are schools alienating digitally engaged students? Longitudinal relations between digital engagement and school engagement. *Frontline Learning Research, 8*, 33–55
[10] Salmela-Aro, K., Muotka, J., Alho, K., Hakkarainen, K., Lonka, K. (2016) School burnout and engagement profiles among digital natives in Finland: A person-oriented approach. *European Journal of Developmental Psychology, 13*, 707–718.
[11] Alho, K., Moisala, M. & Salmela-Aro, K. (2022). Effects of media multitasking and video gaming on cognitive functions and their neural bases in adolescents and young adults. *European Psychologist, 27*, 131–140
[12] Hietajärvi, L., Maksniemi, E., & Salmela-Aro, K. (2022). Digital Engagement and Academic Functioning: A Developmental-Contextual Approach. *European Psychologist, 27*(2), 102–115.
[13] Hietajärvi, L. & Matikainen, J. (2021). Sosiaalinen media on vuorovaikutusta tukeva ympäristö. In Särkkä, N. (Eds.), *Ilmiökartta: digitaalisen median vaikutukset lapsiin, nuoriin ja ikäihmisiin*. Suomalainen Tiedeakatemia, 42–46.
[14] Lonka, K. (2020). Selvitys koronapandemian lyhyen ja pitkän aikavälin hyvistä ja huonoista seurauksista koskien koulutusta, nuoria ja hyvinvointia. *Koronapandemian hyvät ja huonot seuraukset lyhyellä ja pitkällä aikavälillä. Eduskunnan tulevaisuusvaliokunnan julkaisu, 1/2020*, 168–180.
[15] Alho, K., Matikainen, J., Pantzar, M. & Salmela-Aro, K. (2021) Kohti rakentavaa krskustelua digitaalisen median vaikutuksista. In Särkkä, N. (Eds.), *Ilmiökartta: digitaalisen median vaikutukset lapsiin, nuoriin ja ikäihmisiin.* Suomalainen Tiedeakatemia, 8–9.
[16] Hietajärvi, L. (2021). Ruutuajasta puhuminen pitäisi lopettaa. In Särkkä, N. (Eds.), *Ilmiökartta: digitaalisen median vaikutukset lapsiin, nuoriin ja ikäihmisiin*. Suomalainen Tiedeakatemia, 36–41.
[17] Talvio, M., & Lonka, K. (2021). *International Approaches to Promoting Social and Emotional Learning in Schools: A Framework for Developing Teaching Strategy*. Routledge, Taylor & Francis.
[18] Lonka, K. (2018). *Phenomenal learning from Finland.* Edita Publishing.
[19] Maksniemi, E., Hietajärvi, L., Ketonen, E. E., Lonka, K., Puukko, K. T., & Salmela-Aro, K. (2022). Intraindividual associations between active social media use, exhaustion, and bedtime vary according to age—A longitudinal study across adolescence. *Journal of Adolescence 94*(3): 401–414.
[20] Toth-Kiraly, I., Morin, A. J. S., Hietajärvi, L., & Salmela-Aro, K. (2021). Longitudinal trajectories, social and individual antecedents, and outcomes of problematic internet use among late adolescents. *Child Development, 92*(4), E653–E673.

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Visualisation of the ecological systems model: Inka Ronkainen

The Growing Mind project aims to provide models for personal, social, and educational renewal, as well as for the development of schools, teachers, and students. The project aims at achieving societal impact and focuses on the social, individual, and institutional challenges of digitalization. The project is conducted in a research-practice partnership with schools, supporting the implementation of curriculum objectives and the development of students' 21st-century skills and teachers' professional development.

This policy brief has been made in collaboration with the following research projects: Growing Mind, Bridging the Gaps, DigiConsumers, EduRescue, ySkills, Agents.