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The latest research trends in the field of economics of education: July-December 2021

EENEE Coordination team

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ABOUT EENEE

EENEE is an advisory network of experts working on economics of education and training. The establishment of the network was initiated by the European Commission's Directorate-General for Education and Culture and is funded by the Erasmus+ Programme. PPMI is responsible for the coordination of the EENEE network. More information on EENEE and its deliverables can be found on the network's website www.eenee.eu. For any inquiries, please contact us at: eenee@ppmi.lt.

Contractor:

PPMi

Gedimino pr. 50, LT -
01110 Vilnius, Lithuania
Phone: +370 5 2620338
E-mail: info@ppmi.lt
www.ppmi.lt

AUTHOR:

EENEE Coordination team

Important themes and issues for future European Commission's work on the economics of education

This document provides a forward-looking summary of important themes and issues to inspire future European Commission's work in the field of economics of education and training. The summary highlights specific focus areas covered by recently published research and foresight studies (between July and December 2021) and are relevant to the European Commission's programme 2022¹ and the Directorate General for Education, Youth, Sport, And Culture (DG EAC) Strategic Plan 2020-2024².

Following the priorities highlighted in Commission's Programme 2022 and the Strategic Plan 2020-2024, this document is structured around five themes, namely:

1. Financing education;
2. Education for sustainability;
3. Education for the digital age;
4. Promoting research and innovation;
5. Inclusive education;

While tracking research trends in the most prominent academic journals and recent foresight studies, we observed eleven themes relevant to the economics of education and training that have been published consistently (see Table 1).

¹ European Commission Work Programme 2022 https://ec.europa.eu/info/publications/2022-commission-work-programme-key-documents_en

² Strategic Plan 2020-2024 Directorate General for Education, Youth, Sport, And Culture https://ec.europa.eu/info/system/files/eac_sp_2020_2024_en.pdf

TABLE 1: RELEVANT THEMES COVERED IN THE ACADEMIC JOURNALS (JULY – DECEMBER 2021)

THEMES BY POPULARITY ³ (DESCENDING ORDER)	EXAMPLES OF ISSUES COVERED BY RESEARCH
Education outcomes	Schoolwide free means and student discipline. Long-term effects of school-starting age rules. Effects of adjunct instructors on student outcomes. The impact of mandatory economics education on adolescents. Relationship between self-regulated learning and student outcomes.
Education and inequalities	STEM participation by gender (particularly female participation in STEM). Gender imbalance in subfields of economics. Influence of gender and educational attainment differences on international migrants. Effects of education on poverty. Motivation profiles within and across socioeconomic levels and students outcomes.
Online/blended learning	Comparison of face-to-face and distance learning. Virtualisation of higher education in response to the COVID-19 pandemic. Hybrid home-schooling. Schools and virtual learning.
COVID-19 and education	Effects of COVID-19 on school enrolment. Student resilience and COVID-19. Enhancing VET post-COVID-19. Admissions to higher education institutions and COVID-19.
Education and labour market	Educational attainment and labour-market outcomes. Entering or advancing the IT labour market. Education and human capital (particular focus on college education). Education for economic wellbeing. Internships and employment opportunities after graduation.
Higher education	The effectiveness of remedial courses. Academic research, higher education, and peripheral development. Returns to teaching repetition.
Education quality	Impact of education quality on economic growth. The importance of peer quality for completion of higher education. Quality assurance for lifelong learning.
Education and sustainability	Environmental education for sustainability in higher education institutions. Effects of digitalisation on higher education in a sustainable development framework. Improving education for sustainable development.
Innovative learning	Virtual reality and experiential learning. Innovation and research use in schools. Sustainable use of mobile technologies in higher education.
Financing education	Impact of increased tuition fees in higher education. Reasons for rejecting student aid.

Source: compiled by the Coordination team.

³ By popularity, we mean the number of articles under each theme. For example, the 'Education outcomes' theme has more articles than the themes below it. The 'Education and employment' theme had considerably less articles than 'Education outcomes' and the least articles overall.

1.1. Financing education

Financing education is disproportionate to education outcomes

While the investment in education has been increasing steadily in the past decade, the COVID-19 pandemic has put pressure on public finances. Globally, the impact of COVID-19 on financing education presents a mixed picture, with some countries increasing while others decreasing their education budgets (Global Education Monitoring Report Team, World Bank, 2021). According to the 2021 Education Finance Watch⁴ (EFW), many countries will need to invest more in their education systems to achieve national and international education goals. Furthermore, the 2021 EFW report finds that '*<...> recent increases in public education spending have been associated with relatively small improvements in education outcomes.*' Given the evidence that large amounts of spending on education do not necessarily correlate to education outcomes, it will become vital to pay more attention to the use of these resources and their relation to education outcomes. However, global efforts are needed in reporting education resources and spending to understand a better picture of what areas of spending are more effective.

Education at a Glance 2021 dives into the topic with a particular focus on investing in tertiary education. According to the report, '*Investing in tertiary education also pays off in the long run for the public sector, since tertiary-educated adults pay higher income taxes and social contributions.*' This may be related to the evidence showing that '*Adults who complete tertiary education benefit from positive financial returns over their working-age life because they are more likely to be employed and to earn more than those without this degree.*' (OECD, 2021).

Some different insights are offered in the UNESCO foresight working paper by Keri Face (2021), where the author argues that education should no longer be about the jobs but rather about preparing the next generation to create ecologically resilient and caring households. According to the author, '*<...it is time to focus on the whole person in their context – on their **capacity to build relationships, to form social alliances, to act as alert and engaged citizens** and as custodians of local and global common resources – as well **tending to their skills and knowledge** for work in formal and informal economies.*'

Student aspirations are not responsive to large changes in higher education financing

Hassani-Nezhad et al. (2021) analysed the impact of higher education financing on the academic aspirations of teenagers and their parents due to the increasing trends of pupils from socio-economically disadvantaged backgrounds enrolling on higher education institutions. This study looks at the reform in the UK⁵ that introduced a significant increase in the tuition fees universities can charge and challenges a frequent argument that students from more disadvantaged socioeconomic backgrounds have lower aspirations to enrol in higher education. The authors found that despite the increased costs to higher education, teenagers' choice to study at universities was *not* impacted.

By contrast, the paper found that parents' aspirations for their children to continue to higher education have been impacted by the reform '*we do find that their parents react to the reform. Mothers' aspirations for their children change in line with the financial incentives set by the reform; richer parents adjust their aspirations downwards in reaction to the substantial increase in the expected cost of higher education, while poorer parents' aspirations increase in line with the expansion of financial support available to their children in the future, which is combined with insurance against the risk of higher education via the increased repayment threshold.*' (Hassani-Nezhad et al. 2021, p 9.)

⁴ The Education Finance Watch (EFW) is a collaborative effort between the World Bank and UNESCO's Global Education Monitoring (GEM) Report.

⁵ The Higher Education Act 2010

Financial support for education is there, but it is not accessible to all

A 2021 study into 'Why do German students reject free money?' found that many eligible German students do not apply for heavily subsidised student aid called BAföG. According to the study results, the lack of information, risk and debt aversions, and student income can contribute to students abstaining from the application. Furthermore, the authors found that a non-transparent and complicated student aid system disproportionately discourages disadvantaged students, especially those with little experience with the system (Fidan, Manger, 2021).

What to look out for in the field of education financing?

Financing education is a topical issue, especially so due to the ongoing pandemic. The research in the field of education financing appears to be shifting towards **outcomes** and **effectiveness** as opposed to resource distribution. Furthermore, the researchers are looking at issues linked to education fees versus aspirations to progress in education (especially higher education). On this end, the researchers appear to be also diving into the issues of accessibility of education and, in particular, accessibility of support available to progress in higher education.

1.2. Education for sustainability

Higher education institutions play a fundamental role in the transition towards environmental education for sustainability (EES)

Luna-Krauletz et al. 2021 designed an instrument to assess the level of incorporation of Environmental Education for Sustainability into the environmental agenda of HEIs. The pilot of this instrument demonstrated that *'An instrument that determines the level of incorporation of the EES in the substantive and procedural functions of HEIs is presented, valid in content, and with adequate levels of clarity and understanding of the target population.'* The study also argues that HEIs have a priority role in the social change that is expected in the long term to protect the environment.

Digitalisation has a positive (indirect) effect on sustainable development

A 2021 study by Toeder et al. in Romania highlights the vital role of tertiary education for economic growth and sustainability. The authors argue that digitalisation due to the COVID-19 pandemic has a direct positive impact on tertiary education and an indirect positive impact on sustainable development. On the latter, the authors argue that digitalisation and online learning are related to information and life improvement in the context of the sustainable development. Furthermore, the study suggests the positive long-run effect of tertiary education (all age groups) on sustainable economic development, with GDP per capita in logarithmic values used as a proxy. Overall, this demonstrates the necessity and urgency of investing in education (especially tertiary) to boost digitalisation and make new technologies and e-learning widely available as a premise for sustainable development. However, this study does not encourage the excessive use of remote teaching due to its ineffectiveness.

What to look out for in the field of education for sustainability

Higher education and tertiary education are being seen as a gateway to a sustainable future, not only in **promoting environmental education for sustainable development** but also in making use of the ongoing **digitalisation to ensure sustainable economic development**. On this end, the researchers explore ideas such as a more permanent (albeit hybrid) transition to remote learning and a greater digitalisation of overall learning process (use of digital tools in the classroom).

1.3. Education for the digital age

Digital education cannot be based on traditional offline pedagogical approaches

Since March 2020, several studies have emerged assessing the value and impact of online education. However, the authors, e.g. Gómez-Rey et al. (2021), caution not to generalise their findings and consider the broader picture. While it is clear that many educational institutions have been able to teach remotely (despite the expected disruptions during the transition), the traditional teaching model is not suitable and was not designed for online delivery. Rethinking the integration of life skills education from early to higher education should be necessary to prepare both young and adult students for the rapidly changing world. Therefore, there is an urgent need to pay more attention to remote modes and digital scenarios and re-evaluate instructors' competencies for the new era of online teaching and learning. Similar findings have been presented by Petchamé et al. (2021), particularly arguing that more effective training in the development of the appropriate teaching and learning skills within the 'smart classroom' can address a number of shortcomings in online teaching highlighted by the pandemic.

Distance education beyond the pandemic need to be more socially sustainable and responsive to the realities of the post-digital

An Austrian study by Bork-Hüffer et al. (2021) looked into short-term recommendations for quality distance education. The authors argue that '*Current distance learning formats should not be adopted unchanged, but prevailing problems, such as the lack of social contacts and time structure, should be removed*'. Among the recommendations, particular attention has been paid to teacher training to acquire skills enabling students to prepare for an increasingly digitised labour market and society. The study concludes that preparing students for responsible and active use of digital media is an essential component of socially sustainable education and society in the post-digital.

Students demand a shift from traditional lectures to learning spaces that foster experiential learning

Fromm et al. (2021) published a study into virtual reality (VR) in teaching and learning, which found that a contemporary student prefers an experiential learning experience. This study contributes to the scholarship of internet-enabled higher education teaching and learning.

What to look out for in the field of education for the digital age

Overall, we observe that research is shifting beyond the concept of digitalisation and is looking further into the opportunities such transition might bring. More importantly, the research explores how education for the digital age can be **adapted and improved**. We notice increasing interest in life skills, experiential learning, and creating sustainable societies in a digitalised world from the reviewed papers.

1.4. Promoting evidence-based practice

When teachers feel they work in an environment that values research use, they are likely to have more positive perceptions about using research to improve their practice

Findings from a 2021 French study reveal that while teachers feel they are working in a trusting environment, they were less inclined to feel that they were encouraged by their school leaders to innovate. Therefore Gausse et al. (2021) propose three key recommendations for policymakers: i) formalising the use of research in schools; ii) prioritising research use (i.e. supporting and encouraging teachers to engage with research); iii) mobilising research evidence

(i.e. accessing and engaging with research effectively, this includes understanding research methods and accessing research databases).

What to look out for in the field of research

While not many, some research papers, such as Gausssel et al. (2021), started looking into the **practicalities relating to the use of research in schools**. While this concept is widespread in other fields (such as medicine) it is relatively new in education and inclusion, and worth investigating because innovation and evidence-based practice are at the core of European values.

1.5. Inclusive education

Graduate student teaching assistants from underrepresented groups may provide salient role models and enhanced instruction to minority students in stem fields

A US study by Oliver et al. (2021), for the first time, estimated the importance of interactions between underrepresented minority teaching assistant (TA) instructors and underrepresented minority students in science, technology, engineering, and mathematics (STEM). The authors found that graduate student TAs may play an underappreciated role in helping universities educate and motivate a growingly diverse student population. In addition to providing role models for undergraduates, minority graduate students might provide role models in the STEM workforce in the future. The findings have implications for future trends in racial inequality in education and the labour market.

Gender differences in academic performance across subfields emerging as early as the undergraduate level

Beneito et al. (2021) examine the marked gender imbalance across subfields in economics and connect it with the relative scarcity of female students enrolling in economics. The study finds gender differences in academic performance across subfields emerging as early as undergraduate.

The impact of educational attainment and gender inequality on the occupational status

Al-Dalahmeh et al. (2021) investigate the educational attainment of migrants versus the occupational status. At the same time, the study reaffirms the long-known understanding that a high level of educational attainment affects migrants' chances of obtaining high-level occupations (e.g. managerial positions). However, the authors have also found a gender imbalance: female migrants mainly obtain higher-level occupations than male migrants. The study concludes that *'This research was good evidence that the perspective on male migrants taking a more significant role in the labour market in destination countries is changing over time, and as much as male migrants, female migrants are also starting to achieve high positions, with sufficient educational attainment, in host societies.'*

What to look out for in the field of inclusive education

Inclusive education and gender equality are frequently explored by researchers. The trends from this overview suggest that the topics of gender inequality, the labour market, and academic performance will remain prominent. Inclusion of migrant and minority students in education also remains relevant. Like many of the articles above, overall, there appears to be a high-level interest in education outcomes from various aspects of education, whether it is inclusive education, digitalised education, sustainable education or education financing. The researchers are asking very similar questions – what does that mean for the future human capital? What does it mean for student attainment? What does it mean for the future labour force, and so on.

Bibliography

- Al-Dalahmeh M, Sarihasan I, Dajnoki K (2021). *The Influence of Gender and Educational Attainment Differences on International Migrants' Occupational Status in OECD Countries*, *Economies*, Vol 9, No 3:126, available at <https://doi.org/10.3390/economies9030126>, accessed on 10 January 2022
- Beneito, P., Boscá, J. E., Ferri, J., García, M. (2021). *Gender Imbalance across Subfields in Economics: When Does It Start?*, *Journal of Human Capital*, available at <https://www.journals.uchicago.edu/doi/10.1086/715581>, accessed on 10 January 2022
- Bork-Hüffer, T., Kulcar, V., Brielmair, F., Markl, A., Immer, D. M., Juen, B., & Kaufmann, K. (2021). *University Students' Perception, Evaluation, and Spaces of Distance Learning during the COVID-19 Pandemic in Austria: What Can We Learn for Post-Pandemic Educational Futures?*, *Sustainability*, Vol 13, No 14, 7595, available at <https://www.mdpi.com/2071-1050/13/14/7595>, accessed on 10 January 2022
- Facer, K. (2021). *It's not (just) about jobs: Education for economic wellbeing*, Education Research and Foresight Working Paper 29., Paris, UNESCO, available at <https://unesdoc.unesco.org/ark:/48223/pf0000376150/PDF/376150eng.pdf.multi>, accessed on 27 January 2022
- Fidan, M., Manger, C. (2021). *Why do German students reject free money?*, *Education Economics*, 0(0), 1–17, available at <https://doi.org/10.1080/09645292.2021.1978937>, accessed on 9 January 2022
- Gaussel, M., MacGregor, S., Brown, C., & Piedfer-Quêney, L. (2021). *Climates of trust, innovation, and research use in fostering evidence-informed practice in French schools*, *International Journal of Educational Research*, Vol 109, 101810, available at <https://www.sciencedirect.com/science/article/pii/S088303552100080X>, accessed on 10 January 2022
- Global Education Monitoring Report Team, World Bank (2021). *FW: Education finance watch 2021*, available at <https://unesdoc.unesco.org/ark:/48223/pf0000375577> , accessed on 9 January 2022
- Gómez-Rey, P., Fernández-Navarro, F., Francisco, V. D., & José, M. (2021). *Identifying Key Variables on the Way to Wellbeing in the Transition from Face-to-Face to Online Higher Education due to COVID-19: Evidence from the Q-Sort Technique*, *Sustainability*, Vol 13, No 11, 6112, available at <https://www.mdpi.com/2071-1050/13/11/6112>, accessed on 10 January 2021
- Hassani-Nezhad, L., Anderberg, D., Chevalier, A., Lührmann, M., & Pavan, R. (2021). *Higher education financing and the educational aspirations of teenagers and their parents*, *Economics of Education Review*, Volume 85, available at <https://doi.org/10.1016/j.econedurev.2021.102175> , accessed on 9 January 2022
- Luna-Krauletz, M. D., Juárez-Hernández, L. G., Clark-Tapia, R., Súcar-Súccar, S. T., Alfonso-Corrado, C. (2021). *Environmental Education for Sustainability in Higher Education Institutions: Design of an Instrument for Its Evaluation*, *Sustainability*, Vol 13, No 13, 7129, available at <https://www.mdpi.com/2071-1050/13/13/7129>, accessed on 9 January 2022
- OECD (2021). *Education at a Glance 2021: OECD Indicators*, OECD Publishing, Paris, available at <https://doi.org/10.1787/b35a14e5-en>, accessed on 27 January 2022
- Oliver, D., Fairlie, R., Millhauser, G., & Roland, R. (2021). *Minority student and teaching assistant interactions in STEM*, *Economics of Education Review*, Vol 83, 102125, available at <https://www.sciencedirect.com/science/article/pii/S0272775721000443>, accessed 10 January 2022
- Petchamé, J., Iriondo, I., Villegas, E., Riu, D., & Fonseca, D. (2021). *Comparing Face-to-Face, Emergency Remote Teaching and Smart Classroom: A Qualitative Exploratory Research Based*

on Students' Experience during the COVID-19 Pandemic, Sustainability, Vol 13, No 12, 6625, available at <https://www.mdpi.com/2071-1050/13/12/6625>, accessed on 10 January 2022

Toader, T., Safta, M., Titirișcă, C., & Firtescu, B. (2021). *Effects of Digitalisation on Higher Education in a Sustainable Development Framework—Online Learning Challenges during the COVID-19 Pandemic*, Sustainability, Vol 13, No 11, 6444, available at <https://www.mdpi.com/2071-1050/13/11/6444>, accessed on 10 January 2022