

**UNESCO CHAIR/UNITWIN NETWORK PROGRESS REPORT FORM**

Title of the Chair/Network:	Educational Ecosystems for Equity and Quality of Learning
Host Institution:	University of Helsinki
Date of establishment of Chair/Network: (mm, yyyy)	January 2018
Period of activity under report: (mm, yyyy - mm, yyyy)	January 2018 - December 2019
Report established by: (name, position)	Hannele Niemi, Professor, Research Director, the University of Helsinki

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Or by mail to UNESCO, Division for Policies and Lifelong Learning Systems

Section for Higher Education

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**1. Executive Summary:**

*Major outcomes, results and impact of the Chair, including on national policies, in relation to its objectives as stated in Article 2 of the Chair Agreement (between the Institution and UNESCO)*  
(Not exceeding 300 words)

According to the aims of the Chair, Hannele Niemi has promoted the integrated system of research, training, information and documentation on equity and quality of learning by active research collaboration with internationally recognized researchers in China, USA, and Europe. She has given Keynote lectures in several national and international conferences and policy-level meetings, and been invited as an educational expert in China, Thailand, Palestine and India for advancing high quality education to all learners and helping to revise teacher education for that purpose. She was invited as an advisory board member to the University of People that provides free higher education on-line to students in over 200 countries or territories in the most vulnerable conditions, e.g. refugee camps. She has given courses to international higher education students in Finland how to connect equity and quality in educational ecosystems. She has organized national events, e.g. Higher Education responsibilities in global learning crises, Information Literary Week in Finland, and contributed to UNESCO School Network. She has been invited (2018) to expert group by the Ministry of Foreign Affairs, Finland to analyze and make recommendations how Finland could be more active in solving global learning crises. The report has played an important role in national future plans and decision making at the Ministry of Foreign Affairs and the Ministry of Education and Culture.

Professor Niemi has started the research project AI in Learning with researchers and companies how Artificial Intelligence can provide new tools and practices to learning, also in contexts of global learning crises. The project is funded by Business Finland (Total Budget 1,2M, 2018-2021). Her article Artificial Intelligence for the Common Good in Educational Ecosystems has been accepted to UNESCO publication (Humanistic futures of learning: Perspectives from UNESCO Chairs and UNITWIN Networks).

Her websites inform more about Professor Niemi's activities.

<https://www.helsinki.fi/en/networks/educational-ecosystems-for-equity-and-quality-of-learning/unesco-chair-hannele-niemi>

## 2) Activities:

Overview of activities undertaken by the Chair during the reporting period

### a) Education/Training/Research

*(key education programmes and training delivered and research undertaken by the Chair during the reporting period, target group and geographical coverage)*

#### i) Education (leading to certificate)

Hannele Niemi has provided twice in a year the course of the Finnish educational system and teacher education (5 ECTS) for international Bachelor and Master exchange students (100-110 students in a year, from tens of the countries). The course has focused on the analysis how equity and quality can be combined and what it requires from the whole ecosystem and its subsystems of curriculum, evaluation and teacher education. The course has a global perspective even though the course provides information about the Finnish system in which equity and quality of learning have been leading principles since decades.

#### ii) Training (short term)

Lectures at Helsinki University Summer School (40-70 students in 2018 and 2019, 5 ECTS) about the Finnish Educational system from the Perspective of Comparative Education. Lectures also at Helsinki University Summer School 2018 and 2019 on the course of Digital Story Telling (20-25 students in 2018 and 2019, 5 ECTS) with themes how to combine quality of education and digital tools and practices, and promote also democracy in society.

The short courses about equity and quality of learning in educational ecosystems in China (1 day at Peking University 2018 and 2019), (1 one day at Beijing University, 2018 and 2019), 7 days (Jiangnan University, Wuxi, China, 2018), Thailand (1 day, 2019) and Palestine (2 days, 2019), in India (5 days, 2019).

<p>iii) Research</p>	<p><b>Research work has focused on the themes of educational ecosystems, teacher education and digital learning environments</b> (see also the list of publications).</p> <p>Her article Artificial Intelligence for the Common Good in Educational Ecosystems) has been accepted to UNESCO publication (Humanistic futures of learning: Perspectives from UNESCO Chairs and UNITWIN Networks. Paris: Ediciones UNESCO)</p> <p>Hannele Niemi is Chair of Sino-Finnish Joint Learning Innovation Institute (JoLii)in Finland with 10 Universities for research cooperation of 9 Chinese Universities, coordinated by Beijing Normal University. The aim is to find new methods of high-quality learning for all learners.</p> <p>Hannele Niemi has an active cooperation with Stanford University and its H-Star Institute and she has initiated and organized research conferences (2018 and 2019) on intelligent digital tools in education and learning with Stanford researchers.</p> <p>Professor Niemi has started the research project AI in Learning with researchers at the University of Helsinki and University of Lapland, and with four companies how Artificial Intelligence can provide new tools and practices to learning, also to solving global learning crises. She has got funding for the project from Business Finland (Budget euro 1,2 M for 2018-2021). The project has an active cooperation with the most well-recognized researchers in China through JoLii Network and with Stanford University in USA</p> <p><b>Supervisor for PhD Students 2018-2019</b> Professor Niemi has been a supervisor at the University of Helsinki for 5 doctoral students (4 Finnish and 1 Chinese) from whom 3 has graduated in 2018-19. She has also been invited (2018) to serve as an international supervisor in the University of Ljubljana and University of Malta. She has been an opponent of doctoral defenses at the University of Eastern Finland (2019) and the University of Tartu, Estonia (2019).</p> <p>All doctoral dissertations have been from the themes how to promote high quality teacher education and/or to make educational ecosystems for functional when aiming at equity and quality in learning.</p>
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## **b) Conferences/Meetings**

*(key conferences and meetings organized by the Chair or to which its Chairholder contributed)*

### I. Key conferences and workshops hosted by the Chair

#### **Using 21st Century Intelligent Technology Tools in Education I** at Stanford University

23-27.10.2018.

#### **Using 21st Century Intelligent Technology Tools in Education II** at the University of Helsinki,

13-16.2.2019.

- Co-operation of Finnish, Chinese and American researchers how digital tools and artificial intelligence can be developed for promoting high-quality learning and also for solving global learning crises.

#### **Finnish Universities' Responsibility in the Global Learning Crisis.**

- A workshop with the university leaders (e.g. Rector Jari Niemelä, University of Helsinki, Chair of University Board, former President of the Republic Finland Tarja Halonen and UNESCO Chairs) at the conference "Finland as a strong actor in the global learning crisis, organized by the Finnish National Agency of Education, 26 .10. 2019.

#### **Media and Information Literacy: Current needs, future perspectives** at the University of Helsinki, together with CICERO Learning network 28.10.2019

- As part of UNESCO - Global Media and Information Literacy (MIL) Week from 24 to 31 October 2019.

#### **Equity and Quality of Learning in a Global Digital World**

- Sino-Finnish joint Learning Innovation Institute (Chair of the Institute in Finland,) annual conference, at the University of Lapland together local organizers, 21-23.8.2019.

#### **Global Responsibility for Quality of Learning.**

- A thematic workshop at the annual conference of the Finnish Educational Research Association FERA 2018, at the University of Tampere, 15.11.2018

#### **Sustainability and Ethics in Teacher Education and Education Policy**

- Preparing as a board member and local organizer of TEPE (Teacher Education Policy in Europe) international annual conference at the University of Helsinki for 13-15.5.2020 (changed as virtual because of COVID-29). Urgent themes are how teacher education can provide solutions to global learning crises through high quality teacher education and teachers' high-quality professional work for creating sustainable learning opportunities for all learners.

#### **National advisory board for cooperation of UNESCO Chairs and societal stakeholders 2018-**

- Based on the Chairholder's initiative, the University of Helsinki (UH) has established the advisory board 2018, Chair the Chancellor of UH, meetings 2-3 in a year.

- II. Other conferences/organizational activities in which the Chairholder has been invited to give Keynote lectures or to serve as an expert.

**Chinese Academy of Sciences**, 24.-26. 10 2019, invited to give several Keynote Lectures about future education, science in society, and equity and quality of learning.

**10th International Conference on Education and Educational Psychology**

9.-13.10 2019, 13 Barcelona Workshops; Future Academy, Invited Key Note lecture on how to combine equity and quality in learning.

**China-EU Higher Education Exchange and Cooperation Platform (HEECP)** meeting; invited Key Note. 27.9 2019, A conference related to the events Finland being as Chair of European Union.

**Quality and Equity of Schooling.** The Royal Swedish Academy of Sciences and The Wenner-Gren Foundations, Stockholm, 12.9.2018.

**The International Workshop for AI+ Teacher Education** in Beijing, Capital Normal University. 13-14.6.2019. Invited Key Note Lecture.

**Future Learning and Innovative Talents.** Invited Key note lecture and session presentations. Sino-Finnish joint Learning Innovation Institute annual conference, Beijing and Ci'An University, Sino-Finnish Joint Learning Innovation Institute Beijing Normal University and Shaanxi Normal University, 19-21.08.2018.

**Recruiting and Educating the Best Teachers: Policy, Professionalism and Pedagogy.** TEPE (Teacher Education Policy in Europe) annual conference. University of Minho, Portugal, 17-19.05.2018. Invited panel discussant and board member meetings.

Several meetings with **the Ministry of Education and Culture, the Ministry of Foreign Affairs, Finnish National Agency for Education, non-governmental organizations, and higher education** leaders and representatives when preparing the report of the expert group 2018 Finland's role in solving global learning crises, the report is available

[https://um.fi/documents/35732/0/UM\\_case\\_education\\_loppuraportti.pdf/a77c91c5-c6eb-ee2e-e38d-602ee8dd4d36](https://um.fi/documents/35732/0/UM_case_education_loppuraportti.pdf/a77c91c5-c6eb-ee2e-e38d-602ee8dd4d36)

**In India**, Chairholder's negotiations with the **global TATA Steel Company** have been started how Thousands School Programme could provide education for those children who are either without any access to education or have very hard conditions in their life. Teachers' support and training have been an essential part of these plans.

- III. A selection of conference presentations by the Chairholder

"Artificial Intelligence Providing New Tools for Teachers and Schools". The International Workshop for AI+ Teacher Education in Beijing, Capital Normal University. 14.6.2019.

"Combining equity and quality of learning - Educational ecosystems globally and locally"

10th ICEEPSY 2019 Barcelona Workshops; Future Academy.

“Strategic perspectives and changes of teacher education in Finland, from history to present”. EDUCA seminars 16-17.10 2018. Thailand.

“Innovations – Ecosystems – Cooperation”. Invited Key Note Lecture at Innovative Education Week at Beijing Normal University. 24.8.2018

“What do innovations mean in teaching and learning – towards quality of learning for all Students”

“The Finnish Education Ecosystem and Finland’s Role in the Global Education Development”. Invited Key Note Lecture at Bethlehem University, 9.10. 2018

“Quality and equity of education in Finland”. Invited Keynote lecture. The Royal Swedish Academy of Sciences and The Wenner-Gren Foundations, Quality and Equity of Schooling, Stockholm, 14.9.2018.

“The Finnish educational system - A miracle of persistent work for education?” Invited Key Note Lecture at LIFE Conference. University of Lapland. 17.1.2018

“UNESCO Agenda 2030 - Education as the main instrument for sustainable development and societies’ welfare”. The invited speech at the annual meeting of regional stakeholders and companies of Satakunta province, Finland 27.1.2018.

“Games and Playfulness in Finnish classrooms”. Invited Key Note Lecture at Forum on Game-based learning and Learning science in Beijing. Organized by Peking University, 20.9.2018.

### **c) Interuniversity Exchanges/Partnerships**

*(principal exchanges/partnerships between the Chair and other institutions including UNESCO Chairs/UNITWIN Networks)*

The Network of the Finnish UNESCO Chair (8 professors) and Advisory board (2018-) of societal stakeholders and representatives the Ministry of Education and Culture, Ministry for Foreign Affairs, and the Finnish Agency of Education for the UNESCO Chairs in Finland set by the University of Helsinki, Chaired by the Chancellor Kaarle Hämeri, University of Helsinki.

Chair of the **Sino-Finnish Joint Learning Innovation Institute in Finland** with 10 Universities for research cooperation of 9 Chinese Universities, coordinated by Beijing Normal University. The aim is to find new methods of high-quality learning for all learners.

- Research and training cooperation, student exchange

Board member of **TEPE** (Teacher Education Policy in Europe)

- Research cooperation and policy level initiatives

**An invited advisory board member (2018-), The University of the People.** The University works only on-line and provides higher education courses, BA and MA degrees free of charge to students all over the world (more than 200 countries or territories) and wants to reach those students who are in the most vulnerable conditions, e.g. refugees camps.

[https://www.uopeople.edu/?utm\\_source=google&utm\\_medium=cpc&utm\\_campaign=ggl-search\\_brand-exact\\_worldwide&utm\\_term=university%20of%20the%20people&utm\\_content=78968326707&gclid=EAlaIqobChMI8Zidvez76AIVkMCyCh0OOQ11EAAYASAAEgLJW\\_D\\_BwE](https://www.uopeople.edu/?utm_source=google&utm_medium=cpc&utm_campaign=ggl-search_brand-exact_worldwide&utm_term=university%20of%20the%20people&utm_content=78968326707&gclid=EAlaIqobChMI8Zidvez76AIVkMCyCh0OOQ11EAAYASAAEgLJW_D_BwE)

**Chair of the University of Board, University of Lapland (2018-2020).** The university has a special mission of arctic regions where changes of demography, climate and livelihood set enormous challenges to people and where needs of indigenous people must also be faced and served. Social justice, managing distances, and quality of educational services are on focus at the University of Lapland. Co-operation with the following networks coordinated by the University of Lapland.

[UArctic Thematic Network on Teacher Education for Social Justice and Diversity](#)  
[UNITWIN/UNESCO Network on Teacher Education for Social Justice and Diversity](#)

Member of the American Educational Research Association, (AERA) World Educational Research Association (WERA), European Educational Research Association (EERA); and Finnish Educational Research Association (FERA).

d) Publications/Multimedia Materials (major publications and teaching/learning materials)

*Please tick relevant fields of output and indicate volume of output:*

	[tick]	No.
Books		
Books (edited)	√	2
Books (chapters)	√	8
Monographs		
Research Reports	√	1
Journal Articles (refereed)	√	6
Conference Proceedings		
Occasional Papers	√	3
Teaching/Learning Materials	√	3
Multimedia Materials (CD-Rom)		
Multimedia Materials (Video)	√	3
Multimedia Materials (Other)		

**Books (edited)**

1. Yu, S. (Ed.), Niemi, H. (Ed.) & Mason, J. M. (Ed.), 2019 Shaping Future Schools with Digital Technology: An International Handbook, Singapore: Springer Nature Singapore Pte Ltd. 239 Pages (Perspectives on Rethinking and Reforming Education)
2. Niemi, H. (Ed.), Toom, A. (Ed.), Kallioniemi, A. (Ed.) & Lavonen, J. (Ed.), 2018 The Teacher's Role in Changing the Globalizing World: Resources and Challenges Related to the Professional Work of Teaching, Leiden: Brill Sense. 154 Number of pages.

### Research Reports

1. Reinikka, R., Niemi, H. & Tulivuori, J., 2018. Stepping Up Finland's Global Role in Education, Helsinki: Ministry of Foreign Affairs of Finland, 78 p. An expert review based on earlier evaluations, published research and interview data during the project [https://um.fi/documents/35732/0/UM\\_case\\_education\\_loppuraportti.pdf/a77c91c5-c6eb-ee2e-e38d-602ee8dd4d36](https://um.fi/documents/35732/0/UM_case_education_loppuraportti.pdf/a77c91c5-c6eb-ee2e-e38d-602ee8dd4d36)

### Chapters (peer-reviewed)

1. Niemi, H., (Accepted 2019, printed Jan. 2020). Artificial Intelligence for Common Good. In: Humanistic futures of learning: Perspectives from UNESCO Chairs and UNITWIN Networks on the Futures of Education. Paris: Ediciones UNESCO, pp. 148-152.
2. Niemi, H., 2020, (Accepted 2019, printed Jan. 2020). L'intelligence artificielle pour le bien commun dans les écosystèmes éducatifs. Les futurs humanistes de l'apprentissage. perspectives des chaires UNESCO et des réseaux UNITWIN. Ediciones UNESCO, s. 166-170
3. Niemi, H., Niu, S. J., Li, B. & Vivitsou, M., 2019. Supporting Student Learning Toward Twenty-First-Century Skills Through Digital Storytelling. In: Shaping Future Schools with Digital Technology: An International Handbook. Yu, S., Niemi, H. & Mason, J. (Eds.). Singapore: Springer Nature Singapore Pte Ltd., pp. 95-112. (Perspectives on Rethinking and Reforming Education).
4. Niemi, H. & Sinnemäki, K., 2019. The Role of Lutheran Values in the Success of the Finnish Educational System. In: On the Legacy of Lutheranism in Finland: Societal Perspectives. Sinnemäki, K., Portman, A., Tilli, J. & Nelson, R. H. (Eds.). Helsinki: Finnish Literature Society, pp. 113-127 (Studia Fennica Historica; no. 25).
5. Niemi, H., Lavonen, J., Kallioniemi, A. & Toom, A., 2018, The Teacher's Role in Changing the Globalizing World: Resources and Challenges Related to Professional Work of Teaching. Niemi, H., Toom, A., Kallioniemi, A. & Lavonen, J. (Eds.). Leiden: Brill Sense, pp. 47-61 15 Pages
6. Niemi, H., Toom, A., Kallioniemi, A. & Lavonen, J., 2018. The Teaching Profession Amid Changes in the Educational Ecosystems. In: The Teacher's Role in Changing the



Globalizing World: Resources and Challenges Related to Professional Work of Teaching. Niemi, H., Toom, A., Kallioniemi, A. & Lavonen, J. (Eds.). Leiden: Brill Sense , pp. 141-149.

7. Niemi, H. , Lavonen, J. , Kallioniemi, A. & Toom, A. , 2018 The Role of Teachers in the Finnish Educational System: High Professional Autonomy and Responsibility. In: The Teacher's Role in Changing the Globalizing World: Resources and Challenges Related to Professional Work of Teaching. In Niemi, H., Toom, A., Kallioniemi, A. & Lavonen, J. (Eds.). Leiden: Brill Sense , pp. 47-61.
8. Multisilta, J. & Niemi, HM , 2018. Tools, Pedagogical Models, and Best Practices for Digital Storytelling. In: Encyclopedia of Information Science and Technology. Khosrow-Pour, M. (Ed.). 4th edition ed. Hershey, PA: IGI Global.

### **Journal Articles (peer-reviewed)**

1. Niu, J. & Niemi, H. , 2019. Teachers' Pedagogical Role as Mediators in Leading and Guiding Students' Learning in Digital Storytelling (DST), in: Seminar.net. 15, 1, pp. 1-24.
2. Clavert, M., Löfström, E. , Niemi, H. & Nevgi, A., 2018. Change agency as a way of promoting pedagogical development in academic communities: a longitudinal study, in: Teaching in Higher Education. 23 , 8, pp. 945-962.
3. Koivisto, J. -M., Haavisto, E., Niemi, H. , Haho, P., Nylund, S. & Multisilta, J. , January 2018 Design Principles for Simulation Games for Learning Clinical Reasoning: A Design-Based Research Approach, in: Nurse Education Today. 60, pp. 114-120.
4. Niemi, H. , Niu, S., Vivitsou, M., & Li, B., 2018. Digital Storytelling for Twenty-First-Century Competencies with Math Literacy and Student Engagement in China and Finland, In: Contemporary Educational Technology. 9, 4 , pp. 331-353.
5. Harju, V. & Niemi, H., 2018 Teachers' changing work and support needs from the perspective of school leaders and newly qualified teachers in the Finnish context, in: European Journal of Teacher Education. 41, 5, pp. 670-687.
6. Wang, A., Song, J., Niu, S. & Niemi, H., 互联网时代的芬兰教师发展从:从学科教师到新型学校的设计者, in: Zhongguo dianhua jiaoyu. 2018 , 1, pp. 126-132.

### **Occasional papers**

1. Children's education should be made the main theme of development cooperation (In Finnish). Niemi, H. & Hämeri, K. , April 19, 2019 , in: Helsingin Sanomat. 2019 , Apr 19 , 2019 , 1 Pages
2. Niemi, H. , Erma, T., Lipponen, L. , Pietilä, M., Rintala, R., Ruokamo, H., Saarivirta, T., Moitus, S., Frisk, T., Stylman, V. & Huhtanen, M., 2018 Top Teachers in the World: Evaluation of the Teacher Education Forum 2016-2018 (in Finnish). Helsinki: National

Center for Education Evaluation . 165 p. (Publications / National Center for Education Evaluation; No. 27: 2018)

3. Harju, V. & Niemi, H., 2018, Principal supporting newly graduated teacher (In Finnish). in: Rexi. 2018 , 1 , pp. 22–25.

#### e) Cooperation with UNESCO Headquarters, Field Offices

The Decision of the acceptance came in August 2017 and therefore Hannele Niemi could participate in Twenty-fifth anniversary of the UNITWIN/UNESCO Chairs 3.11.2017

The Secretariat of the Finnish National Commission for UNESCO National Office at the Ministry of Education and Culture keeps informed all Finnish UNESCO Chairs about the latest information and work in cooperation with Chairs. Their representative is also a member of the UNESCO Chair Advisory Board.

Hannele Niemi has participated on several Webinars provided by different networks or actors at UNESCO and participated Mobile Learning week 2019. The paper presentation was accepted to the Mobile Learning Week 2020, but the conference was cancelled because on COVID-19.

Hannele Niemi's, chapter 'Artificial Intelligence for Common Good'. In: Humanistic futures of learning: Perspectives from UNESCO Chairs and UNITWIN Networks on the Futures of Education. Paris: Ediciones UNESCO , pp. 148-152/ 'L'intelligence artificielle pour le bien commun dans les écosystèmes éducatifs'. Les futurs humanistes de l'apprentissage. perspectives des chaires UNESCO et des réseaux UNITWIN. Ediciones UNESCO, s. 166-170 was accepted (in 2019, printed Jan. 2020).

The education expert, Professor Eric Hamilton from The Geneva Liaison Office (GLO), UNESCO was invited as a Key Note presenter and participant to the conferences Using 21st Century Intelligent Technology Tools in Education I at Stanford University, 23-27.10.2018 and Using 21st Century Intelligent Technology Tools in Education II at the University of Helsinki, 13-16.2.2019.

Hannele Niemi has actively participated in the Finnish UNESCO School Net's annual conferences, local events, and workshops in Universities' teacher training schools.

#### f) Other (any other activities to report)

##### Expert work in higher education

*An invited panel member in evaluations of Universities or Higher Education evaluation centers organized by European University Association (EUA) or European Association for Quality Assurance in Higher Education (ENQA), The Charles University, Prague (2019); ARACIS*

(Romanian National Evaluation Center, 2010); Evaluation center of Commission des titres d'ingénieur France, 2018); AVEPRO (Evaluation Center for Catholic Universities, Vatican, 2019); OECD/CERI educational research evaluation 2018.

*Chair of the evaluation of Teacher Education Forum (2018)* organized The Finnish Education Evaluation Centre (FINEEC) for the future improvements in teacher education.