UNESCO CHAIR/UNITWIN NETWORK PROGRESS REPORT FORM

Title of the Chair/Network:	UNESCO Chair on Inclusive Literacy Learning for All
Host Institution:	University of Jyväskylä (JYU)
Date of establishment of Chair/Network: *(mm, yyyy)*	January, 2015
Period of activity under report: *(mm, yyyy - mm, yyyy)*	January, 2015 - May, 2016
Report established by: *(name, position)*	Heikki Lyytinen, professor (emeritus) with the Agora Center team at JYU

To be returned by electronic mail to both: unitwin@unesco.org and i.nichanian@unesco.org
Or by mail to UNESCO, Division for Teacher Development and Higher Education,
Section for Higher Education
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Fax: 33 (0)1 45 68 56 26/27/28

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)

The focus of the Chair on Inclusive Literacy Learning for All is providing efficient support in literacy learning for everyone, especially those who have learning difficulties. This includes research on reading acquisition in different language environments and applying that knowledge in developing materials and tools for supporting learners who are struggling to read due to whatever reason (ie. biological or educational; see e.g. Lyytinen, et al., 2015). Due to affordability and accessibility, use of e-learning and mobile technology is used for practical application of the research knowledge.

*Practically all activities have been relatively directly focused on research associated with support of reading acquisition in different countries to take into account the language, writing system and cultural/educational practices related to reading instruction with heavy emphasis on Africa but covering as a whole >30 countries, including. e.g., China and Chile.

*The research covers pilots needed for developing optimal set of content and how it should be introduced to typical and atypical learner all the time searching issues which have to be taken into account due to the language/writing system in question as well as the possible problems resulting from the availability of optimal school instruction. Thus e.g. in Africa the results of the Early Grade Reading Assessment (EGRA; see Sampa et al., submitted) are analyzed to find where reading instruction fails to adapt the research needed for providing support accordingly. Thus e.g. in Zambia teachers have been included to our research for documenting how well our support helps them to optimize their instruction. The end results (Ojanen, Ronimus et al., 2015) reveal that if both teachers and children are able to use our Graphogame technology (GT) via cheap digital device the end results are very promising. Documentation via international publications the GT-based learning outcomes in each country is the final preparation stage for providing support to its children.

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)	**Supervision of Doctoral Candidates (in psychology):** Emma Ojanen (Finland, reading acquisition in Zambia) Francis Sampa (Zambia, comparison of literacy programmes in Zambia) Christopher Yalukanda (Zambia, teachers professional skills in Zambia) Johanna Juvonen (Finland, children with language impairments) Jonathan Munachaka (Zambia, reading difficulties in Zambia) Jacob Nshimbi Chomba (Zambia, community engagement in reading support in Zambia) Jeffrey Pilgram (Finland, supporting reading of English as a pilot to learn how to support children in developing countries to learn to read L2) Anu Keski-Koukari (Finland, supporting reading at older age) Completed: Puhakka, Suzanne (2015) Digital solutions for multilingual learning environments: The case of GraphoGameTM adaptations in Kenya **Supervision of Master's Degree students:** Sofia Linna (in process, Psychology) Computer assisted learning environments helps Chilean children living in poverty Completed: Porokuokka, Iida (2015, Computer Science): An adaptive vocabulary learning environment for intervening with an early language delay
II) Training (short term)	The short term training activities have been given to participants of research running under our coordination in the more than 30 countries. These have included our visits to those countries or the participants' visits in Finland. A more programmatic short-term training is planned to start in Beijing, China in Autumn 2016. Related training periods have been organized all the time in Zambia in our Center for the Promotion of Literacy in Sub-Saharan Africa (CAPOLSA) supported financially from Finland. A special emphasis during 2015 has been in building support functions in Eritrea. Invited lectures/discussion forums have been given to very large audiences in China and Taiwan.

III) Research	Ongoing research projects **Project: Dyslexia: genes, brain functions, interventions** **Date: 09/2015 — 08/2019** **Funding: Academy of Finland (Personalised Health – From Genes to Society)** Reading disorder is a major challenge with a genetic background and related abnormal brain activity. The goal of this research is—by collecting the most important pieces of information from genetic, brain and behavioral observations of dyslexia—to devise a training regimen where use of an enjoyable digital game successfully supports reading skills even in individuals with the most severe reading difficulties. We bring together a multidisciplinary group of experts in genetics, brain dynamics and neuropsychology of reading and dyslexia to identify the bottlenecks in learning, importantly strengthened by data analysis of the empirical observations on learning by Ekapeli (=the Finnish Graphogame) players. **Project: GraphoGame™ Literacy Intervention in Zambia** **Date: 08/2015 — 12/2016** **Funding: All Children Reading: A Grand Challenge for Development partners USAID, World Vision & Australian Government** Early grade teachers in Zambia need information and pedagogical training in literacy instruction in local languages. GraphoGame Teacher Training Service is a mobile intervention method for teacher in-service training that allows teachers to self-study information on implementation of the new local language curriculum and practice correct literacy instruction pedagogy with a mobile learning game. Our research will focus on finding the most feasible method of providing GraphoGame Teacher Training Service for early grade teachers in rural Zambia. **Project: ELINET** **Date: 02/2014 — 01/2016** **Funding: EU (Lifelong Learning Programme)** Project with the cooperation of a sustainable European Literacy Policy Network (ELINET), an umbrella organization for all organizations engaged in literacy policy making and promotion, building on the 2012 Report of the European High Level Expert Group on Literacy (EHLG). Its aim is to develop evidence-based tools for all actors in the heterogeneous field of literacy locally, regionally, nationally or transnationally. **Project: Early identification and prevention of reading problems in alphabetic and semanto-phonetic writing** **Date: 11/2013 — 12/2015** **Funding: EU (Marie Curie (IRSES))** The goal of this collaboration is to compare and try to affect the development of reading skill among compromised readers in alphabetic and semanto-phonetic writing environments represented by European and Chinese orthographies, respectively. **Project: Centre for Promotion of Literacy in Sub-Saharan Africa II** **Date: 04/2013 — 12/2015** **Funding: Ministry of Foreign Affairs** The CAPOLSA project aim is to establish a strong literacy centre with international visibility and impact, specifically in African countries facing

similar challenges with Zambia. The literacy training approach is based on the Grapho Learning Initiative and the innovative and efficient digital-based learning game GraphoGame that is developed based on scientific studies led by Professor Heikki Lyytinen.

Project: Grapho Learning International Development and Exports
Date: 04/2012 — 01/2015
Funding: Tekes (TUTL) University of Jyväskylä
Literacy is vital for individuals' quality of life, their education, career choices, and thus to the world economy and the development of democracy. Yet, globally, 744 million illiterate individuals over 15 years of age and millions of children urgently need help in learning to read due to learning disorders and other challenges. We have developed a science-based reading support solution to help children around the world, based on our 20 years of research on dyslexia. Now we propose to look for a sustainable way to export the already proven Finnish delivery model.

Project: Tieteen työpaja lukemisen ja kielen kehitys
Date: 01/2011 — 01/2016
Funding: Finnish Cultural Fund
In an initiative agreed between Professors Ken Pugh (on behalf of Haskins Laboratory/Yale University), Usha Goswami (University of Cambridge) and Heikki Lyytinen, an initial Kick-Off meeting will be organised between 28.11.-1.12.2010 in Helsinki and Jyväskylä in order to create a network of collaboration to participate in the building of an International Network of Excellence (NoE) to examine the following issues at the highest possible level of existing expertise: Supporting children's learning of first, second and written language skills among typical and atypical learners using the best possible brain and behavioural intervention research. One further special emphasis will be placed on helping children in the most urgent need, such as those in developing countries who do not have adequate instruction.

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

National Learning disability researcher meeting in Jyväskylä, Finland, 25.4.2015, organized jointly by the University of Jyväskylä and the Niilo Mäki Institute

International Literacy Day 4.9.2015; several video presentations, available at
https://moniviestin.jyu.fi/ohjelmat/erillis/agoracenter/unesco-chair/celebrating-the-international-literacy-day
- Transforming scientific discoveries into practical learning services
- Playing mobile games can support learners with reading difficulties
- Empowering education scientists in Africa builds a better future for us all
- Language and literacy are intertwined in learning to read - especially in Africa

II) Other conferences/organizational activities undertaken by the Chairholder

20.1.2015 - 24.1.2015 networking in BETT conference; London, UK
15.05.2015 16.05.2015 COST Action IS1401ELN Meeting in Copenhagen, Denmark
8.7.2015 - 19.7.2015 SSSR, Society for the Scientific Study of Reading; Hawaii, USA
16.-17.9.2015 ELINET European Literacy Network's Workshop, Brussels.
22.9.2015 - 25.9.2015, Dyslexia Symposium in Durham University, UK
8.11. 2015 COST Action IS2401 ELN meeting in Prague (co-chair of Working group 3)
11.11.2015, International Reading Education Forum, Taipei City, Taiwan (invited keynote and chairing a discussion forum)
1.-3.12.2015 Haskins Global Summit on Early development, health, and learning among at-risk children: A global perspective. Yale University, New Haven, USA.
21.-22.1. 2016 ELINET European Literacy Network's conference, Amsterdam (invited lecture)
18.4.2016 ELN COST action Core group and Working Groups' meeting, Ljubljana, Slovenia
24.4.2016, Forum of 20.China's Children's Reading (invited keynote & chairing a discussion forum), China
24-25.5.2016 Healthy lifelong: Child and Adolescent Health funding program's (Federal Ministry of Education and Research, Germany) Review Board meeting, Berlin, Germany.

III) A selection of conference presentations by the Chairholder and other colleagues
Several presentations in national Learning disability researcher meeting, Jyväskylä, Finland, 25.4.2015 by Heikki Lyytinen with Eklund Kenneth, Torppa Minna, Aro Mikko, Leppänen Paavo H.T., Ahonen Timo, Lohvansuu Kaisa, Hämäläinen Jarmo, Tanskanen Annika, Ervast Leena and Ulla Richardson.
8.7.2015 - 19.7.2015 SSSR, Society for the Scientific Study of Reading; Hawaii, USA, invited presentation.
1.-3.12.2015 A Keynote in Haskins Global Summit on Early development, health, and learning among at-risk children: A global perspective.

See Invited Keynotes above: II

c) Interuniversity Exchanges/Partnerships

(principal exchanges/partnerships between the Chair and other institution,s including UNESCO Chairs/UNITWIN Networks)

The Chair works in close collaboration with Dyslexia International ASBL http://www.dyslexia-international.org/ - better training, better teaching, a NGO in consultative partnership with UNESCO.

The contact person there is Judith Sanson, Chair, Board of Directors.

The Chair has initiated and established an active ongoing international **GraphoWORLD Network of Excellence on Literacy and Language learning.** The objective of the GraphoWORLD NoE is to provide technology enhanced support as widely as possible to all learners globally, however, with a special emphasis on countries where access to literary education is limited.

Mission: Technology enhanced support on spoken and written language development among typical and atypical learners. This includes both research and implementation of new knowledge and technology providing the support.

Vision: The vision is a network among universities with the most well informed experts of spoken and written language development to accomplish the mission.

Founding members: Heikki Lyytinen (University of Jyväskylä), Usha Goswami (Cambridge University), Kenneth Pugh (Haskins Laboratories), Daniel Brandeis (University of Zürich), Elena Grigorenko (Moscow State University/Yale), Fumiko Hoeft (Stanford University), Malt Joshi (Texas A &M University), Juha Kere (Karolinska Insitutet), Teija Kujala (University of Helsinki), Beatrice Matafwali (University of Zambia), Tiina Parviainen (Oxford University), Gerd Schulte-Körne (Ludwig-Maximilians-Universität München), Jennifer Thomson (Harvard University), Finn-Egil Tonnessen (University of Stavanger), Johannes ZIegler (CNRS, Aix Marseille University)

The Chair actively participates in COST Action IS1401 European Literacy Network and in ELINET, European Literacy Network.

Travels by the Unesco Chair for research collaboration:

San Pedro de Atacama, Chile	4.3.2015 - 17.3.2015
Santiago, Chile	22.3.2015 - 28.3.2015
University of Zambia, Lusaka, Zambia	28.4.2015 - 6.5.2015
China Development Research Foundation, Beijing, China	19.10.2015 - 25.10.2015
Taipei, Hongkong, Macao, Prague	5.11.2015 - 19.11.2015
USA, Zambia, Kenya	30.11.2015 - 11.12.2015
Amsterdam, the Netherlands	20.1.2016 - 23.1.2016

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

Please tick relevant fields of output and indicate volume of output:		[tick]	[no.]
	Books	O	
	Books (edited)	O	
	Books (chapters)	X	3
	Monographs	O	
	Research Reports	O	
	Journal Articles (refereed)	X	10
	Conference Proceedings	X	2
	Occasional Papers	X	1
	Teaching/Learning Materials	O	
	Multimedia Materials (CD-Rom)	O	
	Multimedia Materials (Video)	X	4
	Multimedia Materials (Other)	O	

Give details of major publications and materials including full citations.

i) Theses

Completed supervised doctoral thesis:
Puhakka, Suzanne (2015) Digital solutions for multilingual learning environments: The case of GraphoGameTM adaptations in Kenya.
Available online: https://jyx.jyu.fi/dspace/handle/123456789/45762

ii) Publications

Cong, F., Ristaniemi, T., & Lyytinen, H. (2015). *Advanced Signal Processing on Brain Event-Related Potentials : Filtering ERPs in Time, Frequency and Space Domains Sequentially and Simultaneously.* World Scientific. doi:10.1142/9306

Torppa, M., Eklund, K., van Bergen, E., & Lyytinen, H. (2015). Late-Emerging and Resolving Dyslexia: A Follow-Up Study from Age 3 to 14. *Journal of Abnormal Child Psychology*, 43 (7), 1389-1401. doi:10.1007/s10802-015-0003-1 Retrieved from https://jyx.jyu.fi/dspace/handle/123456789/48250

Matsson, H., Huss, M., Persson, H., Einarsdottir, E., Tiraboschi, E., Nopola-Hemmi, J., . . . Kere, J. (2015). Polymorphisms in DCDC2 and S100B associate with developmental dyslexia. *Journal of Human Genetics*, 60 (7), 399-401. doi:10.1038/jhg.2015.37 Retrieved from https://jyx.jyu.fi/dspace/handle/123456789/46611

Lyytinen, H., Shu, H., & Richardson, U. (2015). Predictors of reading skills across languages. In E. L. Balvin, & L. R. Naigles (Eds.), *The Cambridge Handbook of Child Language* (pp. 703-723). Cambridge: Cambridge University Press.

Lyytinen, H., Erskine, J., Hämäläinen, J., Torppa, M., & Ronimus, M. (2015). Dyslexia : early Identification and Prevention: Highlights from the Jyväskylä Longitudinal Study of Dyslexia. *Current Developmental Disorders Reports*, 2 (4), 330-338. doi:10.1007/s40474-015-0067-1

Eklund, K., Torppa, M., Aro, M., Leppänen, P. H. T., & Lyytinen, H. (2015). Literacy Skill Development of Children With Familial Risk for Dyslexia Through Grades 2, 3, and 8. *Journal of Educational Psychology*, 107 (1), 126-140. doi:10.1037/a0037121 Retrieved from https://jyx.jyu.fi/dspace/handle/123456789/45686

Puhakka, C. S., Lyytinen, H., & Richardson, U. (2015). Technology enhanced literacy learning in multilingual Sub-Saharan Africa : The case of GraphoGame Kikuyu and Kiswahili adaptations in Kenya. In P. A. M. Kommers, P. Isaias, & T. Issa (Eds.), *Perspectives on Social Media: A Yearbook* (pp. 183-190). New York: Routledge.

Ojanen, E., Jere-Folotiya, J., Yalukanda, C., Sampa, F., Nshimbi, C., Katongo, M., . . . , & Lyytinen, H. (2015). Mobile Solution for Better Reading Instruction in Rural Africa. In P. Cunningham, & M. Cunningham (Eds.), *IST-Africa 2015 Conference Proceedings* (pp. 408-420). IEEE. doi:10.1109/ISTAFRICA.2015.7190559

Walubita, G., Nieminen, L., Serpell, R., Ojanen, E., Lyytinen, H., Choopa, M., . . . Nakawala-Maumbi, M. (2015). Ensuring Sufficient Literacy Practice with Tablet Technology in Zambian Schools. In P. Cunningham, & M. Cunningham (Eds.), *IST-Africa 2015 Conference Proceedings* (pp. 421-430). IEEE. doi:10.1109/ISTAFRICA.2015.7190560

Ronimus, M., & Lyytinen, H. (2015). Is School a Better Environment than Home for Digital Game-Based Learning? : The Case of GraphoGame. *Human Technology*, 11 (2), 123-147.doi:10.17011/ht/urn.201511113637 Retrieved from https://jyx.jyu.fi/dspace/handle/123456789/47910

Lyytinen, H., & Lyytinen, P. (2015). Miten tunnistat lapsen joka tarvitsee apua saavuttaakseen peruslukutaidon ja miten tuen häntä?. *Kielikukko*, 34 (4), 2-5.

Lyytinen, H., Aro, M., Richardson, U., Erskine, J., Li, H., & Shu, H. (2015). Reading Skills, Acquisition of: Cultural, Environmental, and Developmental Impediments. In J. D. Wright (Ed.), *International Encyclopedia of the Social and Behavioral Sciences : Vol. 20* (pp. 5-11). Elsevier. doi:10.1016/B978-0-08-097086-8.23111-5

Ojanen, E., Ronimus, M., Ahonen, T., Chansa-Kabali, T., February, P., Jere-Folotiya, J., . . . Lyytinen, H. (2015). GraphoGame – a catalyst for multi-level promotion of literacy in diverse contexts. *Frontiers in Psychology*, 6, 671. doi:10.3389/fpsyg.2015.00671 Retrieved from https://jyx.jyu.fi/dspace/handle/123456789/46478

Mourgues, C., Tan, M., Hein, S., Ojanen, E., Reich, J., Lyytinen, H., & Grigorenko, E. L. (2016). Paired associate learning tasks and their contribution to reading skills. *Learning and Individual Differences*, 46, 54-63. doi:10.1016/j.lindif.2014.12.003

Aro, M. & Lyytinen, H. (2016) Training Reading Skills in Finnish: From Reading acquisition to Fluency and Comprehension. In Reading Fluency, 12, 125-140. http://link.springer.com/chapter/10.1007/978-3-319-30478-6_8

Francis K. Sampa, Emma Ojanen, Jari Westerholm & Heikki Lyytinen (submitted). Efficacy of National Literacy Programs: Implications for Children's Early Reading Skills in Familiar Language in Zambia.

Multimedia materials:
International Literacy Day 4.9.2015; several video presentations, available at
https://moniviestin.jyu.fi/ohjelmat/erillis/agoracenter/unesco-chair/celebrating-the-international-literacy-day
- Transforming scientific discoveries into practical learning services
- Playing mobile games can support learners with reading difficulties
- Empowering education scientists in Africa builds a better future for us all
- Language and literacy are intertwined in learning to read - especially in Africa

e) Cooperation with UNESCO Headquarters, Field Offices

Opening meeting of UNITWIN UNESCO Chair on Inclusive Literacy Learning for All; **11th May 2015, UNESCO HQ Paris 13h – 16h,**

Attendees:
Heikki Lyytinen, University of Jyväskylä, Finland
Fumiko Hoeft, Stanford University, USA
Kenneth Pugh, Haskins Laboratories, USA
Johannes Ziegler, CNRS, Aix-Marseille University, France
Ulla Richardson, University of Jyväskylä, Finland
Emma Ojanen, University of Jyväskylä, Finland
Linda Siegel, Unversity of British Columbia, Canada
Liliane Sprenger-Charolles, University Paris Descartes, France
Ovid Tzeng, Academia Sinica, Taiwan
Ludo Verhoeven, University of Nijmegen, The Netherlands

Borhene Chakroun, UNESCO, Chief, Section for Youth, Literacy and Skills Development (ED/PLS/YLS)
Mari Yasunaga, UNESCO, Programme specialist, Section for Youth, Literacy and Skills Development
Maki Hayashikawa, UNESCO Chief, Section of Learning and Teachers **Via Adobe**
Connect:
Elena Grigorenko, Yale, USA
Elinor Haddad, Bar-Ilan University, Israel
Sonali Nag, University of York, UK
Mikko Pitkänen, University of Jyväskylä, Finland
Jenny Thomson, University of Sheffield, UK

Observers:
Dyslexia International: Judith Sanson, Chair, Board of Governers,
Section of Learning and Teachers, UNESCO Education Sector:
Florence Migeon, Programme Specialist
Kaga Yoshie, Programme Specialist ?
Mariana Kitsiona, Assistant Programme Specialist
Adrien Alain Boucher, Assistant Programme Specialist

Heikki Lyytinen stated that the main goal of the UNESCO Chair on Inclusive Literacy Learning for All is to provide support for literacy for everyone regardless of the cause of the challenges in reading. People are struggling in literacy for both biological and environmental reasons and the main task of the UNESCO Chair is to seek ways to promote literacy learning in all language environments. Teachers around the world need open access materials for science-based literacy instruction in different language environments.

Goals to be addressed:
UNESCO representatives pointed out the need to reach key decision makers in the global education policy and the need for advocacy materials that can be used for introducing the UNESCO Chair activities to the non-scientific audience. Importance of good quality assessment of learning outcomes was also highlighted as an important theme for the chair activities. Mobile learning week and International Literacy Day are important events where UNESCO Chair activities could be showcased. UNESCO Institute of ICT and Education would be important collabrator

Sustainability of ICT-based literacy interventions needs to be examined carefully, especially if the plan is to reach for the rural areas and ensure continuity of the learning support beyond the limited projects.

Dissemination of the information: Khan Academy collaboration was suggested as one format of dissemination. TED talk would be important medium for advocacy. Online course materials need to be developed.

Funding solutions need to be developed and it was agreed at this point all options for funding should be kept open, including the for-profit business models. UNESCO Chair is now a new possibility to apply for funding and develop private sector partnerships so all models of funding should be considered. However, the conditions of commercial partnerships need to be discussed.

f) Other
(any other activities to report)

3. Future Plans and Development Prospects:

Outline of action plan for the next biennium and short/medium and long-term development prospects. Please do not hesitate to refer to difficulties that the Chair has experienced
(Not exceeding 300 words)

Future Chair activities continue to raise awareness of the effect of orthography in reading acquisition and importance of considering language impact in designing reading programmes, especially in Sub-Saharan Africa and in other places where the use of mother tongue in education is often neglected due to prioritizing English and French. Chair also continues to promote developing research based support methods for children with reading difficulties and improving the availability of information about reading difficulties for teachers and parents. These activities can consist of writing a book about the practical implications to reading instruction of the orthography together with the GraphoWorld reading researcher network. The challenges experienced relate to availability of funding for organizing meetings with the research network. Organizing a conference focused in the aforementioned themes would be important for gathering the current knowledge on best practices around the world. A conference associated with the COST Action IS1401 European Literacy Network has been agreed to be organized at the beginning of 2017 in the Jyväskylä University (the chair's home university).

Research on use of mobile technology as learning support is part of Chair activities as a means of disseminating the latest research knowledge and practices to the learners who need the support most urgently. In Sub-Saharan Africa, this includes dissemination of reading materials in African languages and expanding the research focus into reading fluency and comprehension.

The collaboration with Dyslexia International will continue, with the aim of support the MOOCs and training of teachers. The Chair's team will observe how teachers' skills to instruct children with dyslexia change when they use the dynamic reading acquisition assessment via the Graphogame technology.

Appendix:

1) Human Resources

The human resources are available for the Unesco through a large international initiative with several layers of actions.
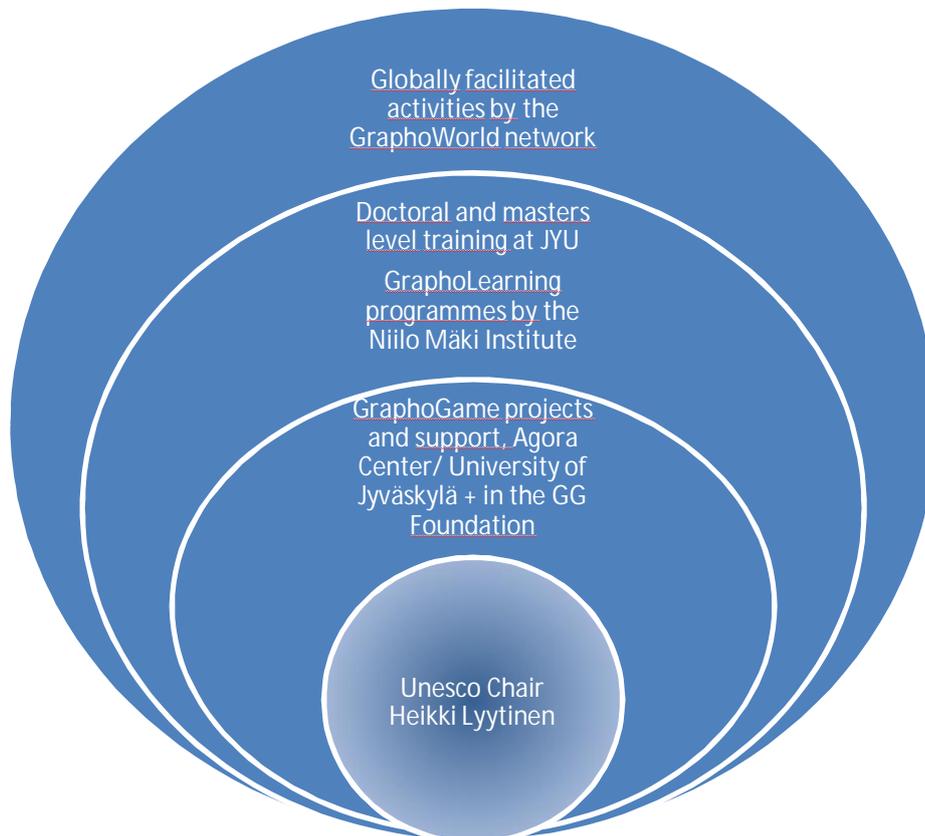
The main local site of the applicant is the Agora Center at the University of Jyväskylä. The Agora Center coordination unit is committed to offer effective research and innovation infrastructures that re-envision and reinforce interdisciplinary collaboration with university, business, and public sector partners from around the world; and give support in delivering evidence-based solutions to wicked problems in such a way that achieves thriving societal impact and the commercial value of results. The Agora Center offers substantial administrative and other support to the projects, and also other departments of the university focus on these areas in their research and training. The Agora Center is administering a starting ForLearning network to enhance interdisciplinary collaboration in this area.

The active faculty members in the Unesco Chair team include: Professor Timo Ahonen (developmental neuropsychology), Professor Ulla Richardson (linguistics), Project researcher Emma Ojanen (support of reading development in developing countries), PhD Päivi Fadjukoff (administrative support).

A significant external contributor is the Niilo Mäki Institute (NMI), e.g. hosting the GraphoLearning Training Programme for teachers from African countries. NMI, funded by the Niilo Mäki Foundation has collaborated with African countries now close to 20 years. Heikki Lyytinen has served the Chair of Board at the Niilo Mäki Foundation all this time. Our African operations have proceeded under the guidance of Onerva Mäki who is the first receiver (2008) in Finland of the UNESCO Comenius Medal Award.

2) Financial Resources

Please tick sources of financial contribution and specify the amount in U.S. dollars		[tick]	Amount ($)
	Host Institution	X	_____
	Partner Institution	O	_____
	Government Body	X	_____
	Other Public Institution/Body	X	_____
	(incl. Research Councils)	X	_____
	UNESCO	O	_____
	Other UN Agency	O	_____
	IGO	O	_____
	NGO	X	_____
	Industry	O	_____
	Other Private	O	_____

Give details of financial contributions, material resources and space.

The University of Jyväskylä covers Heikki Lyytinen's salary at a 10% of full time level, as well as his services including space and working tools. n addition, Heikki Lyytinen gets a full pension funding. The research team members in Jyväskylä are funded with project and University of Jyväskylä funding, and the network members through their national and local fundings.

As detailed in the research project descriptions, the funders of projects include the National Agency for Technology and Innovations TEKES, Academy of Finland, Ministry of Foreign Affairs, European Union, and World Vision. The present project portfolio funding totals to around 1,5 M€

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