

International Scientific Conference

Empowering Change: Fostering Social Entrepreneurship for a Sustainable Future

**SUSTAINABLE DISTANCE EDUCATION
A LITERATURE REVIEW OF THE LAST DECADES AND A CORRESPONDING
BIBLIOMETRIC ANALYSIS**

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ODLEP

Optimizing Distance Learning Educational Programs

Optimizing Distance Learning Educational Programs

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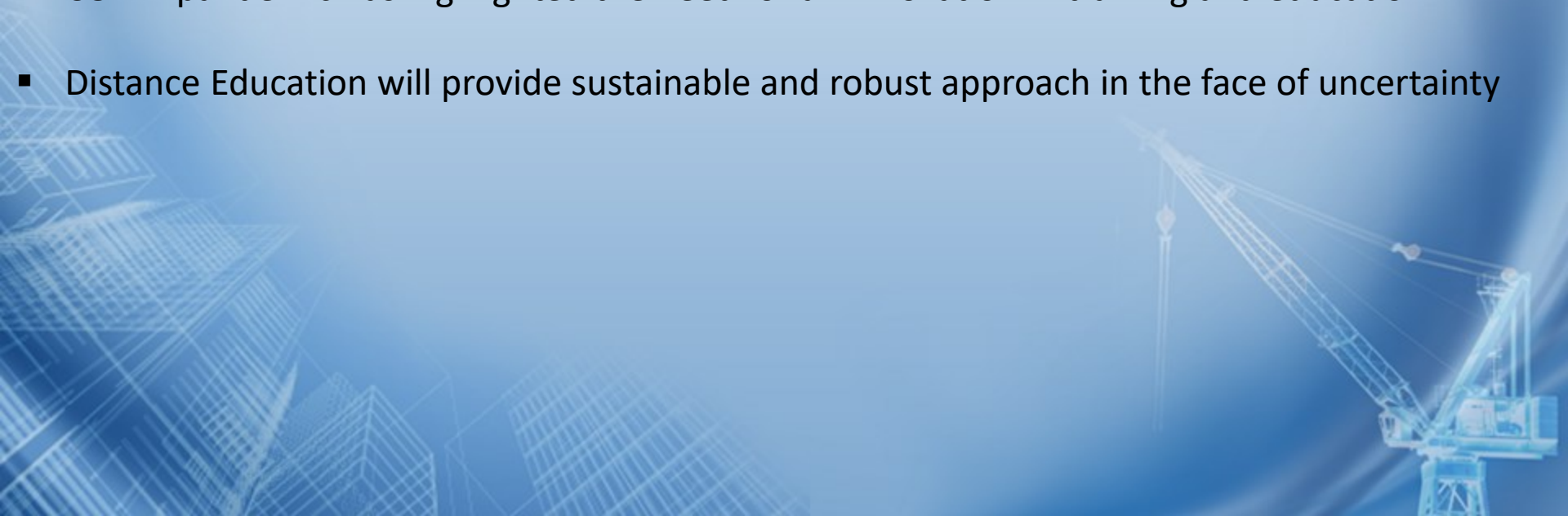
Definition of Distance Education

Distance education, also called distance learning, e-learning, and online learning, is the form of education in which the main elements include physical separation of teachers and students during instruction and the use of various technologies to facilitate student-teacher and student-student communication.



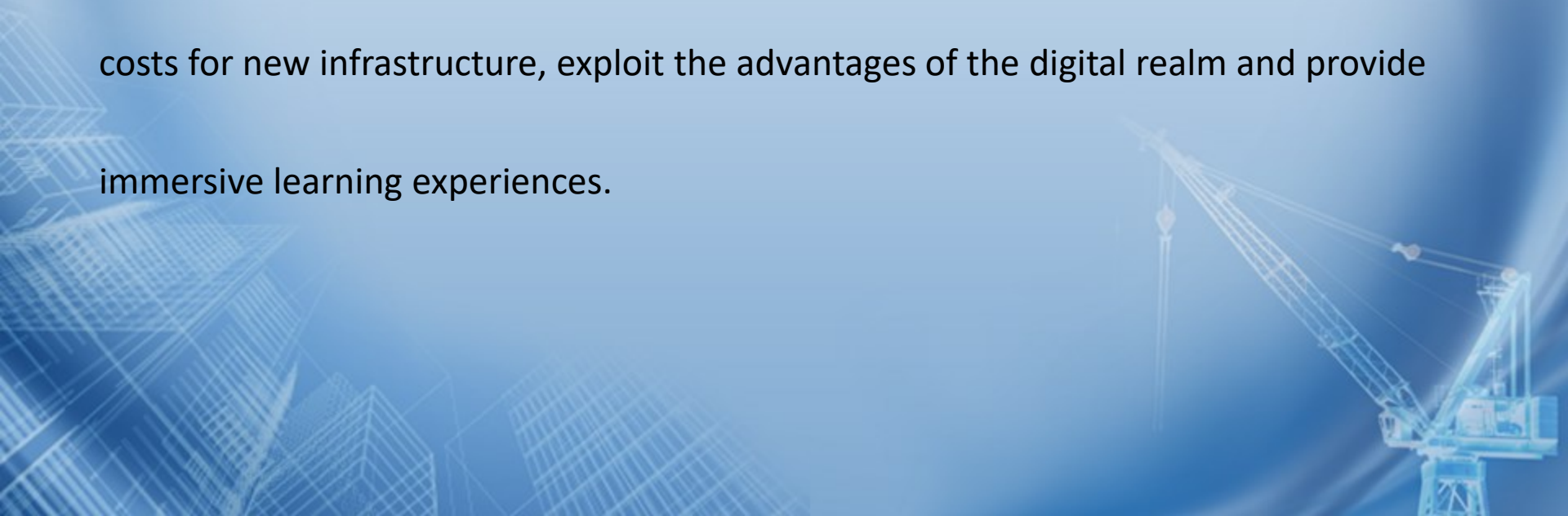
Introduction

- Today's colleges and universities face a wide range of challenges, including:
 - ✓ Disengaged students
 - ✓ High dropout rates
 - ✓ Ineffectiveness of a traditional “one-size-fits-all” approach to education
- COVID pandemic has highlighted the need for an innovation in training and education
- Distance Education will provide sustainable and robust approach in the face of uncertainty



Introduction

- Distance education must be sustainable and flexible to accommodate the needs and timetable of the students and educators without compromises to its quality and at the same time taking into account unforeseen situations.
- Distance education should include the ability to reach remote areas without extreme costs for new infrastructure, exploit the advantages of the digital realm and provide immersive learning experiences.



Distance Education Background

- In a distance education class, electronic communication systems serve as the delivery method which replaces the face-to-face classroom.
- Distance education offers the potential to build better interactive classrooms which foster learning communities.
- Personalized interaction with students can be successful in a transparent and efficient manner based on the Web.
- The digital environments (for video conferencing, shared writing, chat, forums and more), which characterized Distance Teaching (DAD) during the pandemic have been widely used, due to the fact that they have been established tools for several years.
- Immersive environments exploit the ability of media to make us feel present and with agency in a place different from the one where you are physically.

Attributes of Distance Learning

- The limits and potentialities linked to the design of online classes in addition to or in substitution to traditional ones are mainly detectable in the ability to favor the participation of students
- It is critical to take into account the preferences of students and educators so that education can move from its traditional style and be rendered to one of personalized learning.
- Distance learning has gained a lot of momentum in the current years and is able to respond to the challenges that have arisen.



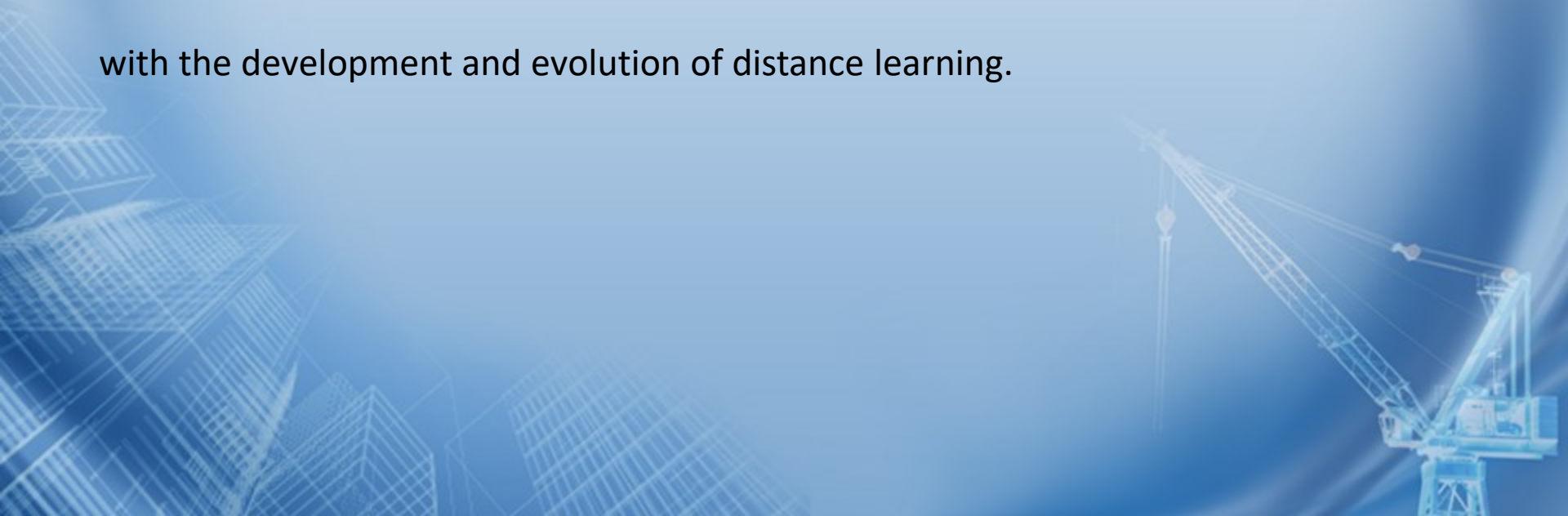
Distance Education Objectives

- ✓ Assist students in achieving their academic goals
- ✓ Instructors able to adapt their lectures to maximize the knowledge they wish to convey



Aim and Scope

- The current paper provides an extensive literature review focusing on distance learning, initiating from 2000.
- Furthermore, a bibliometric analysis has taken place, through the combined use of Mendeley and VOS-viewer, and identified fundamentals concepts that are associated with the development and evolution of distance learning.



Methodological Approach

- Inquiry for scientific papers
- The database used was Scopus
- Keywords used: “Distance Education”
- Research Period: beyond 2000
- Documents that were identified and examined equal to: 480
- Documents were imported in the reference manager: Mendeley
- A database for analysis regarding “Distance Education” was created
- The citations were exported in a RIS file
- Vos Viewer was used to create the bibliometric maps
- The RIS database was imported in Vos Viewer Application
- Three types of maps were created which included:
 - ✓ Network visualization
 - ✓ Overlay visualization
 - ✓ Density visualization



Scopus Database

Country/territory

Show abstract Full Text Related documents

Source type

Language

- English 6,239
- Portuguese 174
- Spanish 135
- Russian 42
- Turkish 36

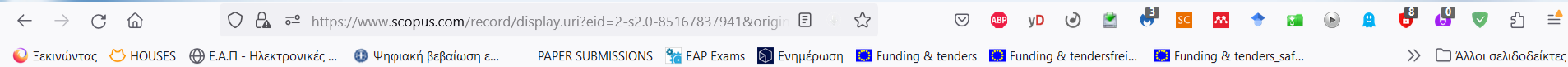
Show all

Publication stage

Funding sponsor

<input type="checkbox"/> 97	Article • Article in Press A Multi-Scale Gabor Filter-Based Method for Enhancing Video Images in Distance Education	Hu, Y., Kundi, M.	Mobile Networks and Applications	2023	1
<p>Show abstract <input type="checkbox"/> Full Text <input type="button" value="Full Text"/> Related documents</p>					
<input type="checkbox"/> 98	Editorial • Article in Press • Open access <u>Key Technologies of Quality Assessment in Network and Distance Education</u>	Huang, Y., Peng, C., Fu, W.	Mobile Networks and Applications	2023	0
<p><input type="button" value="Full Text"/> Related documents</p>					
<input type="checkbox"/> 99	Article • Article in Press Sense of Efficacy of Costa Rican Early Childhood Teachers in Face-to-Face and Distance Education Instructional Settings	Chroust, A.J., Atilas, J.T., Vargas, A.C., León, I.M.Z.	International Journal of Early Childhood	2023	0
<p>Show abstract <input type="checkbox"/> Full Text <input type="button" value="Full Text"/> Related documents</p>					

Exporting from Scopus to Mendeley



Document type

Article

Source type

Journal

ISSN

17439884

DOI

10.1080/17439884.2023.2244426

[View more](#) ▾

Reforming education via radio lessons for teachers? The promise and problems of distance learning in Cameroon, 1960–1995

Oumarou, Gnebora [✉](#)

[Save all to author list](#)

^a Faculty of Letters and Social Sciences, The University of Douala, Douala, Cameroon

Full text options ▾ **Export** ^

File types

CSV

RIS

BibTeX

Plain text

Reference managers

Mendeley

ProQuest RefWorks

Zotero (RIS)

EndNote (RIS)

Abstract

Author keywords

SciVal Topics

Funding details

Abstract

This article contributes to the literature on pedagogy in Africa by exploring the Cameroonian case. It shows how Cameroon gained independence in 1960 but faced a shortage of primary school teachers. To address this, the government implemented a training scheme based on distance learning via radio broadcasts. Drawing on archival records and taking a historical perspective, the article analyzes this training initiative and its impact on the development of this training program. It also examines the role of this initiative in the advancement of the education system. The article concludes that the economic crisis of the 1980s put an end to this continuous training scheme.

pedagogy in Africa by exploring the Cameroonian independence in 1960 but faced a shortage of training scheme based on distance learning via radio broadcasts. Drawing on archival records and field interviews, the article analyzes the implementation of this training initiative and its impact on the development of this training program. It also examines the role of this initiative in the advancement of the education system. The article concludes that the economic crisis of the 1980s put an end to this continuous training scheme. It includes with shedding light on the current challenges

[Set citation alert >](#)

Related documents

[The Christian churches and democracy in contemporary Africa](#)

Joseph, R.
(2019) *Body Politics: Disease, Desire, and the Family*

[African families faced with NICT: Stakes and effect on inter-individual and intergenerational relation](#)

Mimche, H. , Lengha, N.T.
(2009) *Organizational Communication and Sustainable Development: ICTs for Mobility*

[Technical teaching in Cameroon: The poor relation of the system? | L'enseignement technique au Cameroun: Le parent pauvre du système?](#)

Tsala, J.-P.
(2004) *Carrefours de l'Education*

[View all related documents based on references](#)

Find more related documents in Scopus based on:

Author > [Keywords >](#)

Creating the Mendeley Database

The screenshot displays the Mendeley Desktop interface. The main window shows a list of documents in a table format. The left sidebar contains navigation options like 'My Library', 'External Library', and 'Groups'. The right sidebar shows details for the selected document, including title, authors, year, and publisher. A yellow tooltip is visible over the 'The origins of distance education and its use in the United States: Technological Horizons in Education' entry.

★	●	📄	Authors	Title	Year	Published In	Added
★	●	📄	Shikulo, Lukas; Lekhetho, Mapheleba	Exploring student support services of a distance learning centre at a Namibian university	2020	Cogent Social Sciences	1:44np
★	●	📄	Patrick, Pamela K.S.; Yick, Alice G.	Standardizing the interview process and developing a faculty interview rubric: An effective method to recruit and retain online instructors	2005	Internet and Higher Education	1:44np
★	●	📄	Matthews, Diane	The origins of distance education and its use in the United States: Technological Horizons in Education	1999	T.H.E. Journal	1:44np
★	●	📄	PWC	Delivering the PPP promise: A review of PPP issues and activity	2005	A PriceWaterhouse Coopers Report	1:44np
★	●	📄	Muilenburg, L.; Berge, Z.L.	Barriers to distance education and its use in the United States: Technological Horizons in Education	2001	International Journal of Phytoremediation	10ul 16
★	●	📄	Beege, Maik; Kriegelstein, Felix; Arnold, Caroline	How instructors influence professional appearance and communication	2022	Computers and Education	1:44np
★	●	📄	Rockenbach, Barbara; Almagno, Stephen	Distance Education: Some of the Unasked and Unanswered Questions	2013	http://dx.doi.org/10.1080/10572317.2000...	1:44np
★	●	📄	Fornaciari, C.J.; Forte, M.; Mathews, C.S.	Distance education as strategy: How can your school compete?	1999	Journal of Management Education	1:44np
★	●	📄	Moore, M.G.	Editorial: Institutional restructuring: Is distance education like retailing?!	1999	International Journal of Phytoremediation	1:44np
★	●	📄	Radovan, Marko	Should i stay, or should i go? Revisiting student retention models in distance education	2019	Turkish Online Journal of Distance Education	1:44np
★	●	📄	Starr, D.R.	Virtual Education: Current Practices and Future Directions	1998	Internet and Higher Education	1:44np
★	●	📄	Anderson, K.	Internet-based model of distance education	1999	Human Resource Development International	10ul 15
★	●	📄	Suarez, Tiki L.	Access grid technology in classroom and research environments	2007	Journal of Supercomputing	1:44np
★	●	📄	Kovacich, J.; Arndt, J.; Clark, N.	New Technologies in Distance Education to Increase Access to Rural Health Care	1998	Journal of Health Education	1:44np
★	●	📄	Lauzon, A.C.	Distance education and diversity: Are they compatible?	2000	International Journal of Distance Education	10ul 16
★	●	📄	Sweis, Ghaleb J.; Sweis, Rateb J.; Al-Shboul, Muhammad A.; Al-Dweik, Ghadeer A.	The impact of information technology (IT) adoption on the quality of construction projects.	2015	International Journal of Information Technology P...	Aug 16
★	●	📄	Arhin, Vera; Wang'Eri, Tabitha	Orientation programs and student retention in distance learning: The case of university of cape coast	2018	Journal of Educators Online	1:44np
★	●	📄	Michael, G.M.	Editorial: Distance Education Theory	1991	American Journal of Distance Education	10ul 16
★	●	📄	Bağrıncak Yılmaz, Ayşe; Karataş, Serçin	Why do open and distance education students drop out? Views from various stakeholders	2022	International Journal of Educational Technology in...	1:44np
★	●	📄	Skitmore, R. Martin; Ng, S. Thomas	Forecast models for actual construction time and cost.	2003	Building and Environment	Aug 16

Details | Notes | Contents

445 documents selected
Edits will affect all selected documents.
[Merge Documents](#)

Type: [Dropdown]

Title

Authors: Authors

Year:

Pages:

Abstract:

Tags:

Author Keywords:

City:

Publisher:

Type of Work:

URL:
Add URL...

Catalog IDs
DOI:

Other Settings
 Unpublished work - exclude from Mendeley Web catalog

Options for Vos Viewer

The analysis was applied in three basic pillars

- The first analysis was run for five occurrences of keywords
- The second analysis was run for four occurrences of keywords
- The third analysis was a text based for nine occurrences of keywords



Vos Viewer – Creating a Map

Create Map



Choose type of data

Create a map based on network data

Choose this option to create a map based on network data.

Create a map based on bibliographic data

Choose this option to create a co-authorship, keyword co-occurrence, citation, bibliographic coupling, or co-citation map based on bibliographic data.

Create a map based on text data

Choose this option to create a term co-occurrence map based on text data.

< Back

Next >

Finish

Cancel

Data Source

Create Map



Choose data source

Read data from bibliographic database files

Supported file types: Web of Science, Scopus, Dimensions, Lens, and PubMed.

Read data from reference manager files

Supported file types: RIS, EndNote, and RefWorks.

Download data through API

Supported APIs: Microsoft Academic, Crossref, Europe PMC, Semantic Scholar, OCC, COCI, and Wikidata.

< Back

Next >

Finish

Cancel

Uploading of RIS file

Create Map



Select files

RIS

EndNote

RefWorks

RIS files: ?

\\JULIS\OneDrive\Desktop\DISTANCE_EDUCATION\DISTANCE_EDUCATION_DATABASE.ris



< Back

Next >

Finish

Cancel

Analysis Type

Create Map



Choose type of analysis and counting method

Type of analysis: ?

- Co-authorship
- Co-occurrence

Unit of analysis:

- Keywords

Counting method: ?

- Full counting
- Fractional counting

VOSviewer thesaurus file (optional): ?

< Back


Next >

Finish

Cancel

Threshold Selection Focusing on Keywords

Create Map ✕

 **Choose threshold**

Minimum number of occurrences of a keyword:

Of the 309 keywords, 17 meet the threshold.

Number of Keywords

Create Map



Choose number of keywords

For each of the 17 keywords, the total strength of the co-occurrence links with other keywords will be calculated. The keywords with the greatest total link strength will be selected.

Number of keywords to be selected:

< Back

Next >

Finish

Cancel

Selected Keywords

Create Map



Verify selected keywords

Selected	Keyword	Occurrences	Total link strength
<input checked="" type="checkbox"/>	distance education	32	42
<input checked="" type="checkbox"/>	e-learning	20	26
<input checked="" type="checkbox"/>	online learning	11	18
<input checked="" type="checkbox"/>	confirmatory factor model	5	15
<input checked="" type="checkbox"/>	higher education	10	15
<input checked="" type="checkbox"/>	structured equation modeling	5	15
<input checked="" type="checkbox"/>	dropout	10	14
<input checked="" type="checkbox"/>	distance learning	18	12
<input checked="" type="checkbox"/>	retention	10	12
<input checked="" type="checkbox"/>	student retention	8	12
<input checked="" type="checkbox"/>	technology	8	7
<input checked="" type="checkbox"/>	adult learning	6	6
<input checked="" type="checkbox"/>	open and distance learning	6	6
<input checked="" type="checkbox"/>	computer-mediated communication	5	5
<input checked="" type="checkbox"/>	education	7	5
<input checked="" type="checkbox"/>	access grid	5	4
<input checked="" type="checkbox"/>	academic performance	6	2

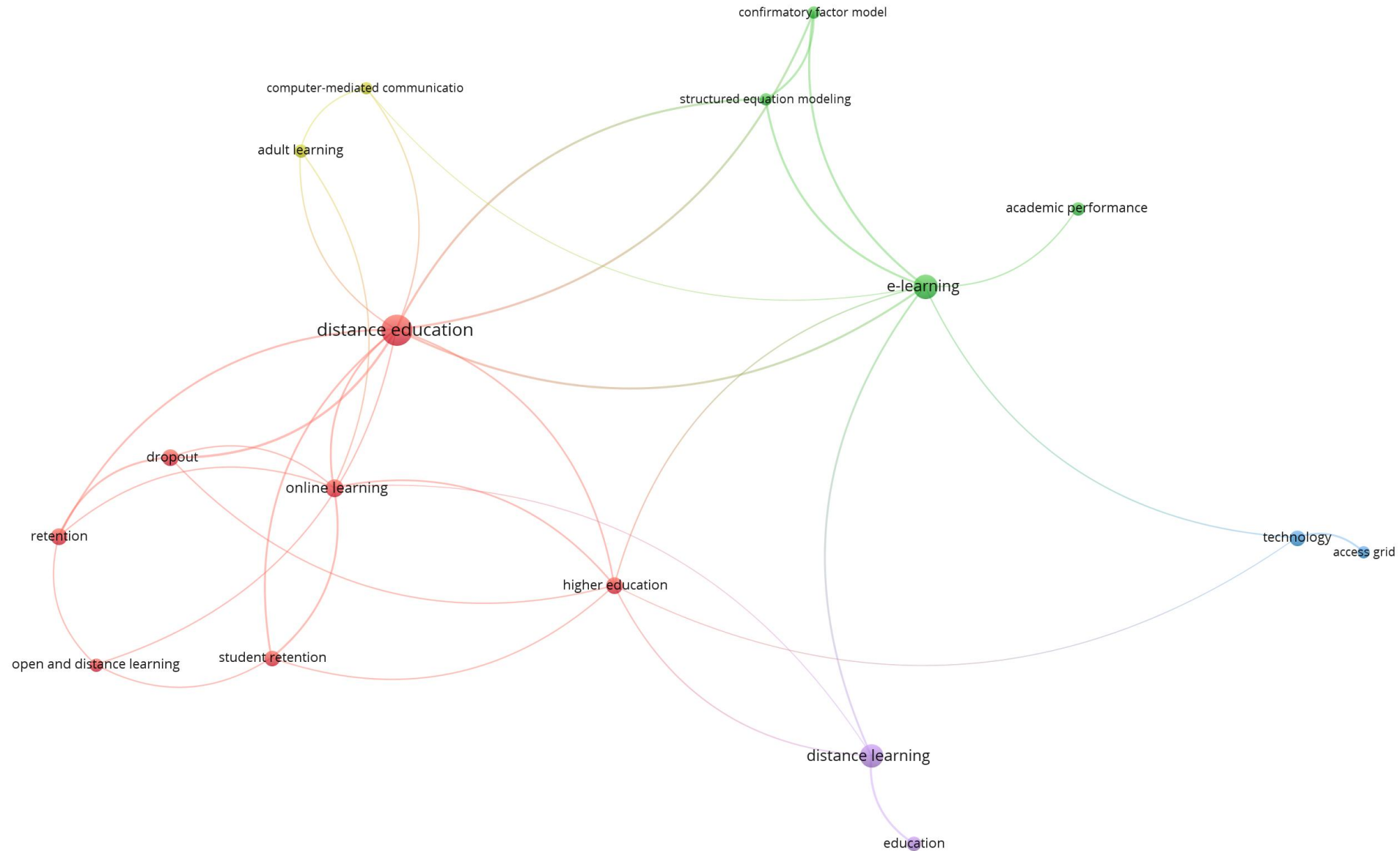
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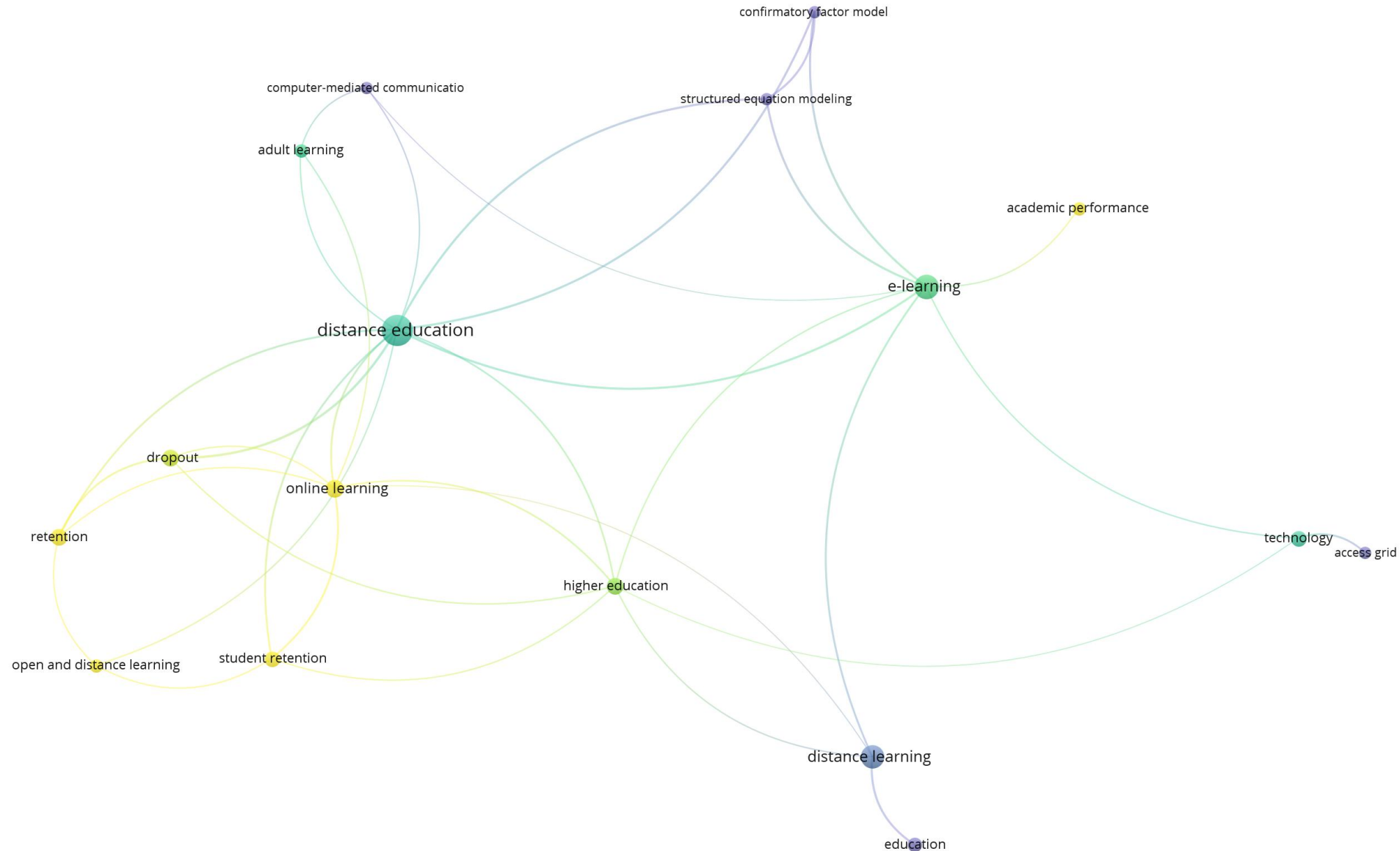
Finish

Cancel

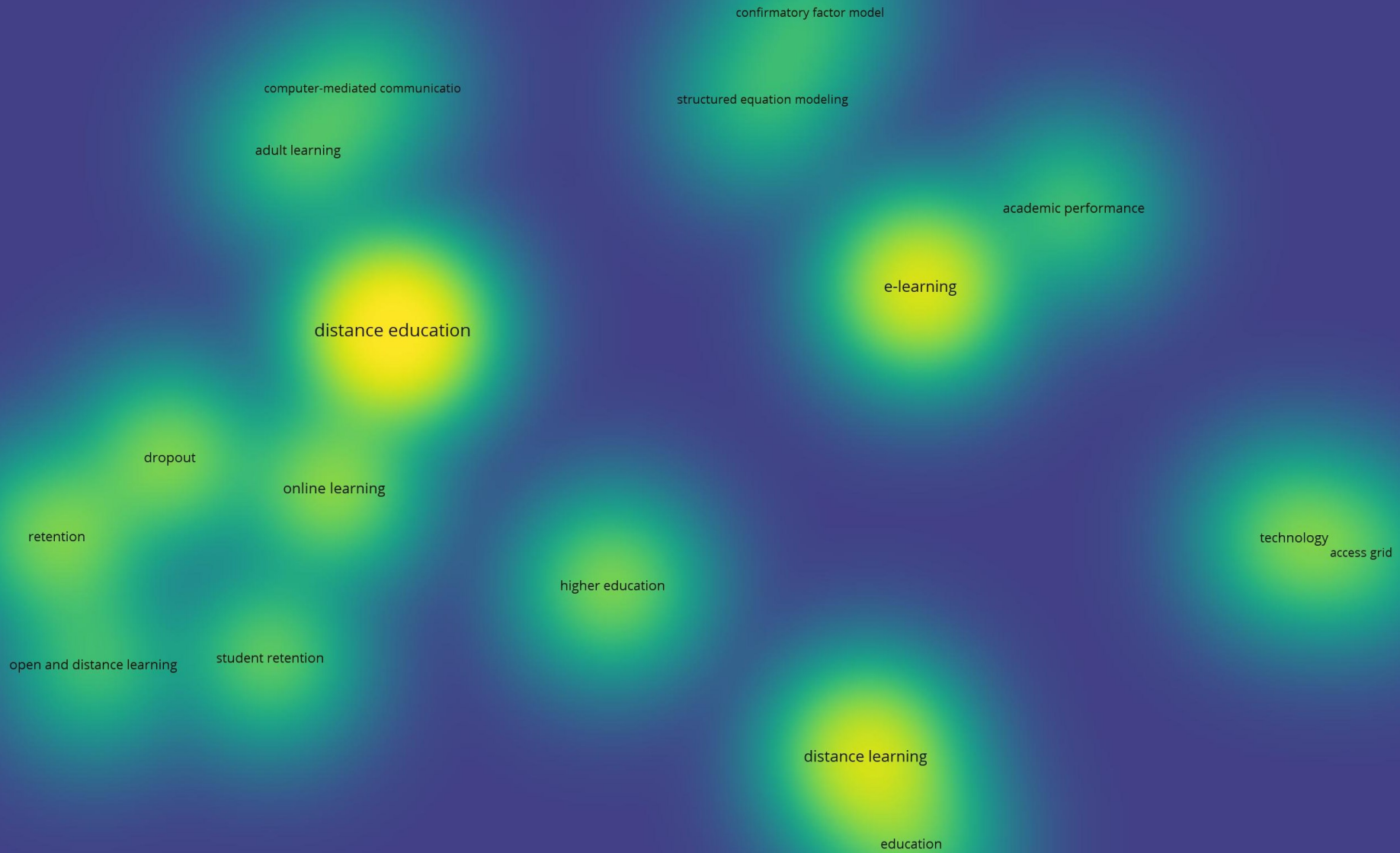
Network map designed for five occurrences of keywords



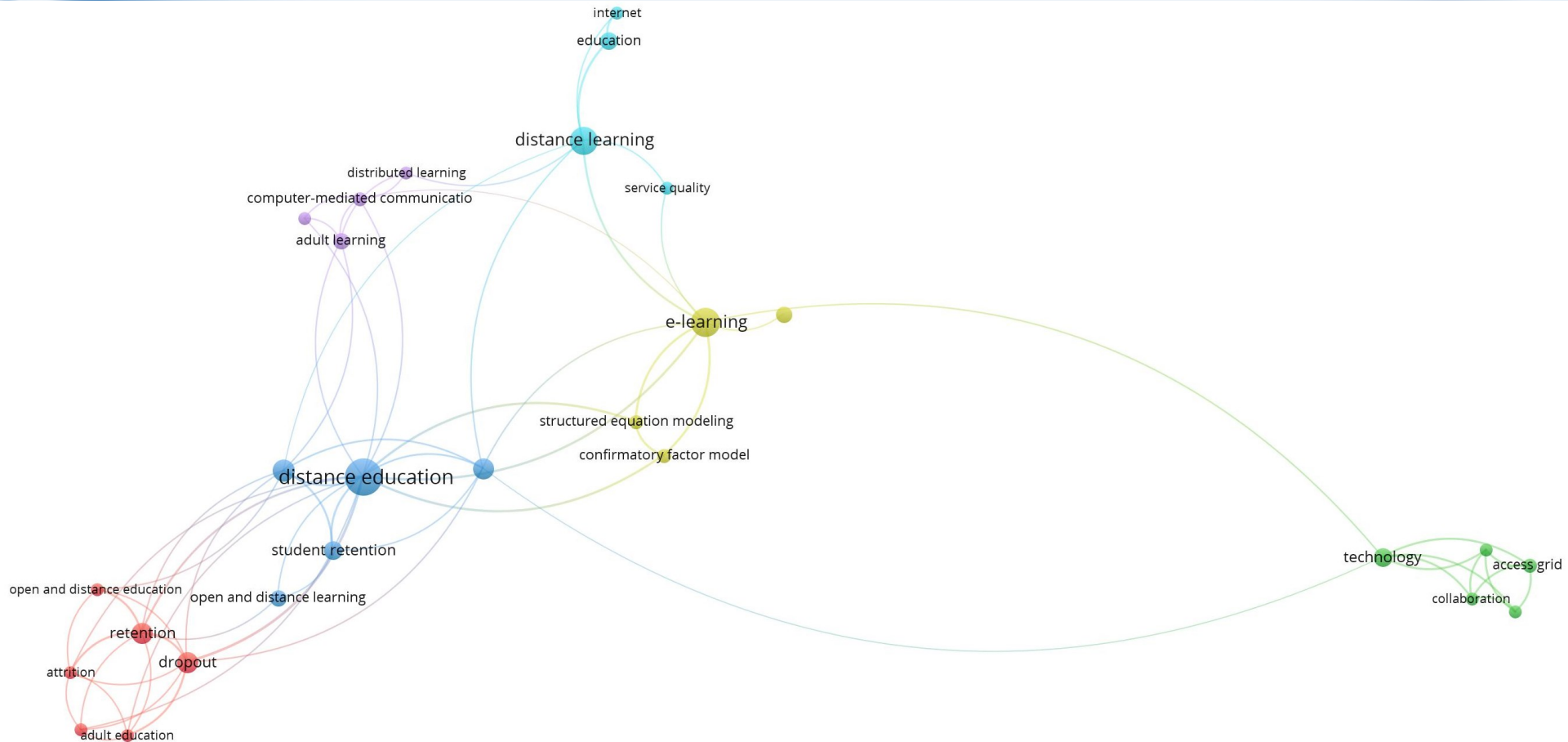
Visualization map designed for five occurrences of keywords



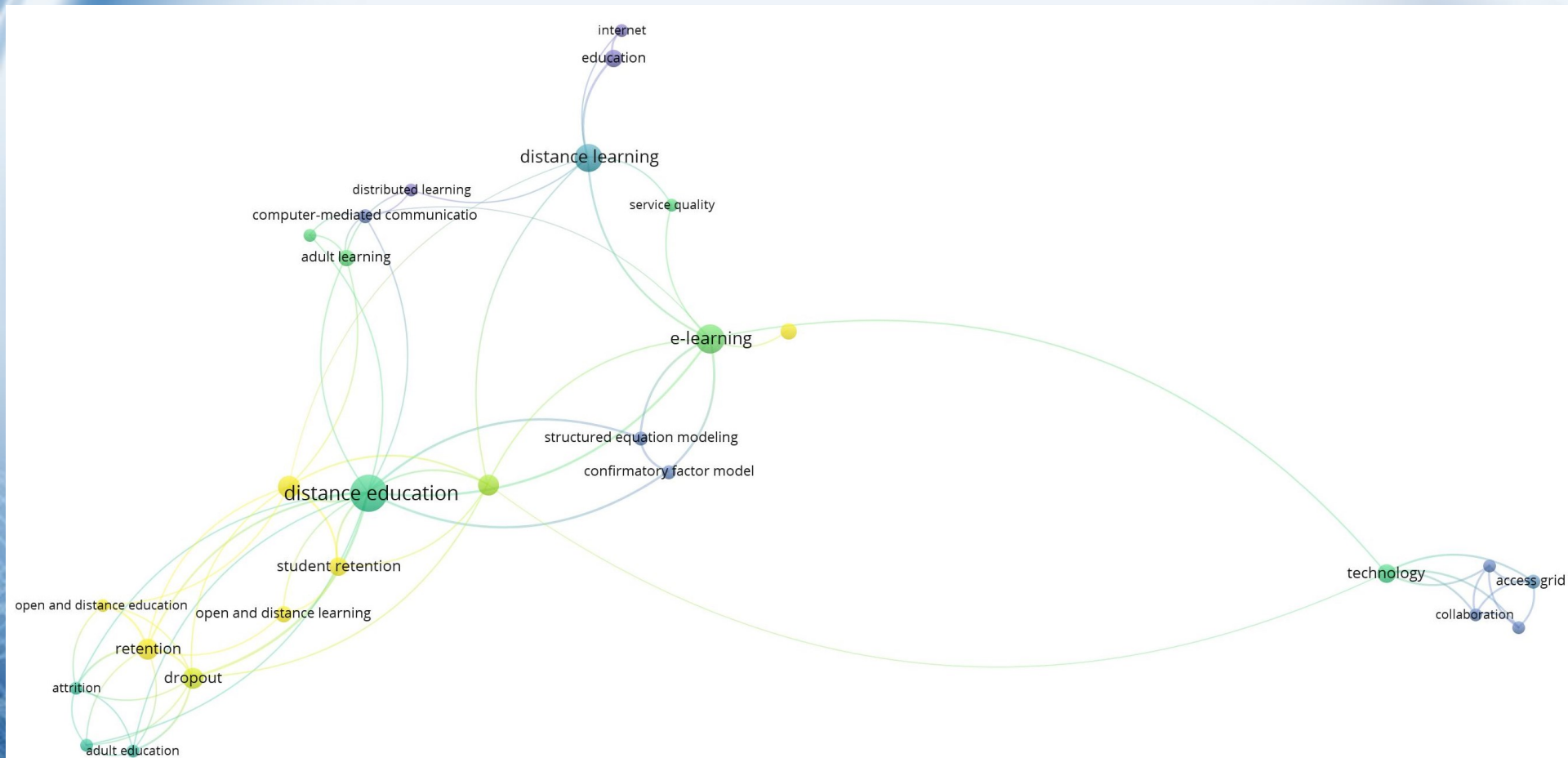
Density map designed for five occurrences of keywords



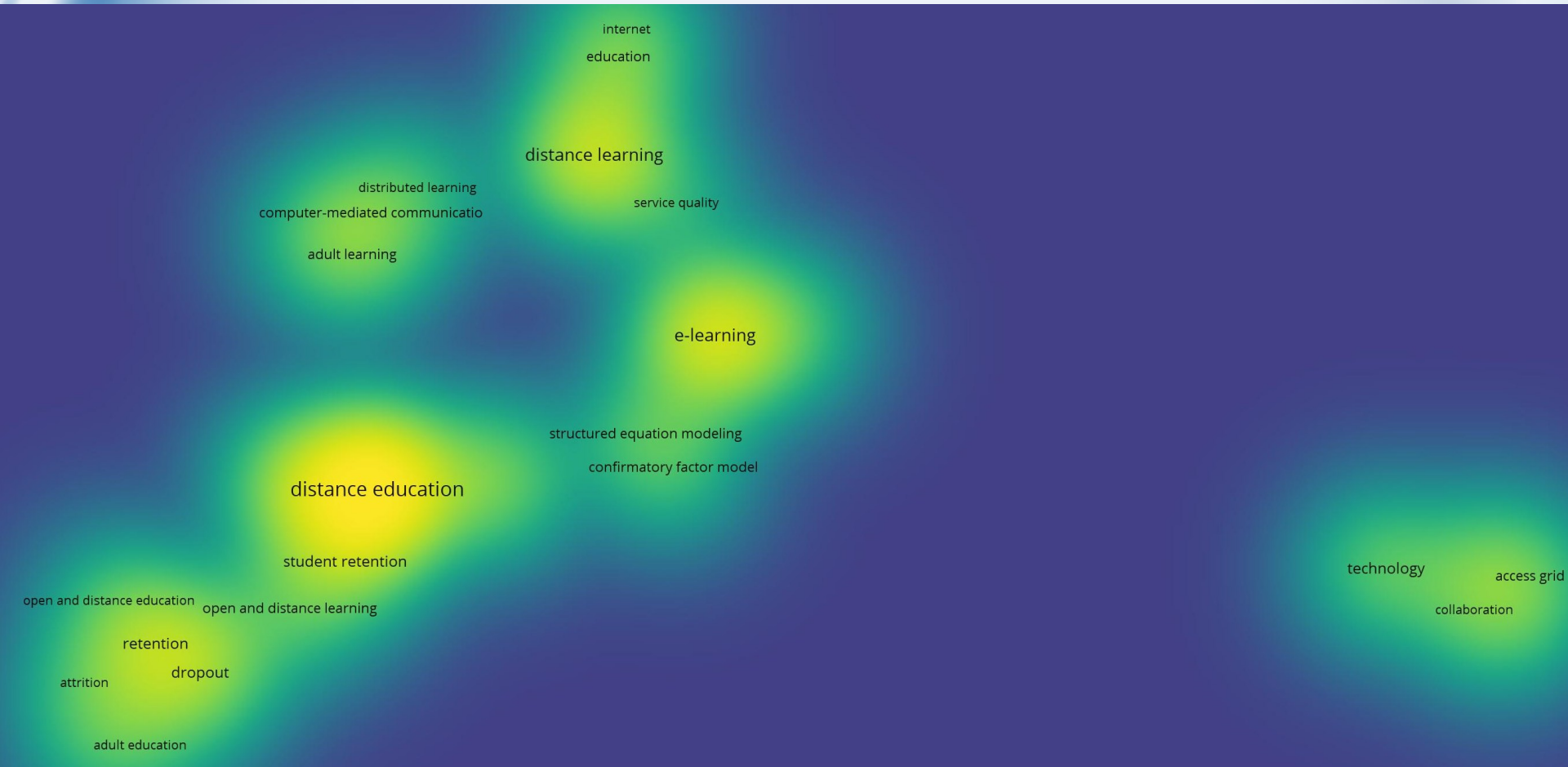
Network map designed for four occurrences of keywords



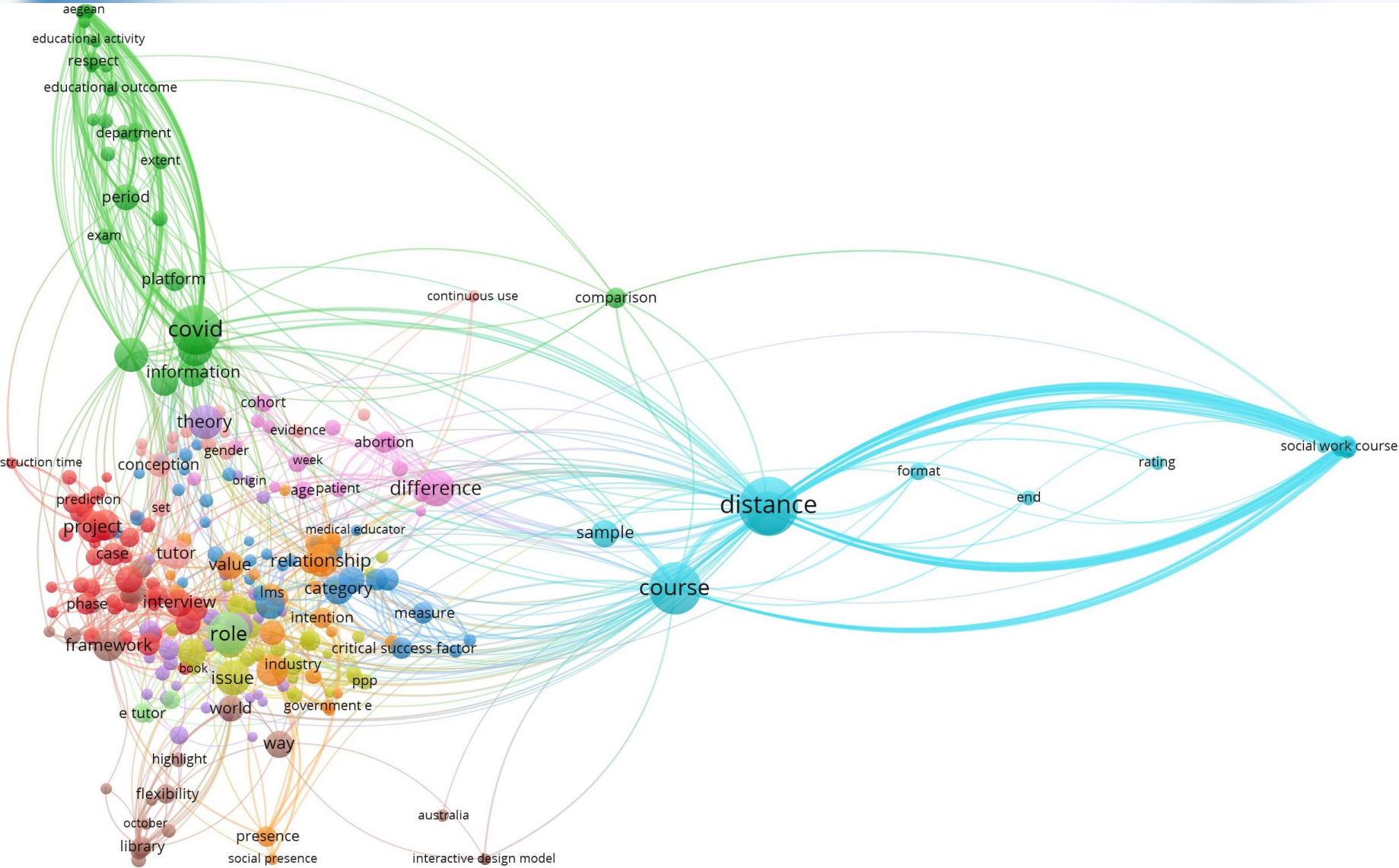
Overlay map designed for four occurrences of keywords



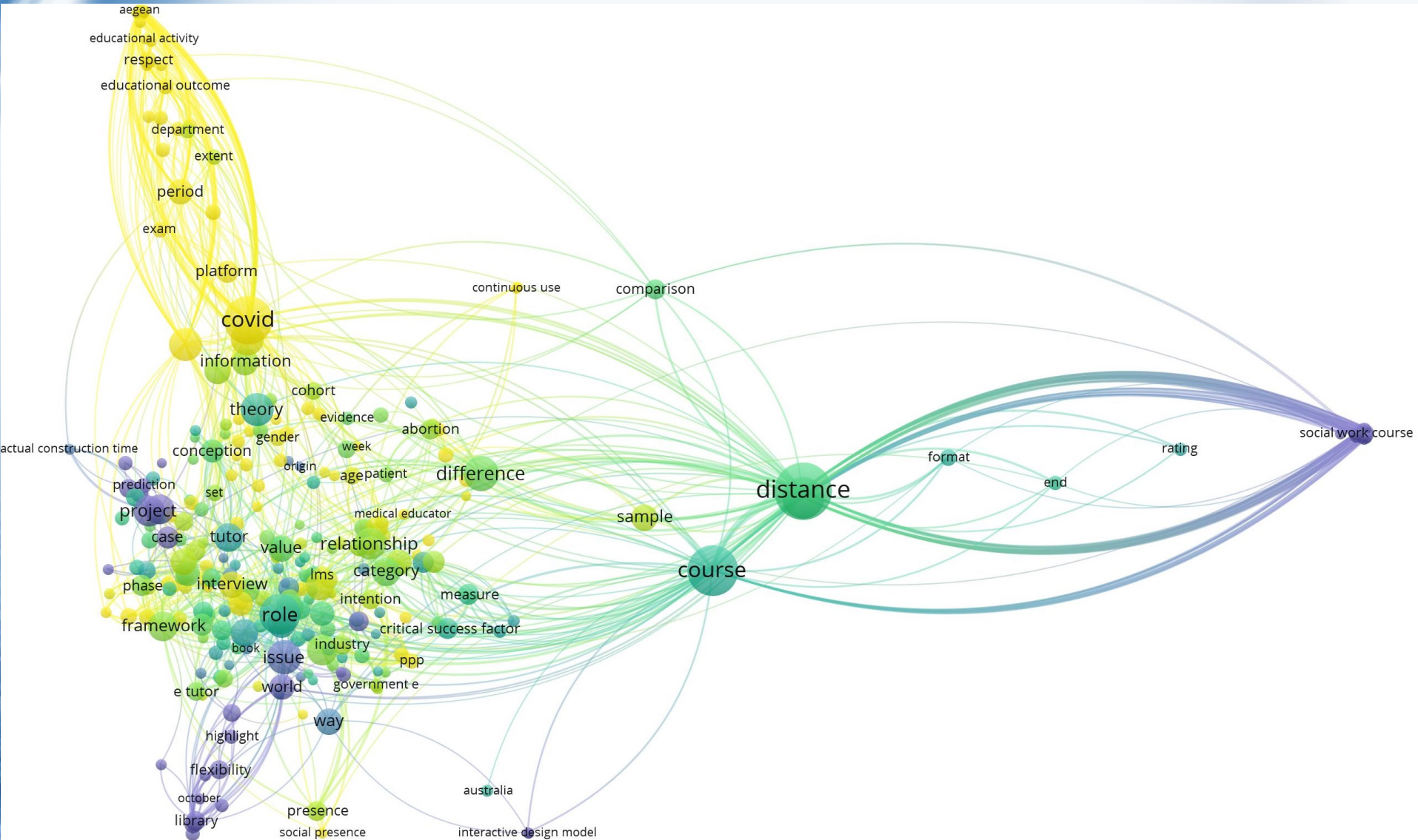
Density map designed for four occurrences of keywords



Network map text based



Overlay map text based



Conclusions

- Distance Education especially during COVID 19 is a significant tool that would transform the educational process
- People who are involved in the implementation of distance education programs originate from a wide variety of scientific fields
- The number of research papers has increased significantly in recent years
- The technology associated with the distance education is highlighted in research
- Research also has focused on the association of COVID 19 and distance education
- Research projects are focusing on the instructors and students
- Personality and cognitive abilities are being considered and evaluated
- Furthermore, teaching and learning styles are receiving a lot of attention
- Technological innovations and availability combined with affordable procurement cost have also increased the demand for distance education
- This demand is also strengthened due to the time and location constraints of the educators and students

Conclusions

The analysis **for four occurrences of keywords** based on the Network map identified the following clusters:

- ✓ Distance Education
- ✓ Distance Learning
- ✓ Adult Learning
- ✓ Dropout
- ✓ Technology



Conclusions

- ❑ Based on the Map of Density, the concepts that seem to be dominant **for four occurrences of keywords**, include:
 - Distance Education
 - Distance Learning
 - E-learning
 - **Dropout**
 - Technology



Conclusions

- ❑ The analysis **for five occurrences of keywords** based on the Network map identified the following:
 - Distance Education
 - E- learning
 - Distance Learning
 - Technology



Conclusions

- ❑ The analysis **for five occurrences of keywords** based on the Density map identified the following:
 - Distance Education
 - E- learning
 - Distance Learning
 - Technology



Conclusions

Text based analysis identified certain core concepts:

- Distance Course
- COVID
- Role



Conclusions

- All the basic terms and concepts are identical in the first two analyses
- Only the **dropout term** appears in the **four occurrences**
- **Special emphasis is provided on:**
 - ✓ **Technology**
 - ✓ **Communication**
 - ✓ **Cooperation**



Limitations

- The analysis focused mainly on the most current years
- The keywords used was “Distance Education”
- Database was created based on Mendeley
- Bibliometric analysis was based on Vos Viewer
- Analysis on Vos Viewer was mainly based on four and five occurrences and text based analysis




Future Research

- As part of the future research, it is proposed that the Mendeley database should be increased
- Additional Keywords could be examined (apart from Distance Education)
- Various options regarding the Vos Viewer analysis could be implemented
- A thesaurus could be implemented in order for the analysis to be more reliable
- The database needs to be screened for repetition and relevant terms

Acknowledgement

Ι Δ Ρ Υ Μ Α
Κ Ρ Α Τ Ι Κ Ω Ν
Υ Π Ο Τ Ρ Ο Φ Ι Ω Ν
IKY


ODLEP
Optimizing Distance Learning Educational Programs

The current findings of the research are part of the ODLEP research project (Optimizing Distance learning Educational Programs) which is co-funded by the European Union.



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THANK YOU SO MUCH !!!!!

