

**European Conference on
Information Literacy (ECIL)**
Saint-Malo, France
18-21 September 2017



Information literacy quest. In search of Graduate Employability.

Vjeran Bušelić, University of Applied Sciences, Zagreb
Mihaela Banek Zorica, University of Zagreb, Croatia

My Personal Journey



Researcher

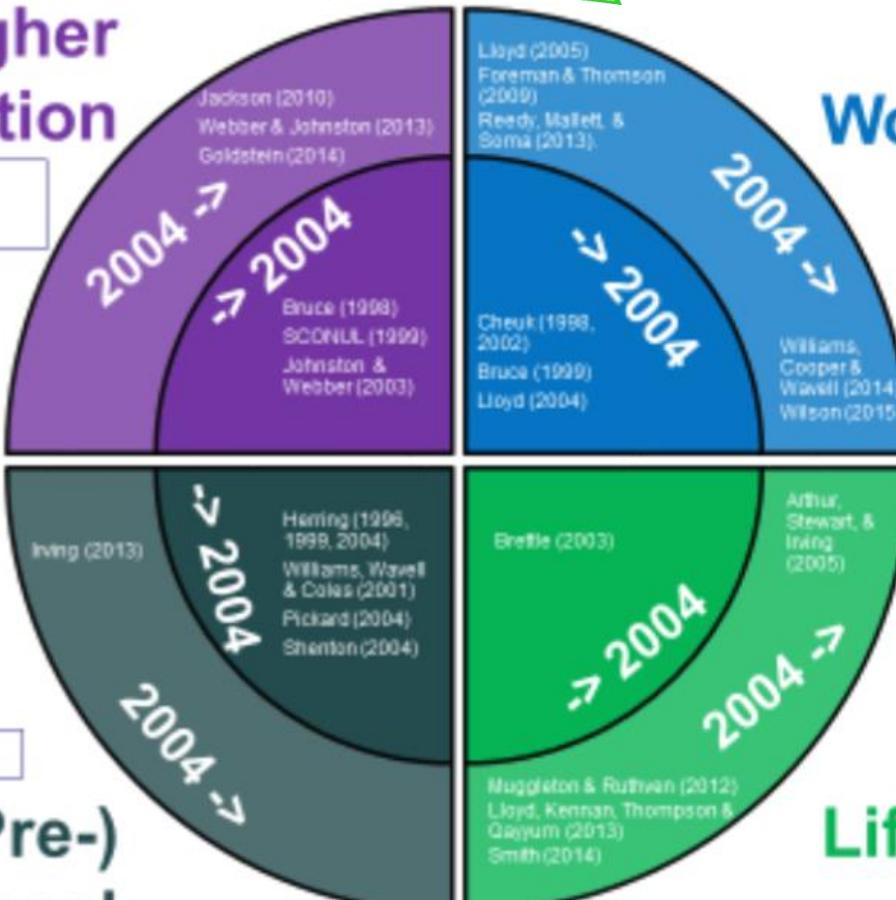
Information Seeking & Consulting in the workplace context (1999)
Dr Christine Bruce – Seven types of Information Literacy
Dr Brenda Dervin – Sense-Making Methodology

Business Consulting: Knowledge Management (2000)
Information literacy Meeting of Experts (UNESCO 2003)
Business leader: Director Knowledge & Collaboration
Senior Executive: Digital Transformation

Information Literacy research focus

Higher education

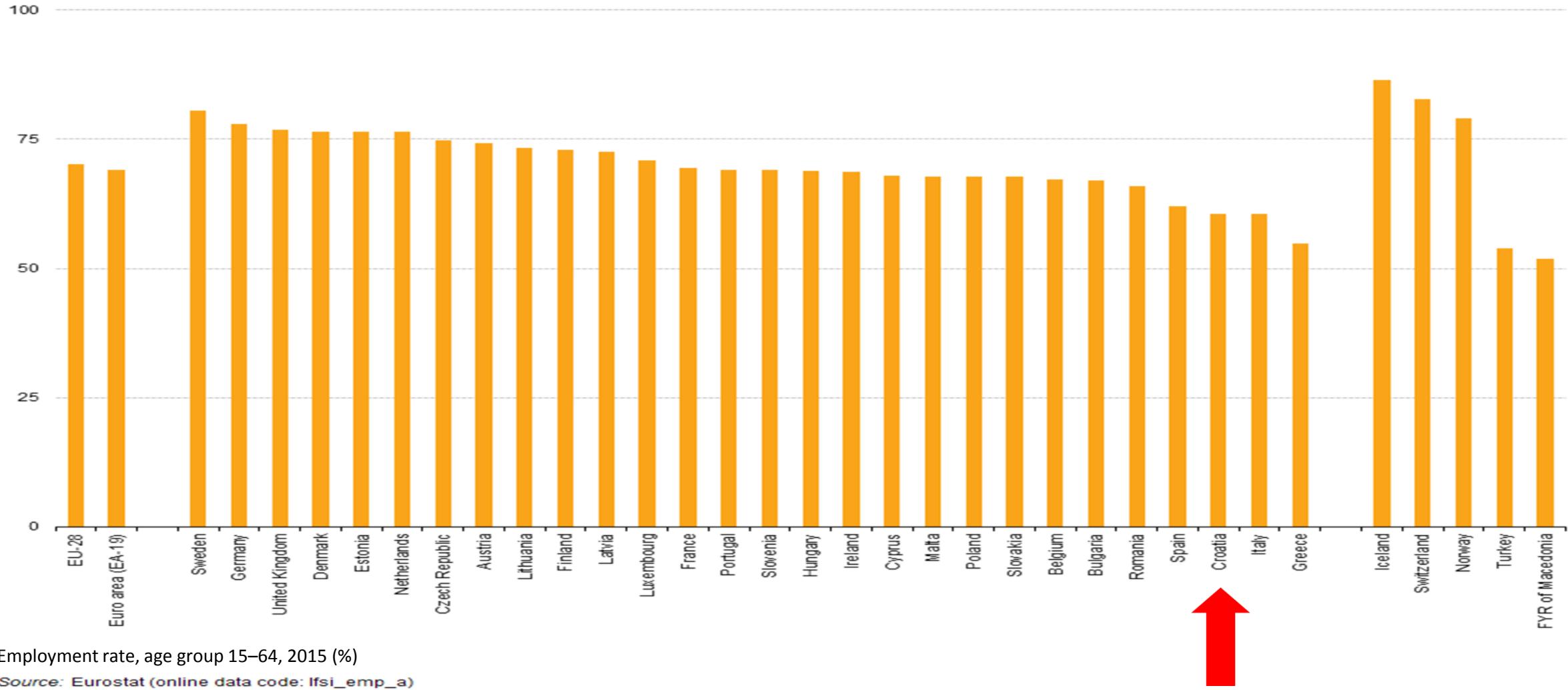
- Graduateness
- Employability



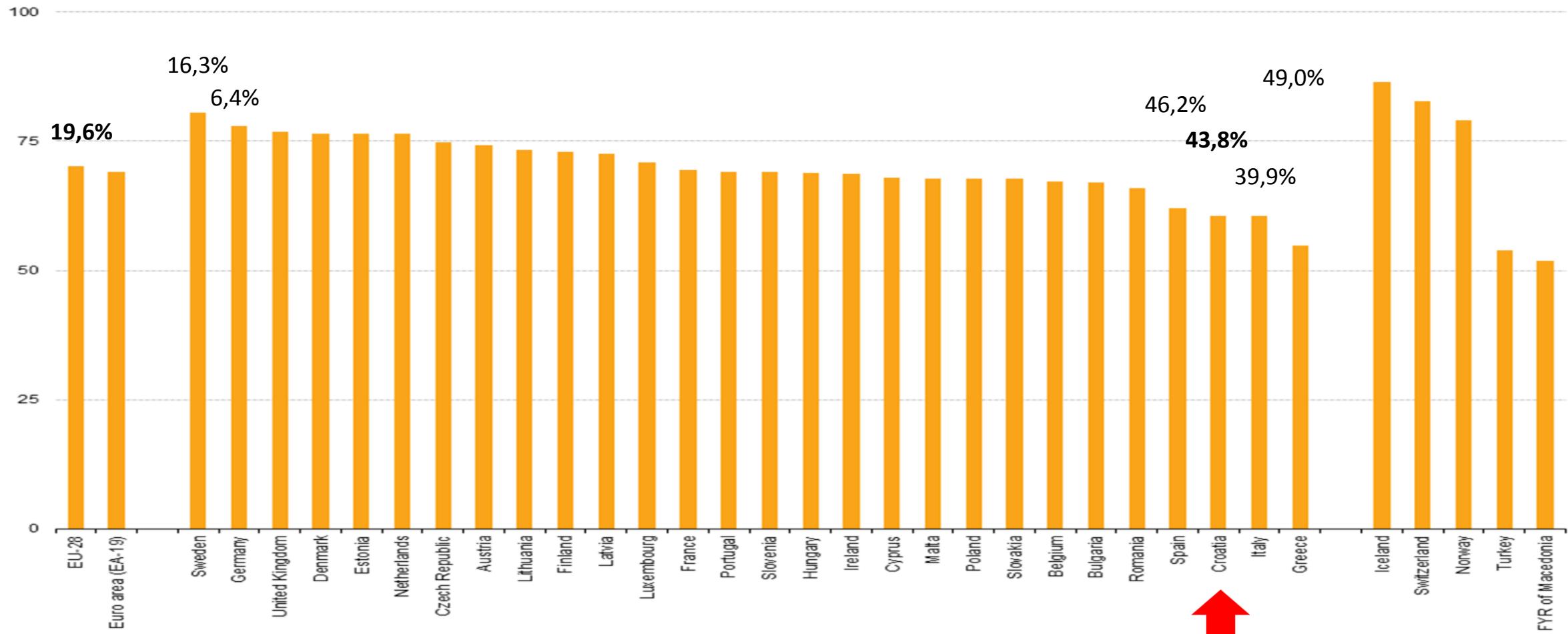
Policy formation

Slide 7 of 24

Employability



Graduate unemployment



Youth unemployment rate, 2015Q4 (%)

Source: Eurostat (online data code: Ifsi_emp_a)



Are we speaking the same language?
Croatian employers' IL competency requirements
for prospective employees

Mihaela Banek Zorica, Sonja Špiranec, University of Zagreb
Vjeran Bušelić, Polytechnics of Zagreb, Croatia



Information Literacy

A screenshot of the Web of Science search results page. The search term used was "(marr ma)". The results show three publications listed:

1. Distinct evolutionary trajectories of primary high-grade serous ovarian cancers revealed through spatial mutational profiling
By: Bashashati, Ali; Ha, Gavin; Tone, Alicia; et al.
JOURNAL OF PATHOLOGY Volume: 231 Issue: 1 Pages: 21-34 Published: SEP 2013
2. Mutational and structural analysis of diffuse large B-cell lymphoma using whole-genome sequencing
By: Morin, Ryan D.; Mungall, Karen; Pleasance, Erin; et al.
BLOOD Volume: 122 Issue: 7 Pages: 1256-1265 Published: AUG 15 2013
3. Comprehensive molecular characterization of clear cell renal cell carcinoma
By: Creighton, Chad J.; Morgan, Margaret; Gunaratne, Preethi H.; et al.
Group Author(s): Cancer Genome Atlas Research Network; Anal Working Group
NATURE Volume: 499 Issue: 7456 Pages: 43-+ Published: JUL 4 2013

Employability,
Graduate
Employability

Information Literacy and Employability domain comparisation

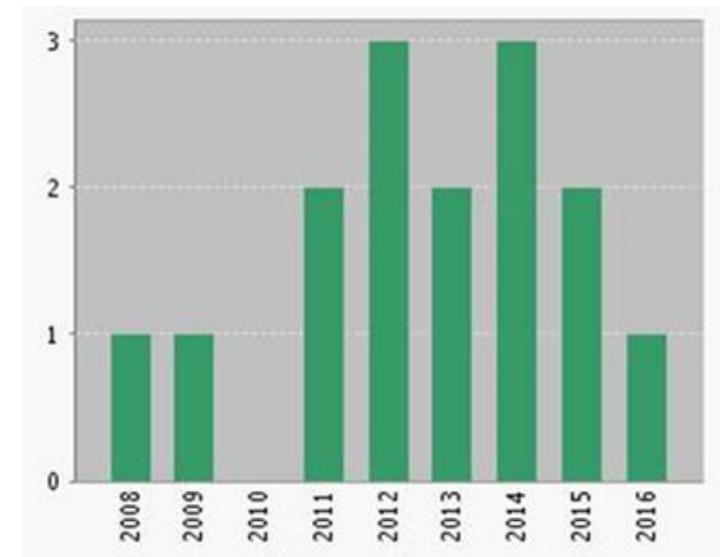
(searching for Graduate Employability)

Information literacy and (graduate) employability

- WoS Core db
 - „Information literacy“ 2.975 publications
 - „Employability“ 2.819 publications
-

- IL&E 15 (11 citations)
 - Crawford (4), w/Irwing (2)

1 - N/R



Information literacy **AND** Employability

0,5 %

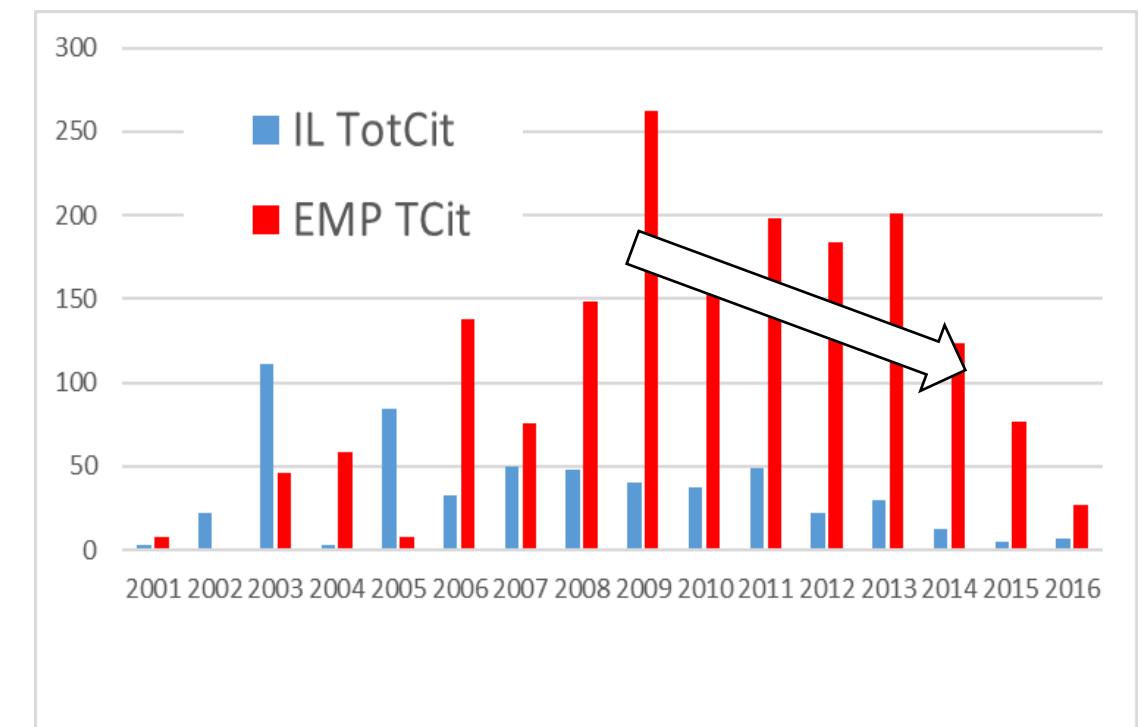
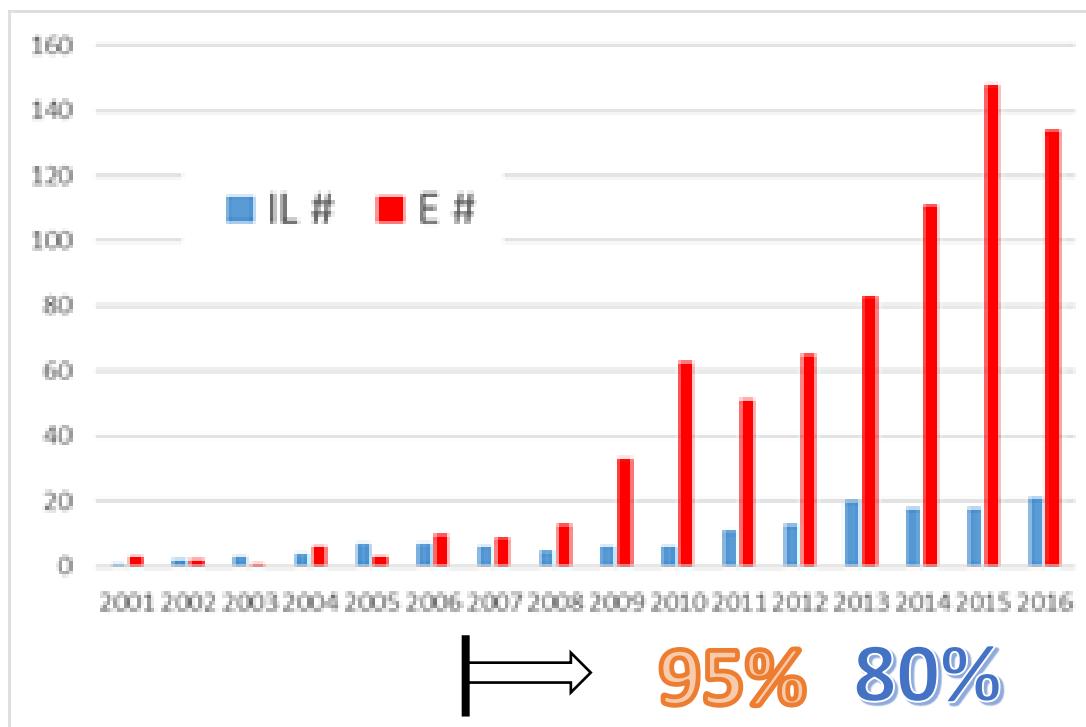
Lets start with Graduate(s)

- „Graduate”

61.662 publications

- G&IL
- G&E

156 - 0,25%
755 - 1,22% - 5x more



Domain analysis
(visual mapping incl.)

IL(2.975)

Tc(11.211), Avg (3,8), h ind (40)

E(2.819)

Tc(15.668), Avg (5,6), h ind (54)

- Authors

PINTO M	33
LLOYD A	33
JULIEN H	27
IRVING C	18
CRAWFORD J	18
BRUCE C	18

DE CUYPER N	29
DE WITTE H	23
LINDSAY C	22
VAN DER HEIJDEN BIJM	20
JACKSON D	14

- Countries

USA	37.5%
ENGLAND	7.2%
AUSTRALIA	6.2%
CHINA	5.2%
CANADA	4.5%

ENGLAND	17.1 %
USA	15.2 %
AUSTRALIA	6.7 %
SPAIN	6.1 %
CHINA	5.6 %

- Research area

ISLS	63.7 %
EDU	21.2 %
CS	20.7 %

EDUCATION	34.4 %
BUSINESS ECONOMICS	19.9 %
PSYCHOLOGY	13.9 %

Comparison

	Country	EMP %	IL %	IL rank
1	ENGLAND	17,161	7,208	2
2	USA	15,290	37,546	1
3	AUSTRALIA	6,780	6,235	3
4	SPAIN	6,179	3,352	6
5	CHINA	5,579	5,230	4
6	NETHERLANDS	5,544	0,805	20
7	SCOTLAND	3,990	1,374	14
8	GERMANY	3,602	1,475	12
9	MALAYSIA	3,425	0,905	18
10	CANADA	3,319	4,593	5

Comparison

	Research Area	EMP %	IL %	IL rank
1	EDUCATION EDUCATIONAL RESEARCH	34,357	21,187	2
2	BUSINESS ECONOMICS	19,880	1,911	6
3	PSYCHOLOGY	13,877	0,905	12
4	SOCIAL SCIENCES OTHER TOPICS	6,356	1,676	7
5	ENGINEERING	5,897	3,989	4
6	REHABILITATION	4,873	0,268	20
7	COMPUTER SCIENCE	4,732	20,717	3
17	INFORMATION SCIENCE LIBRARY SCIENCE	1,201	63,694	1
24	NURSING	0,777	2,782	5
67	MEDICAL INFORMATICS	0,106	1,442	8

Journal Analysis

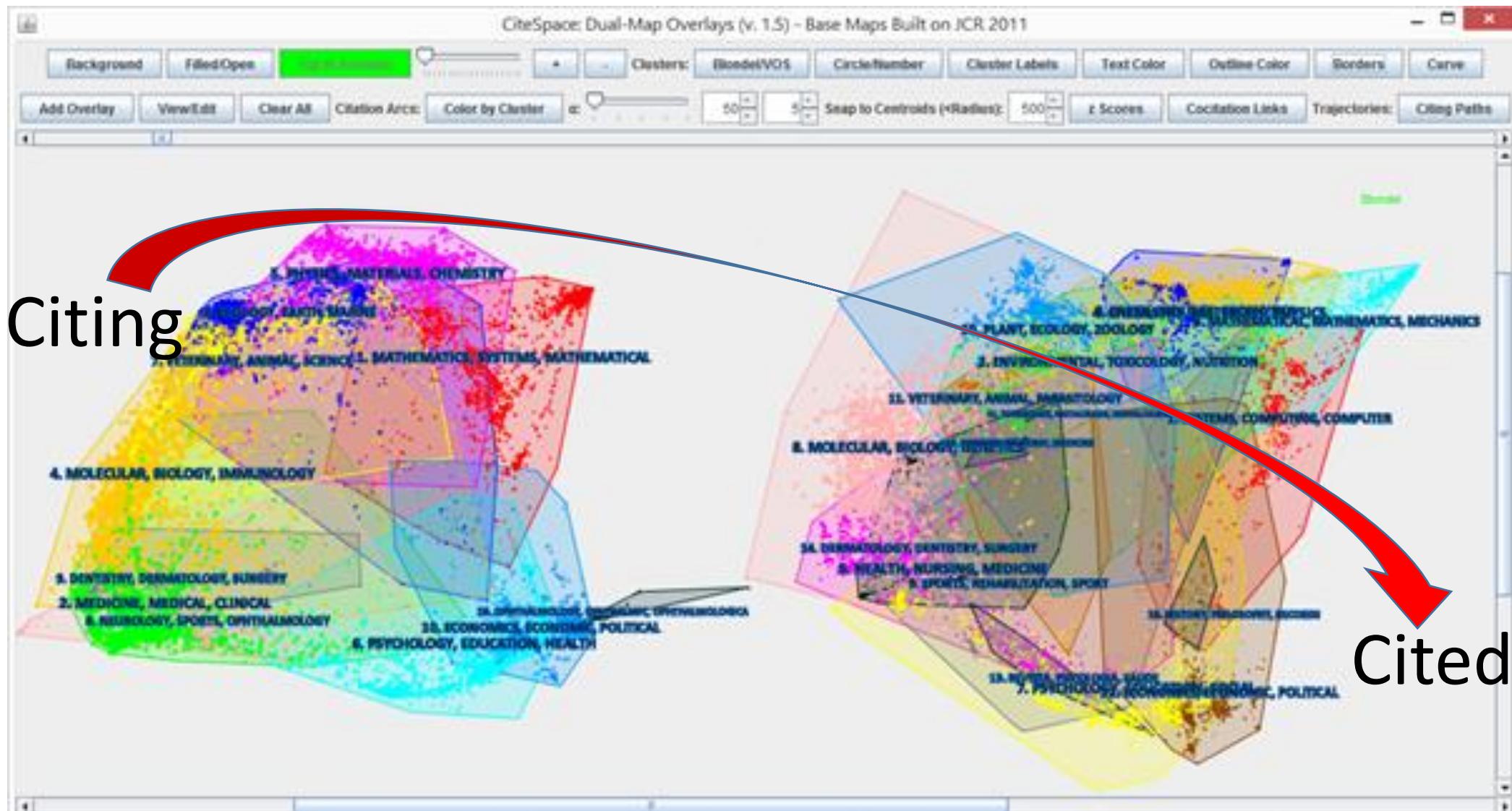
No. of Journals

- IL (170)
- Emp (3.163)

Top 20 Research Area

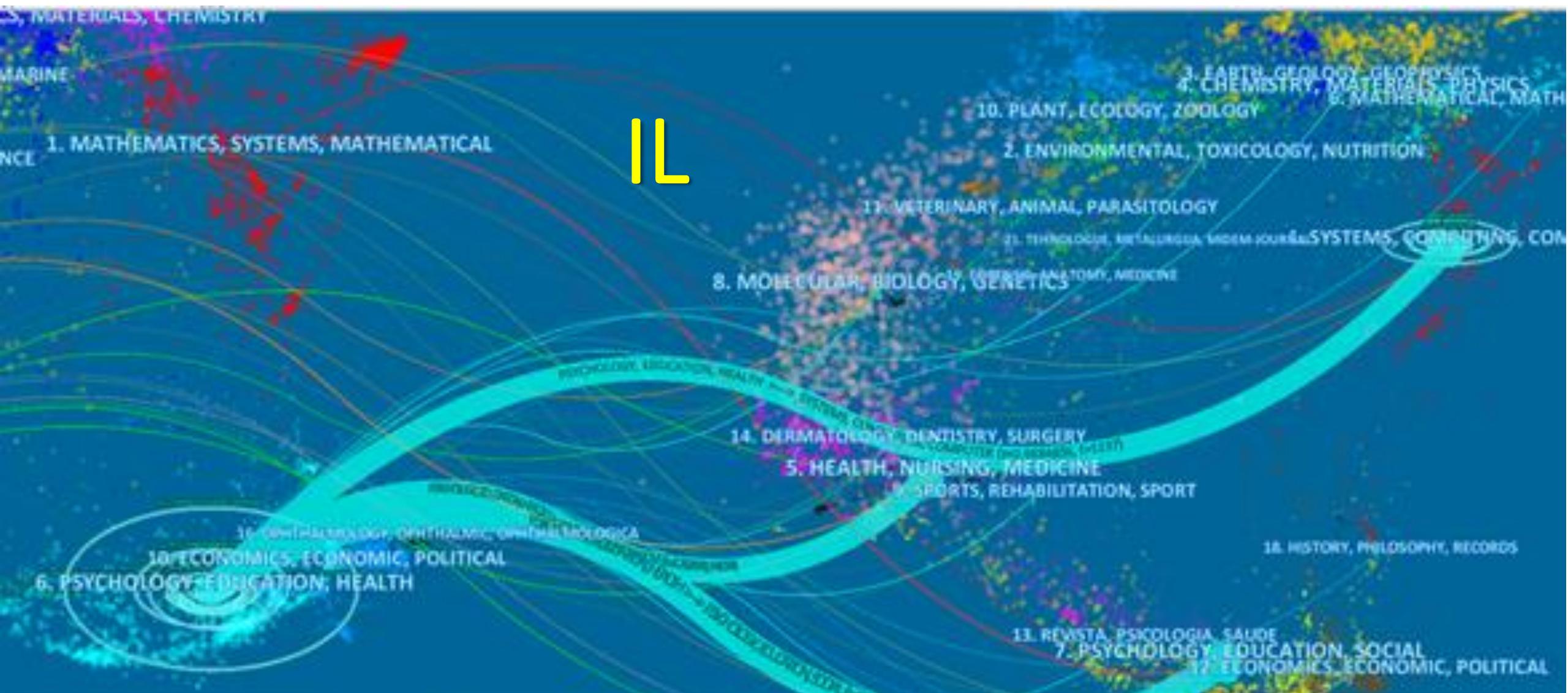
- IL - 17/20 from SS-LIS
- Emp - Avg 2,5/Res Area
 - 1. Business, Management and Accounting (22)
 - Organizational Behavior & Human Resource Mgmt (12)
 - 2. SocialSciences (17)
 - Education (12)
 - 3. Psychology (8)
 - Applied Psychology (7)

JCR 2011 Science Journal Base Maps

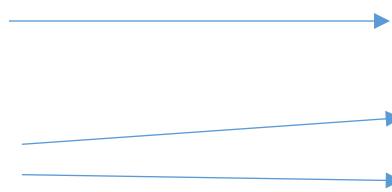


1. Psychology, Education, Health

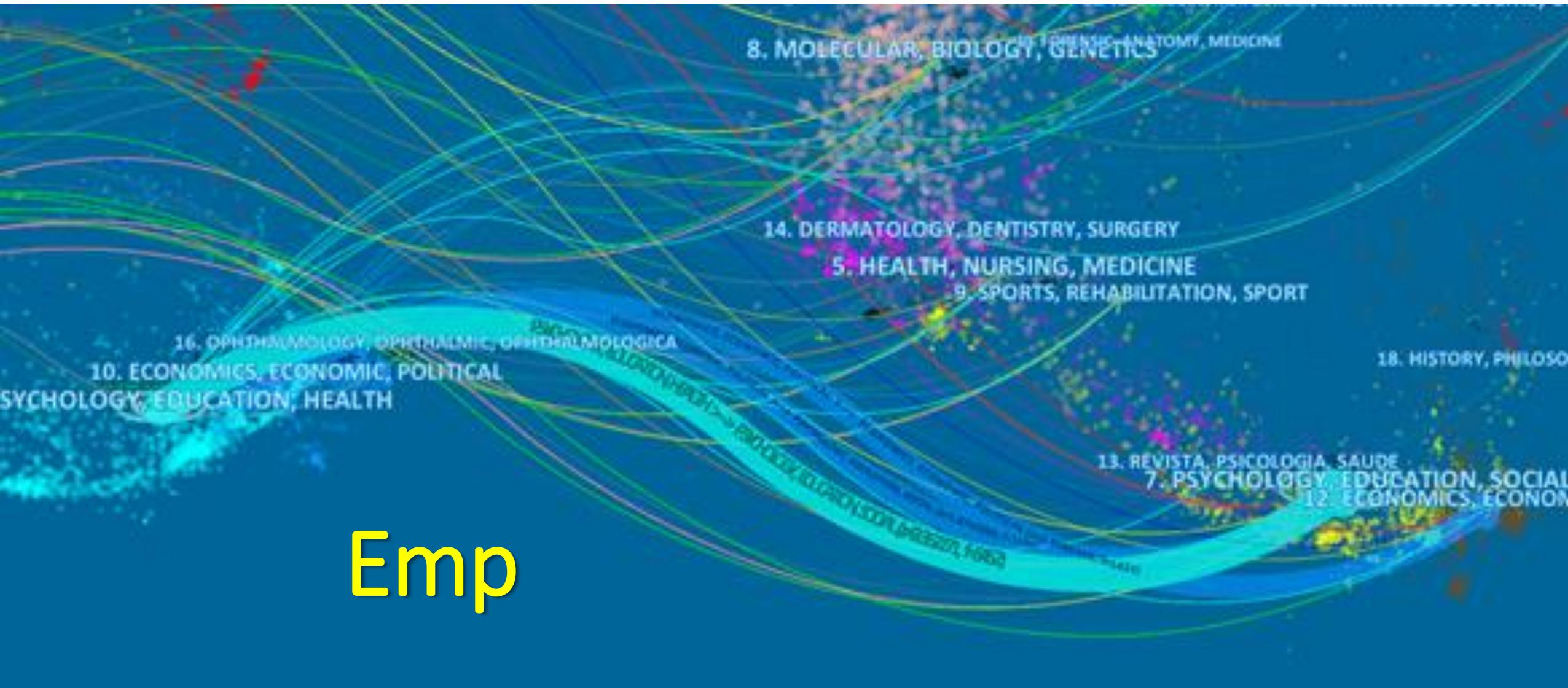
1. Systems, Computing, Computer
2. Health, Nursing, Medicine
3. Psychology, Education, Social



1. Psychology, Education, Social
2. Economics, Economic, Political



1. Psychology, Education, Social
2. Economics, Economic, Political
3. Psychology, Education, Social



Employability domain analysis

(searching for Graduate Employability)

Bibliometrics co-citation analysis
Employability, 1980-2016 (2703)
Citespace IV, Chaomei Chen

Burst analysis

- Top 10 Bursts

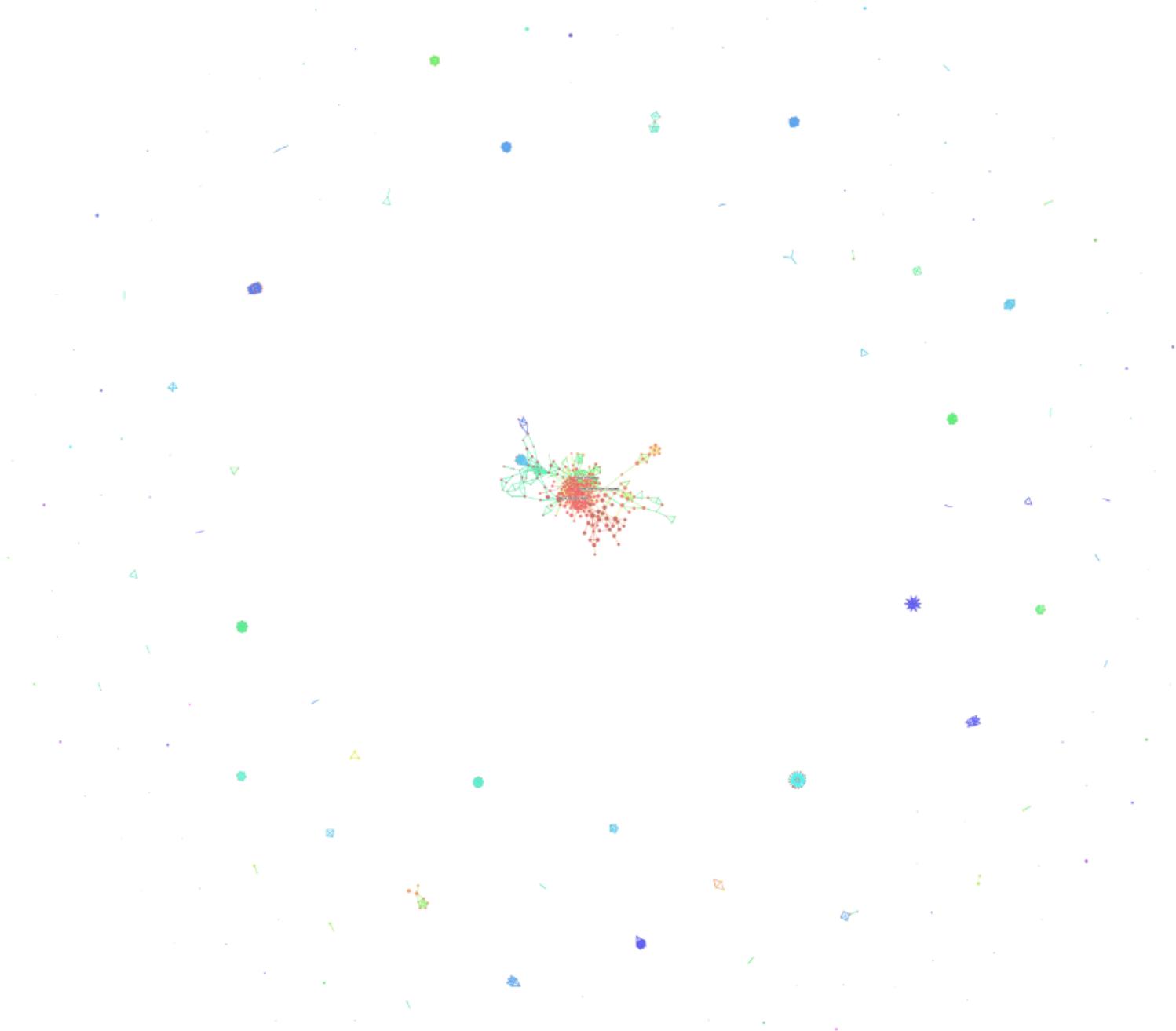
References	Year	Strength	Begin	End	1999 - 2016
FUGATE M, 2004, J VOCAT BEHAV, V65, P14, DOI	2004	19,7639	2007	2012	
VAN DER HEIJDE CM, 2006, HUM RESOURCE MANAGE, V45, P449, DOI	2006	11,7355	2011	2014	
BRIDGSTOCK R, 2009, HIGH EDUC RES DEV, V28, P31, DOI	2009	10,6264	2014	2016	
MCQUAID RW, 2005, URBAN STUD, V42, P197, DOI	2005	9,4248	2005	2010	
FORRIER A, 2003, INT J HUM RESOUR MAN, V3, P102	2003	7,8477	2006	2011	
DEVOS A, 2011, J VOCAT BEHAV, V79, P438, DOI	2011	7,7475	2013	2016	
VAN DAM K, 2004, EUROPEAN J WORK ORG, V13, P29	2004	7,5594	2007	2012	
PODSAKOFF PM, 2003, J APPL PSYCHOL, V88, P879, DOI	2003	7,4876	2008	2011	
WITTEKIND A, 2010, J ORGAN BEHAV, V31, P566, DOI	2010	6,8372	2013	2016	
FORRIER A, 2003, WORK EMPLOY SOC, V17, P641, DOI	2003	6,7698	2006	2011	

84 bursts (1999-2016) → cutting the period

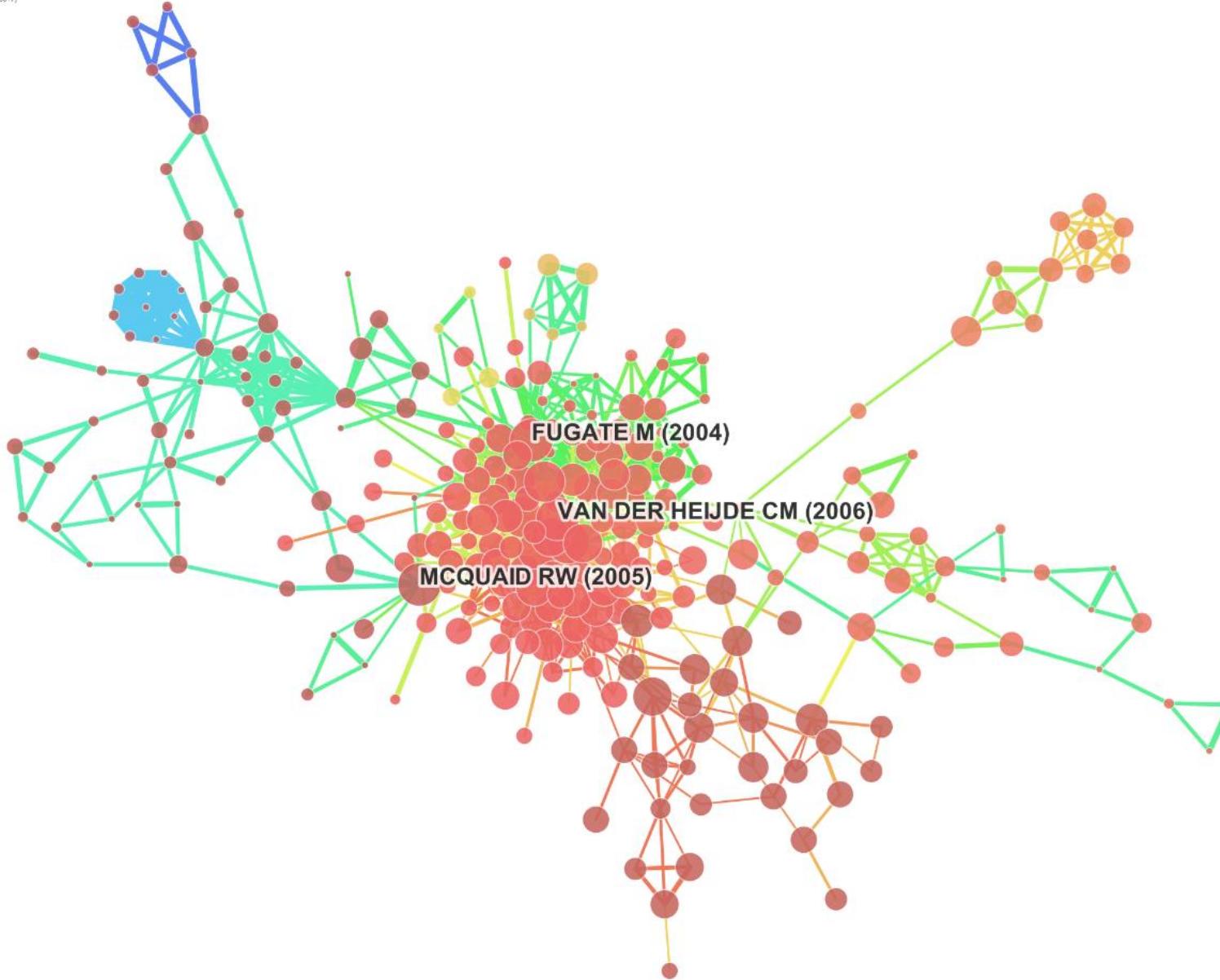
Top 10 Cited Authors

1	73	2004	FUGATE M, 2004, J VOCAT BEHAV
2	70	2006	VAN DER HEIJDE CM, 2006, HUM RESOURCE MANAGE
3	69	2005	MCQUAID RW, 2005, URBAN STUD
4	68	2007	ROTHWELL A, 2007, PERS REV
5	54	2008	DE CUYPER N, 2008, APPL PSYCHOL-INT REV
6	54	2007	BERNTSON E, 2007, WORK STRESS
7	54	2006	BERNTSON E, 2006, ECON IND DEMOCRACY
8	46	2009	BRIDGSTOCK R, 2009, HIGH EDUC RES DEV
9	45	2007	MCARDLE S, 2007, J VOCAT BEHAV
10	45	2008	FUGATE M, 2008, J OCCUP ORGAN PSYCH

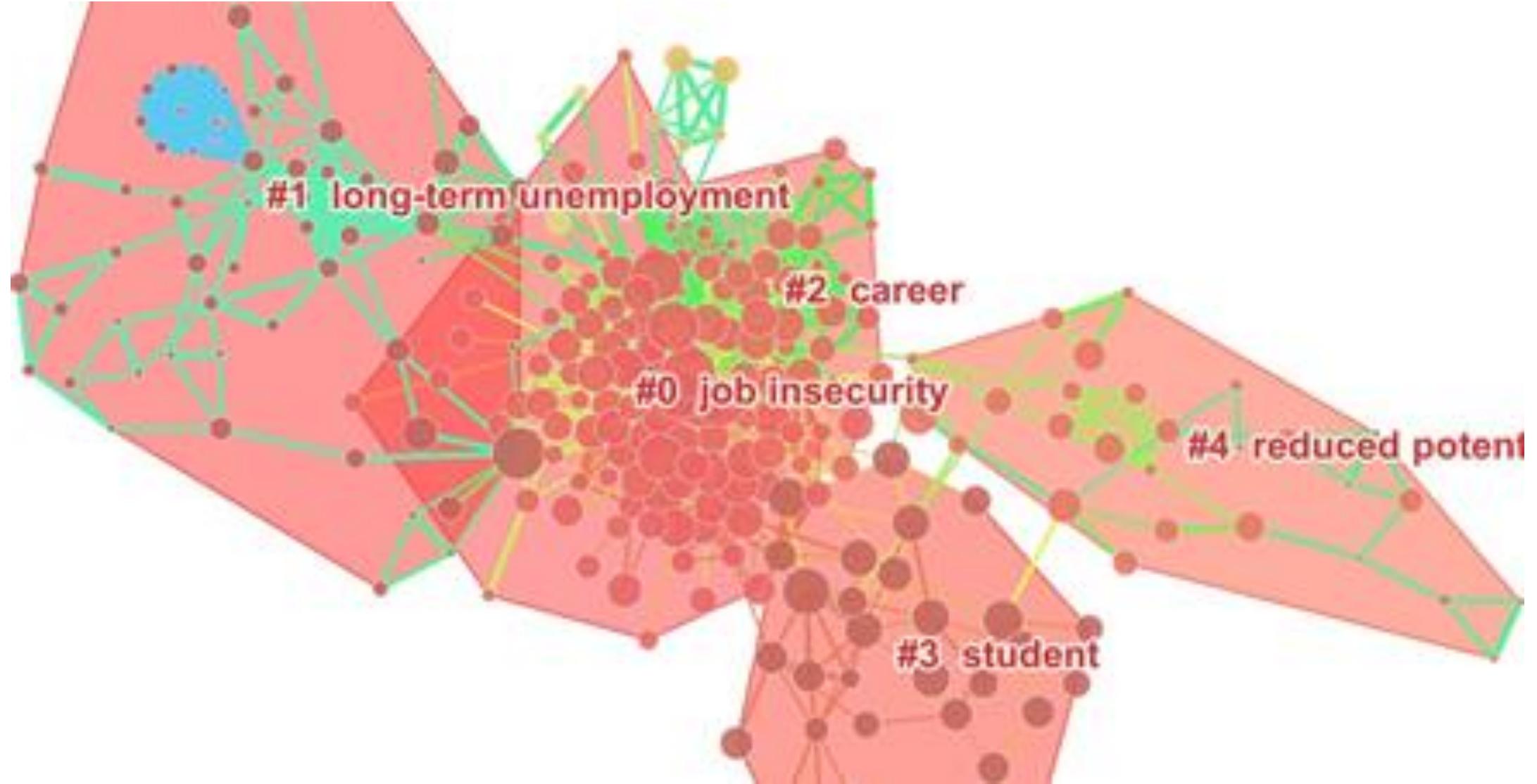
ChirSpace, v. 4.0.15 SE (32-bit)
Running on Windows 7 Pro SP1 (64-bit) - CPU: Intel(R) Core(TM) i7-4770HQ CPU @ 2.20GHz
C:\Users\klaus\Downloads\ChirSpace\UL_WosIEMP_1980-2010\data
Timestamp: 1980-2010 (Show Length=1)
Selection Criteria: Top 50 per site
Number of sites: E=1889 (Density=0.0077)
Pruning: None
Modularity Q=0.8338
Mean Silhouette=0.3178



OneStep.v1_4.0.RS.951254d
Reversion: 28.2016.2.54.37 PM CDT
C:\Users\wesley\OneDrive\Documents\Wes\GMP\1960-2010\data
File Type: GML
Selection Criteria: Top 50 no silv
Number of Nodes: 1863 (Density=0.0077)
Pruning: None
Modularity: 0.4856
New: 594 nodes, 4,318



Top 5 Clusters



#	Nodes	Avg. TCit	Shil.	Median Year	Top terms tf*idf weighting algorithm
0	87	16.5	0.786	2007	(26.26) job insecurity; (24.94) temporary employment; (24.94) mediation; (23.77) role; (23.38) employee
1	64	4.5	0.979	2000	(23.14) long-term unemployment; (22.71) buoyant labour market; (22.71) employability gap; (19.96) labour market policy; (19.63) unemployment
2	40	9.6	0.822	2004	(21) career; (16.41) boundaryless career; (15.98) role; (15.89) employability; (14.89) evaluating employability
3	31	16.0	0.935	2010	(17.61) student; (17.44) graduate; (16.44) learning; (15.47) business; (14.77) employability
4	27	6.25	0.924	2003	(17.43) reduced potential; (17.43) innovation; (17.43) examination; (17.43) ict cluster; (16.82) graduate

#2 Career Cluster (2004) – Boundaryless Career

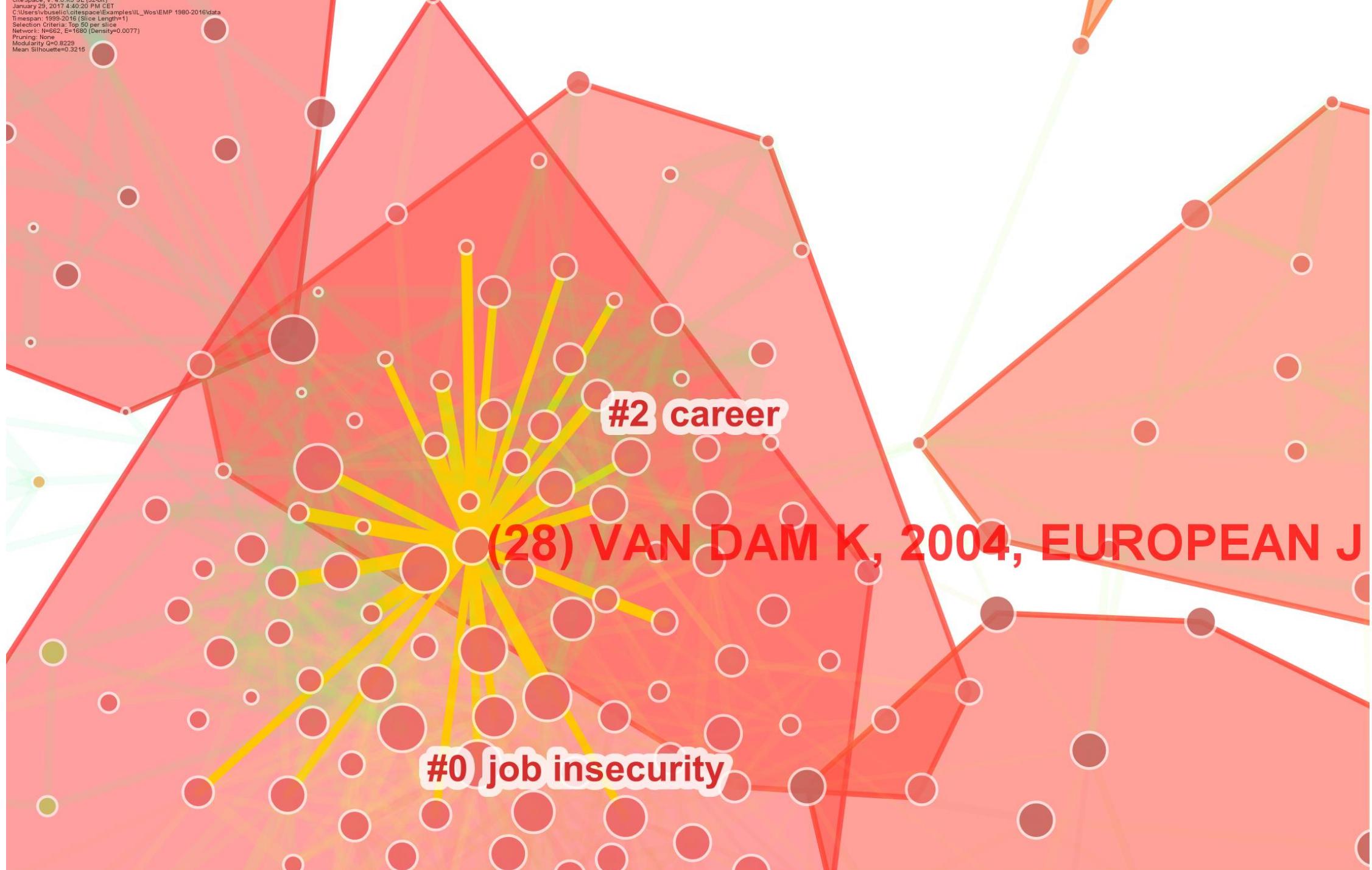
TCit	Burst	Author	Year	Journal
28	7,56	Van Dam K	2004	EUROPEAN J WORK ORG
22	5,90	Hall D T	2004	J VOCAT BEHAV
21	3,08	Sullivan SE	2006	J VOCAT BEHAV
20		Briscoe JP	2006	J VOCAT BEHAV
18	6,41	Eby LT	2003	J ORGAN BEHAV

- **employability (55)**
- **employees (30)**
- **career (24)**
- **relationship (21)**
- **job (17)**

1092 selected terms

- **learning (1)**
- **education (1)**
- **graduates (3)**

January 29, 2017 4:40:20 PM CET
C:\Users\Viellec.citespace\Examples\IL_Wos\EMP_1980-2016\data
Timescale: 1980-2016 (length=1)
Selection Criteria: Top 50 per slice
Network: N=62, E=1680 [Density=0.0077]
Pruning: None
Modularity Q=0.9229
Mean Silhouette=0.3215



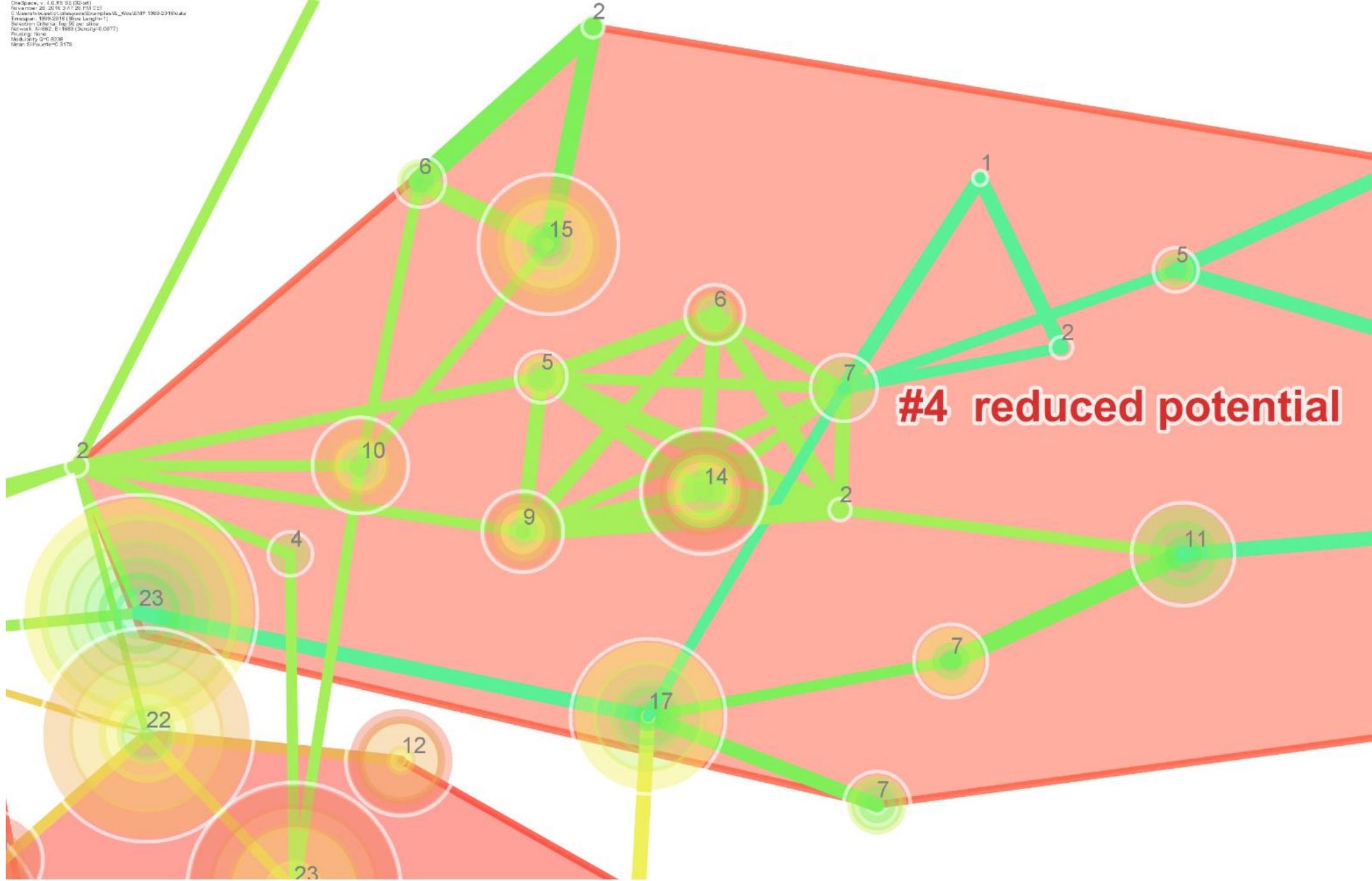
#4 Reduced Potential (2003)

TCit	Burst	Author	Year	Journal
23	6,17	Brown P	2004	MISMANAGEMENT TALENT
17	4,55	Knight P	2004	LEARNING CURRICULUM
15		Barrie S	2006	HIGH EDUC
14		Scholarios D	2008	INT J HUM RESOUR MAN
11	4,26	Harvey L	2002	ENHANCING EMPLOYABIL

- **graduates (30)**
- **students (28)**
- **employability (26)**
- **university (18)**
- **skills (17)**

940 selected terms

Open Space v. 6.0.195 32-bit
File: C:\Users\Public\Documents\Examples\IL_WoI\EMP_1980-2010\data
C:\Users\Public\Documents\Examples\IL_WoI\EMP_1980-2010\data
Time Period: 1980-2010
Buckets Criteria: Top 50 (Density=0.0077)
Periods: A=1982, B=1989 (Density=0.0077)
Modularity: Q=0.8336
Mean: Entropy=0.3478



(2001)

BARRIE S (2004)

BARRIE S (2006)

BALDRY C (2007)

GARSTEN C (2004)

MASON G (2006)

DEPARTMENT FOR EDUCATION AND SKILL
#4 reduced potential

SCHOLARIOS D (2008)

MARKS A (2008)

2006) 005)

06)

ML (2005)

06)

BERG CR (2005)

(2006)

JEN (2013)

FLORIDA R L (2002)

BROWN P (2004)

HARVEY L (2004)

CREBERT G (2004)

KNIGHT P (2004)

MASON G (2003)

GREEN W (2009)

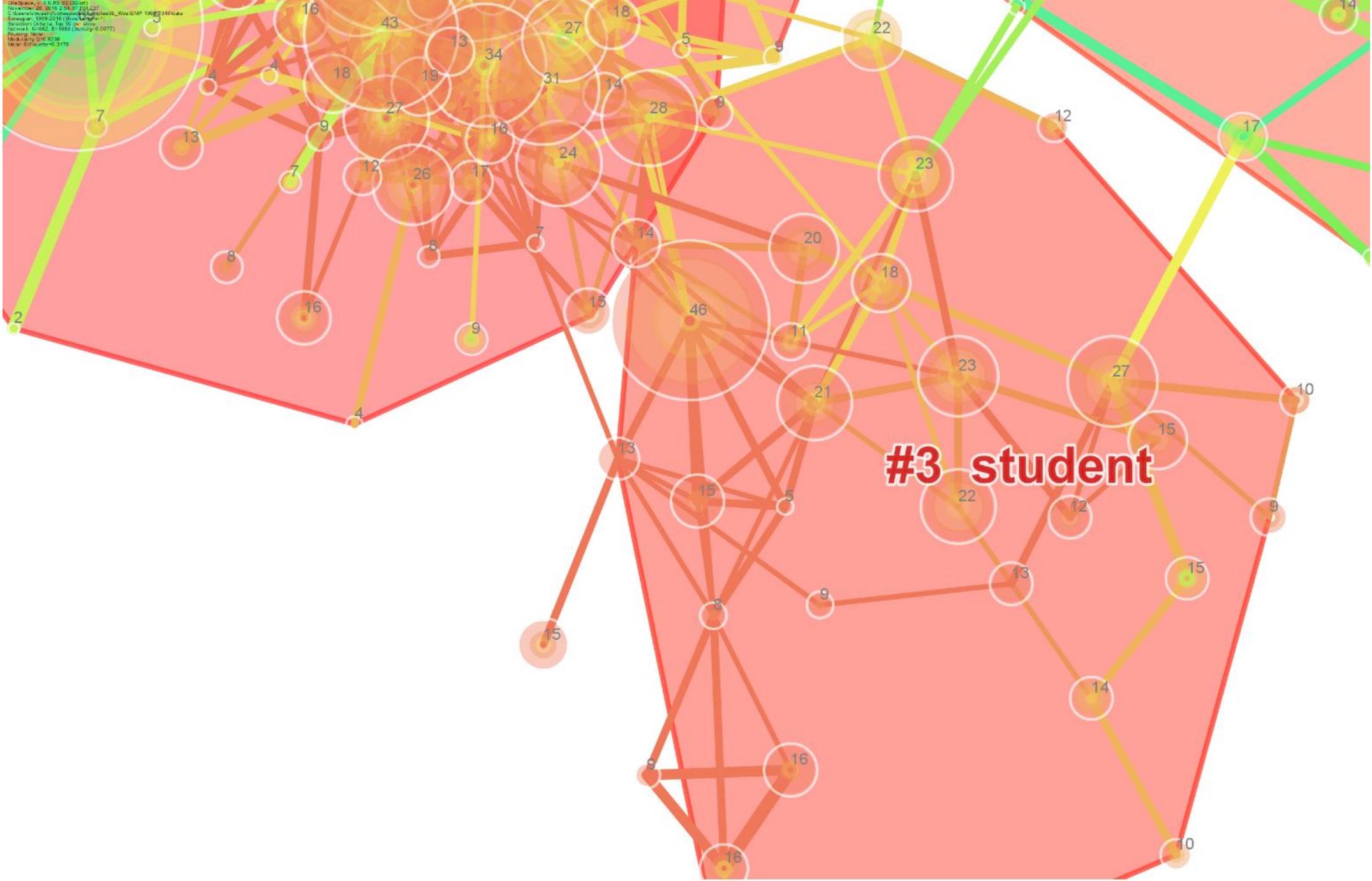
ARCHER W (2008)

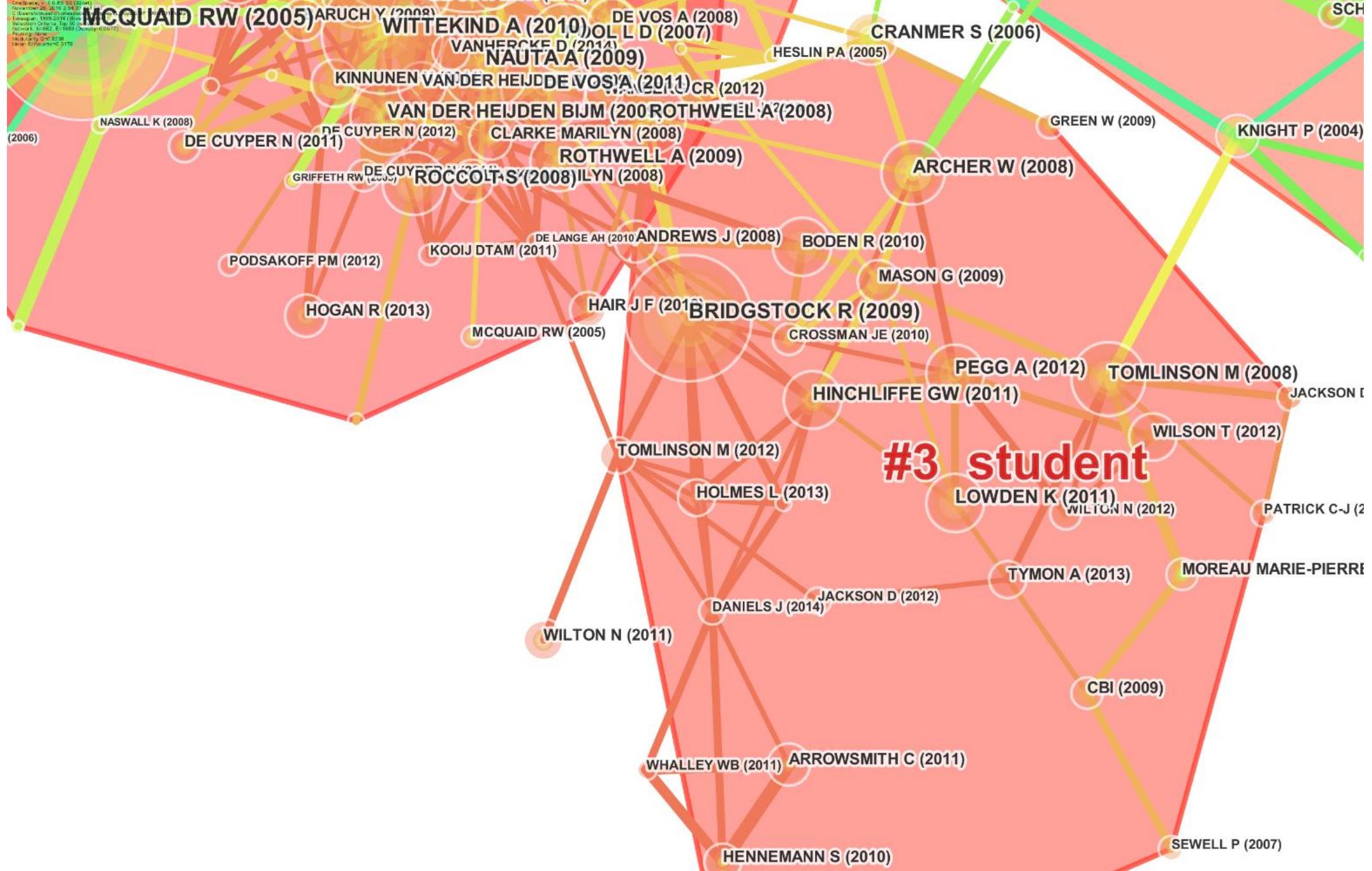
#3 Student (2010)

TCit	Burst	Author	Year	Source
46	10,63	Bridgstock R	2009	HIGH EDUC RES DEV
28	4,12	Rothwell A	2008	J VOCAT BEHAV
27	4,25	Tomlinson M	2008	BRIT J SOCIOl EDUC
23		Archer W	2008	GRADUATE EMPLOYABILI
23	4,85	Pegg A	2012	PEDAGOGY EMPLOYABILI
22	3,93	Cranmer S	2006	STUD HIGH EDUC
22	5,95	Lowden K	2011	EMPLOYERS PERCEPTION
21	4,30	Hinchliffe GW	2011	BRIT EDUC RES J
20	5,91	Boden R	2010	J EDUC POLICY
18	5,12	Mason G	2009	ED EC

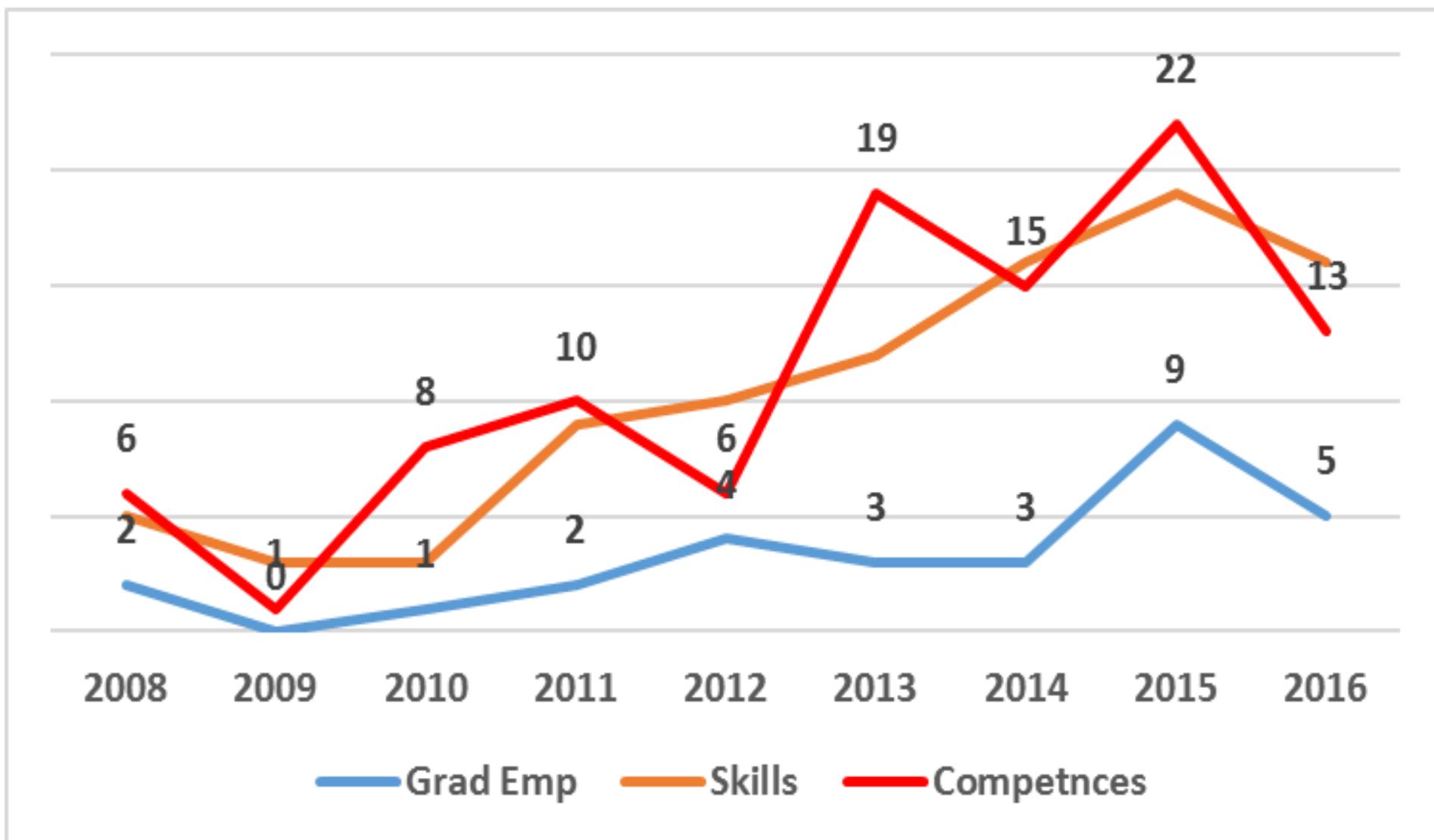
1527 selected terms

- students (62)
- graduates (58)
- employability (46)
- skills (34)
- education (22)

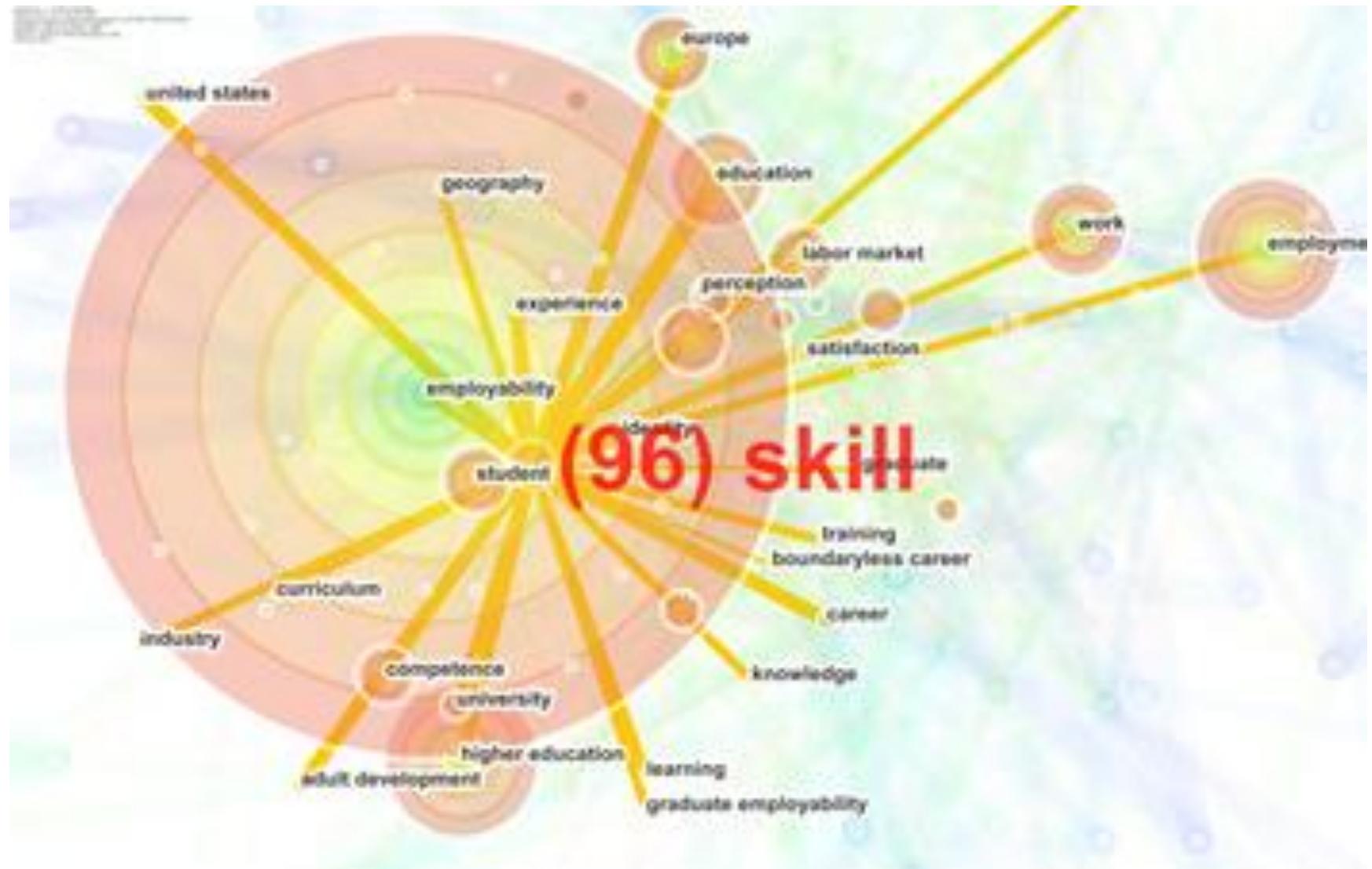




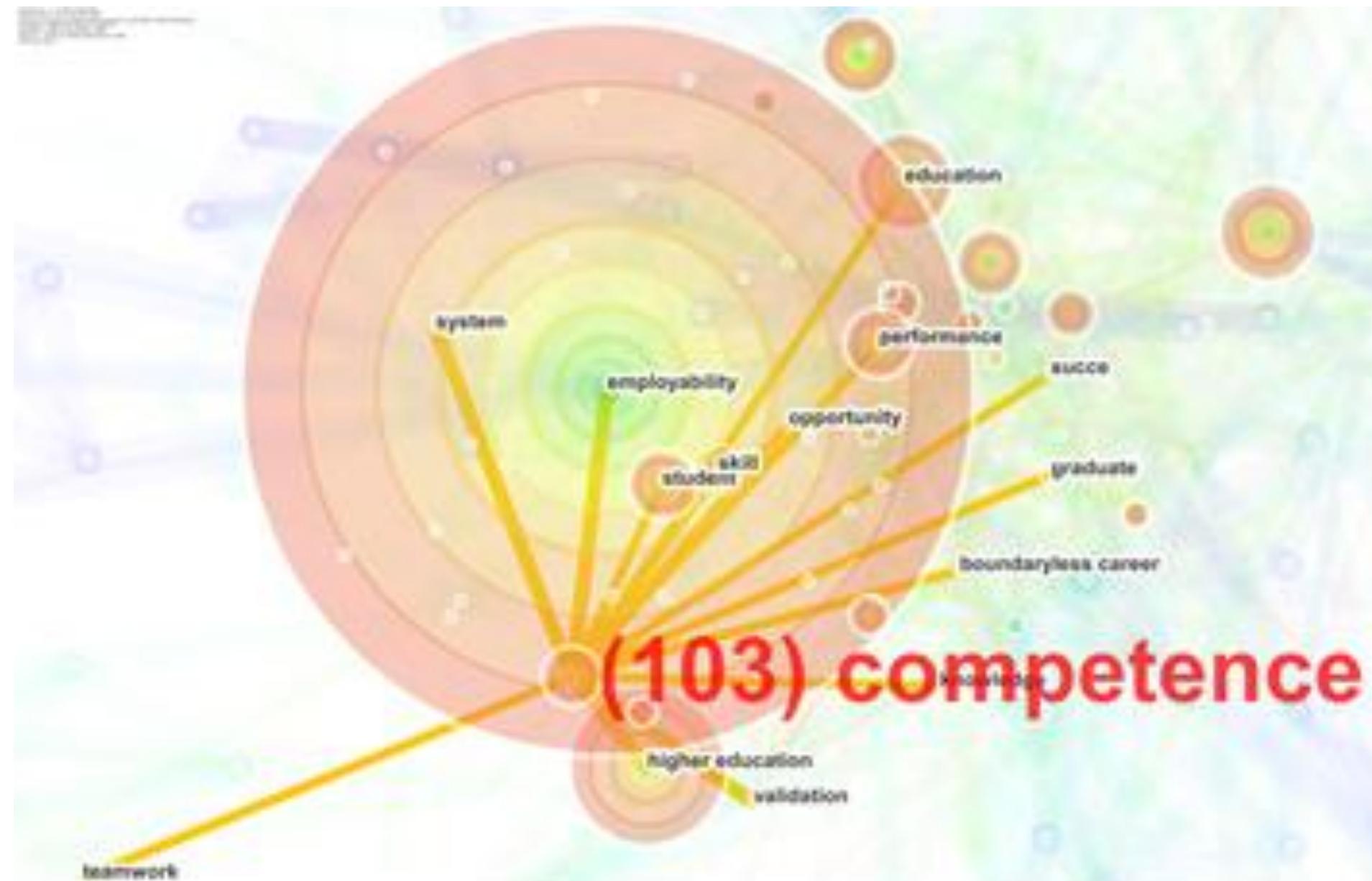
History of appearances



Relatedness



Relatedness



Thank you