



Knowledge Mapping Of Learning Analytics And Professional Capital In Education: a Bibliometric Study.

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Introduction/Justification

Professional capital

(Hargreaves y Fullan, 2012)

The key to this term is the systemic development and integration of three types of capital – **human, social and decision-making** – into the teaching profession. Professional capital has to do with **collective responsibility**, not individual autonomy; with rigorous training, continuous learning, going beyond the evidence, being open to the needs and priorities of students and society “

Learning Analytics

(Khalil & Ebner, 2016)

The **measurement, collection, analysis and presentation of data** about students and their contexts, in order to understand and optimize learning and the environments in which it occurs” acquires a relevant value as it **can be used as a means to extract the most effective methodologies, processes and tools in data measurement, collection, analysis and reporting of professional capital**

Where is the linking between these two fields of research?

Objective

The rationale for this work was to understand the structure of **how learning analytics can help the improvement and understanding of professional capital in the field of education** by analyzing its scientific output.



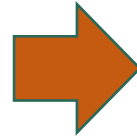
RQ1: What are the key **themes or knowledge** grouped around the use of learning analytics for the improvement of professional capital?

RQ2: What is the **research trend** of the field under study?

RQ3: What are the **research boundaries** extracted from the network analysis?

Methodology

STEP 1

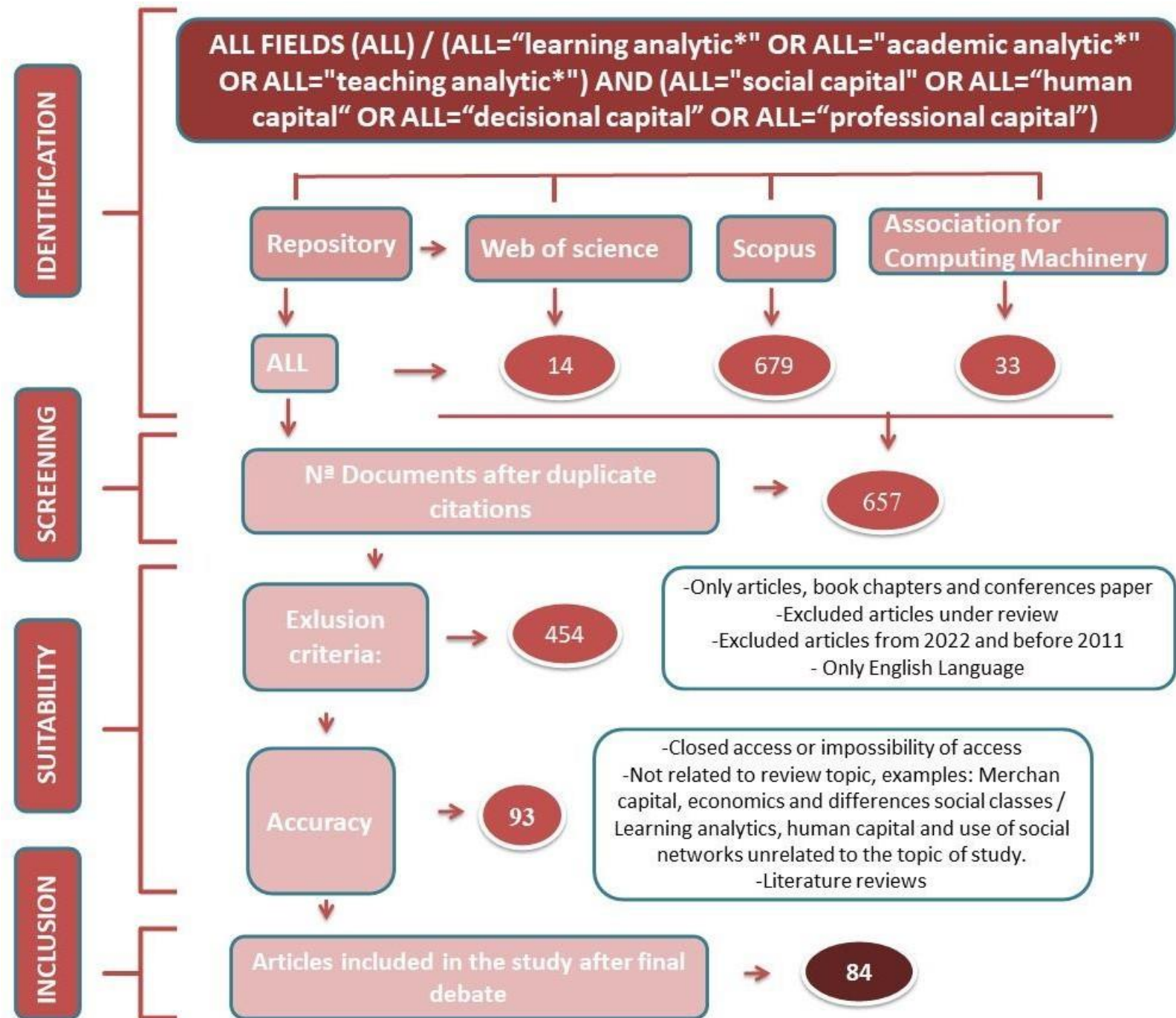


PRISMA. (Moher et al 2009, 2015).

STEP 2

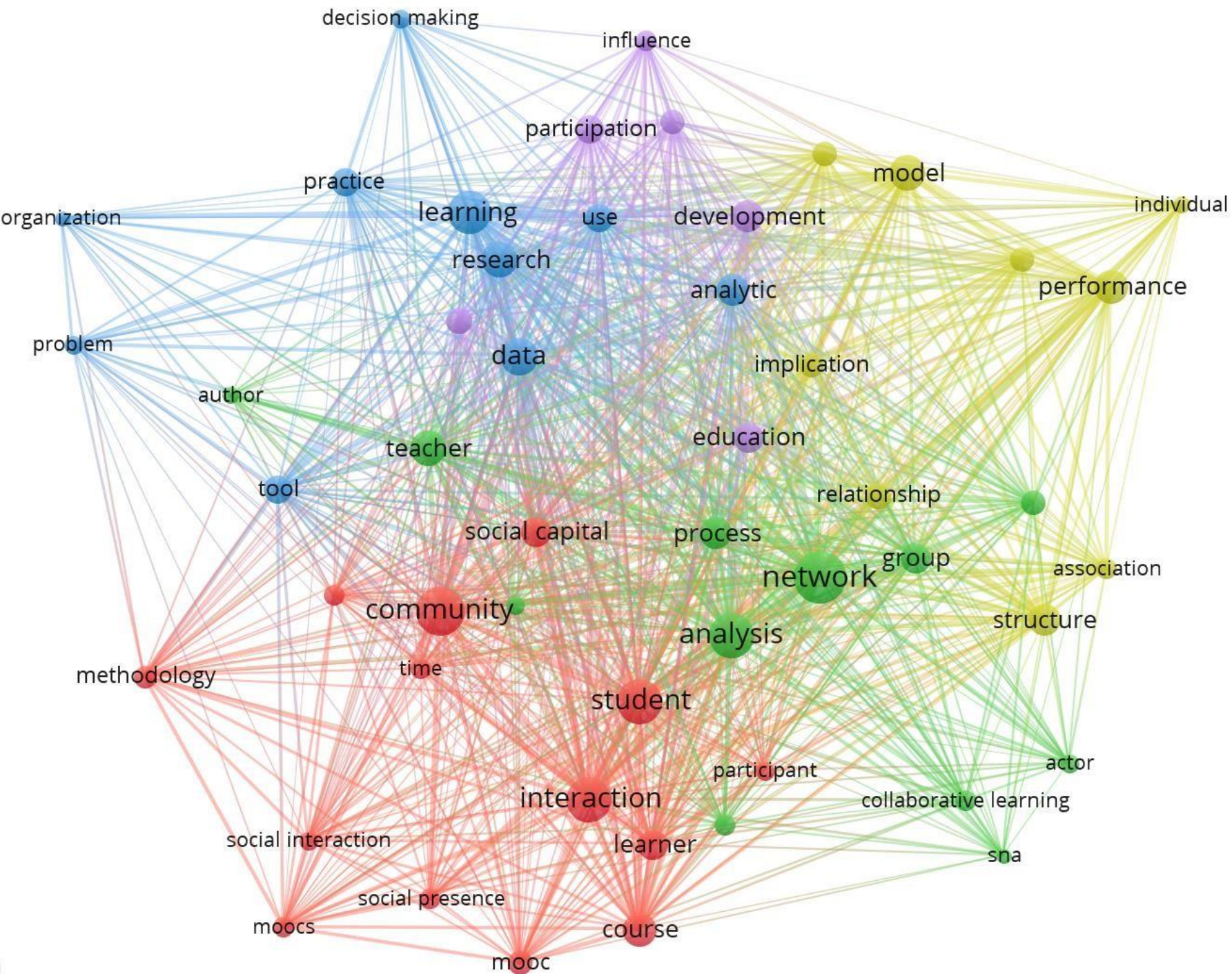


BIBLIOMETRIC MAPS.
(Moher et al 2009, 2015) →
VOSVIEWER (van Eck & Waltman,
2011)



Results

RQ1: What are the key themes or knowledge grouped around the use of learning analytics for the improvement of professional capital?



Results

RQ1: What are the key themes or knowledge grouped around the use of learning analytics for the improvement of professional capital?

Cluster/color	Key terms of abstracts and titles
1/Red	Community
1/Red	Course
1/Red	Interaction
1/Red	Learner
1/Red	Methodology
1/Red	Mooc
1/Red	Opportunity
1/Red	Participant
1/Red	Social Capital
1/Red	Social Interaction
1/Red	Social Presence
1/Red	Student
1/Red	Time

Research on the **influence of community improvement programs**. This line of research focuses on training courses, particularly the impact on social capital and vice versa. In this line, methodologies focused on students were also highlighted.

Results

RQ1: What are the key themes or knowledge grouped around the use of learning analytics for the improvement of professional capital?

2/Blue	Analytic
2/Blue	Data
2/Blue	Decision making
2/Blue	Learning
2/Blue	Organization
2/Blue	Practice
2/Blue	Problem
2/Blue	Research
2/Blue	Tool
2/Blue	Use

Research in **the analytics of learning**. This research front focused on the work on tools, data management and the social factors that influence them.

Results

RQ1: What are the key themes or knowledge grouped around the use of learning analytics for the improvement of professional capital?

3/Green	Actor
3/Green	Analysis
3/Green	Author
3/Green	Collaborative learning
3/Green	Group
3/Green	Information
3/Green	Nature
3/Green	Network
3/Green	Process
3/Green	Social network analysis
3/Green	Teacher

Analysis of **collaborative networks**. This stream focused on the impact and management of studies that **support collaborative** learning efforts, specifically teacher improvement processes

Results

RQ1: What are the key themes or knowledge grouped around the use of learning analytics for the improvement of professional capital?

4/Yellow	Association
4/Yellow	Implication
4/Yellow	Individual
4/Yellow	Model
4/Yellow	Performance
4/Yellow	Relationship
4/Yellow	Social learning
4/Yellow	Structure
4/Yellow	Social network

Relationship models for performance improvement. Different aspects related to the interrelationships and partnerships drawn from social networks were included in this thematic group

Results

RQ1: What are the key themes or knowledge grouped around the use of learning analytics for the improvement of professional capital?

5/Purple	Development
5/Purple	Education
5/Purple	Effect
5/Purple	Influence
5/Purple	Knowledge
5/Purple	Participation

Theoretical background.

This line of research tests the state of educational knowledge and its implication on participatory development

Results



RQ3: What are the research boundaries extracted from the network analysis?

Below are a series of variables and lines to be explored in future studies:

1. Bibliometric data (repository, document types, nationality...)
2. Source and type of professional capital.
3. Development focus and application focus.
4. Significant theories about network and social interaction.
5. Type of collection of social interactions (online, face-to-face...), method and instruments.
6. Type of analysis to see social interactions (online, face-to-face...), method, analysis techniques, instruments and types of visualizations.
7. Digital platforms and service for the improvement of collaborative networks.
8. Variables on which professional capital includes or is influenced.
9. Emerging issues within the research field.

Conclusions

a) It helps to better understand how learning analytics studies are carried out in the improvement of professional capital, as well as the fields and disciplines in which they are carried out, specifically **6 clusters** or clusters were detected **(research on the influence of community improvement program, research in the analytics of learning, analysis of collaborative networks, relationship models for performance improvement and theoretical background)** b) The evolution over time of the studios, where it is possible to appreciate a **current interest in platforms for the improvement of professional capital**; and c) a frontier of analysis is proposed, with **content studies to try to observe and use more specific information of these articles.**



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