Systematic Literature Review on Digitalized Logistics Measures and Benchmarking to Identify the Best Practice for Supply Chains in Developing Countries

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Introduction

Logistics forms the backbone of economic development.

Modern technologies that are used in logistics have the advantage of improving logistics efficiency and effectiveness by focusing on reducing delays, lead time, and logistics costs.

The integration of these technologies with logistics in the emerging economies is low compared with developed nations.

Purpose of the review

The aim of this review was to perform systematic literature review on digitalized logistics systems to identify the best practice for implementation.
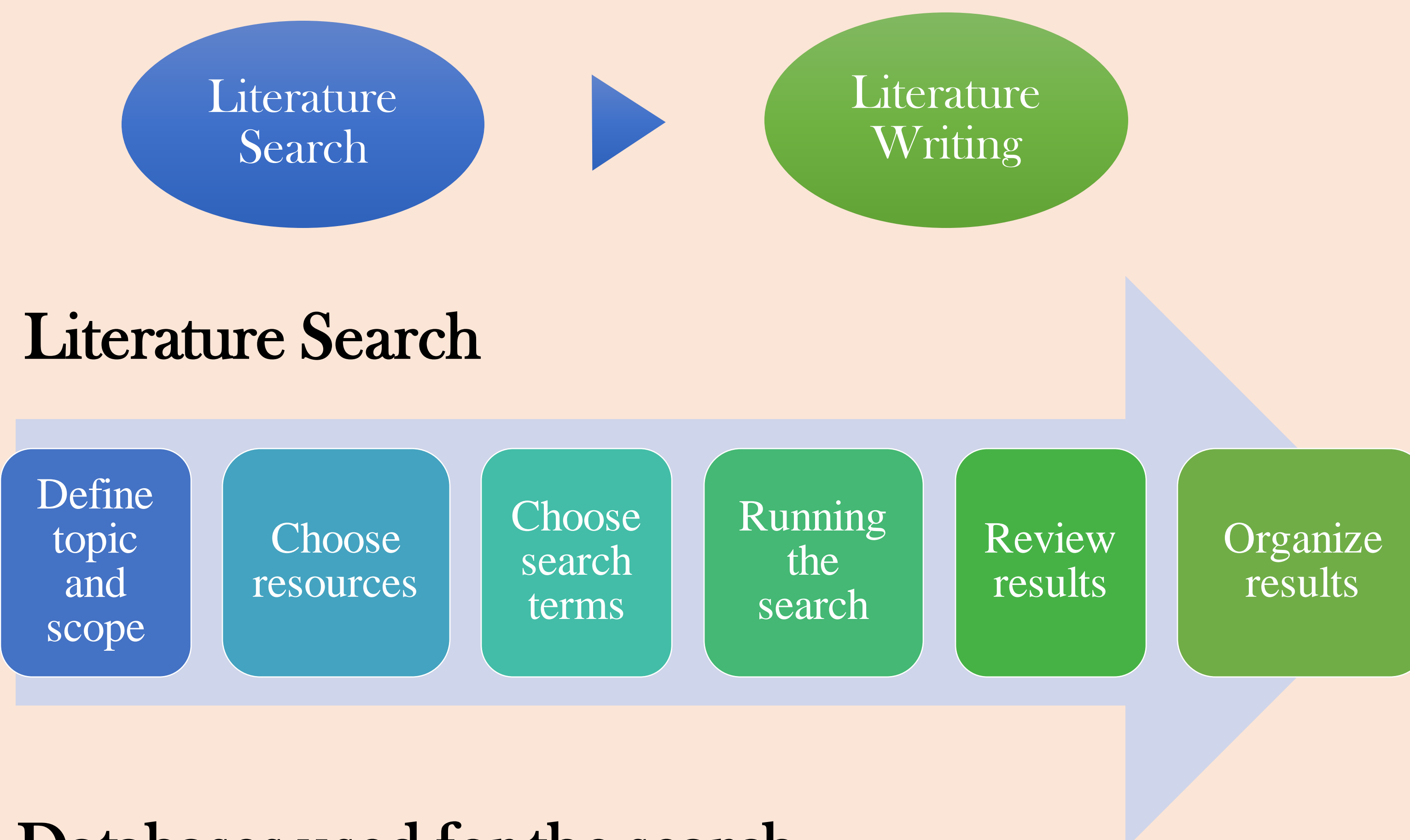
The research questions that this paper answers are:

RQ1: How does digitalization improve the performance of a logistics system?

RQ2: What are the technologies that are used in a digitalized logistics systems and what are their fields of application?

RQ3: What is the state of the art implementation that can be adopted for developing countries?
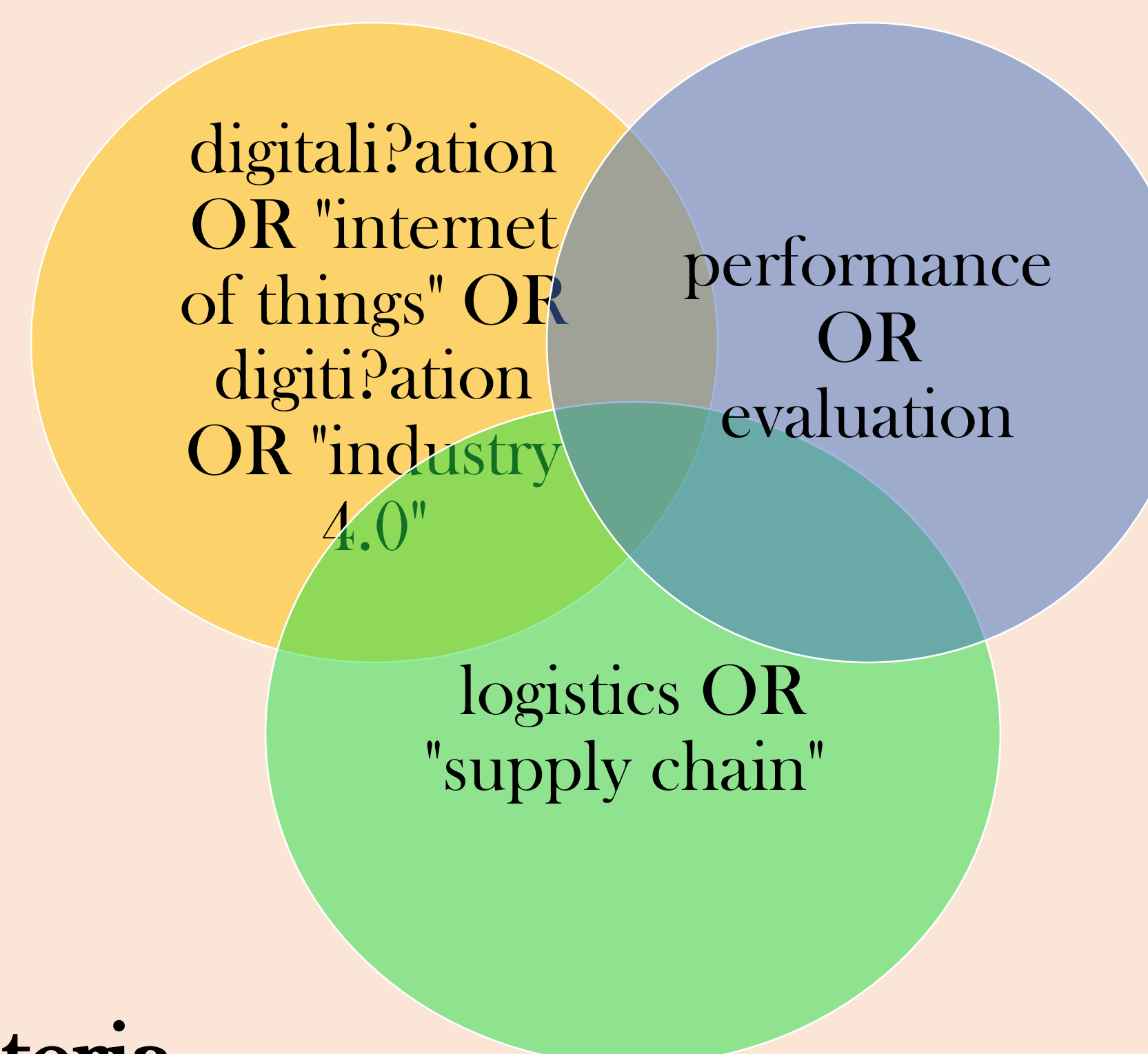
Review Methodology

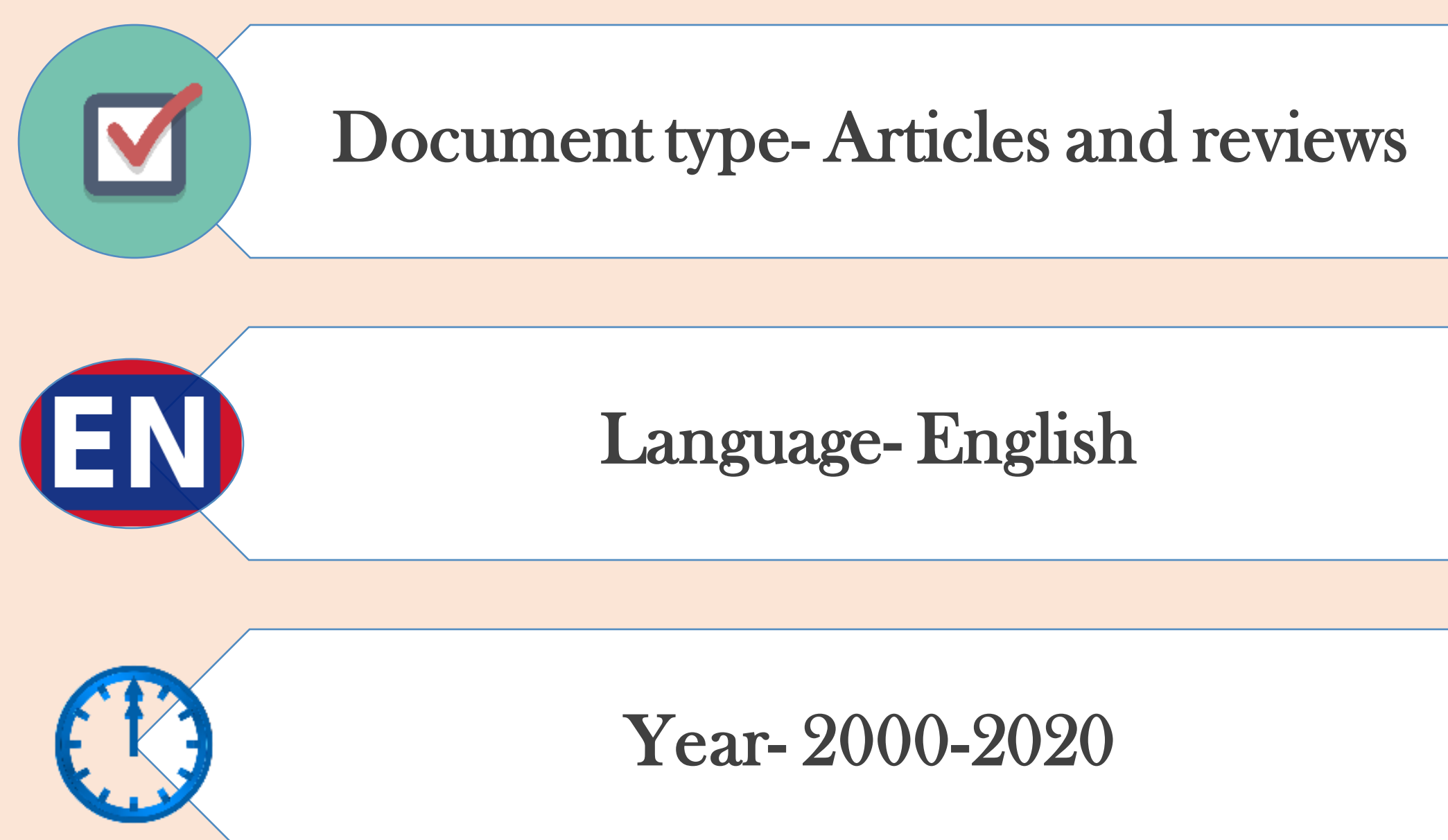A two step approach was adopted from TRB (2015)

Literature Search → Literature Writing

Literature Search

Define topic and scope → Choose resources → Choose search terms → Running the search → Review results → Organize results

Databases used for the search

Web of Science Core Collection, Scopus, ProQuest and TRID.

Keywords

digitali?ation OR "internet of things" OR digiti?ation OR "industry 4.0"

performance OR evaluation

logistics OR "supply chain"

Inclusion Criteria

☑ Document type- Articles and reviews

EN Language- English

🕐 Year- 2000-2020

Literature Writing

Remove duplicates → Review research → Evaluate material → Organize results and write review

Result

- 228 papers were reviewed
- Internet of Things (IOT), block chain, and automation were most discussed technologies
- The internet of things technologies include wireless sensors and Radio Frequency Identification (RFID)
- China, India and Germany published the most papers.

Discussion

Digitization by way of using IoT and other technologies improve the efficiency of services, and achieve green and sustainable logistics. (Mondragon et al., 2020)

The most studied supply chain has been the cold chain were IoT has been adopted to improve traceability (Gupta et al., 2019), (Han et al., 2015), and(Liu et al., 2016). IoT has the capability of increasing food security, profitability, and reliability.

Conclusion

This research reviewed literature about digitalized logistics systems. Although this topic has showed a growing interest in the developed world, there is much to be done in the developing nations regarding their adoption and implementation.

References

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