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UPI Universitas Pendidikan Indonesia

Integrating Workforce Planning, Reskilling and Upskilling, and *Employability*

A Systematic Literature Review and Bibliometric Mapping



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Why Workforce Capability Matters



1 AI

Rapid Change

AI, technology, demographics and the green transition reshape required capabilities.

2

Skills Gaps

Gaps constrain business transformation and workforce adaptability.

3

Skills Governance

OECD (2025) calls for agile, data-driven skills systems.

The Integration Gap

1

Concepts

Inconsistent boundaries between workforce planning, reskilling, upskilling and employability.

2

Evidence

Dispersed findings linking anticipation, gap diagnosis, development and employment outcomes.

3

Indicators

Employability, adaptability, readiness, mobility and job security are related but not interchangeable.

Six Research Questions

RQ1 | Intellectual Landscape

How has the literature evolved, and what are its themes?

RQ2 | Conceptual-isation

How are the four constructs defined and operationalised?

RQ3 | Planning Link

How does workforce planning shape reskilling and upskilling needs?

RQ4 | Outcomes

How do reskilling and upskilling relate to employability and adaptability outcomes?

RQ5 | Conditions

Which factors enable or constrain these relationships?

RQ6 | Integration

How can they form a framework for strategic workforce development?

Research Methodology

Systematic Literature Review + Bibliometric Mapping

01 SEARCH

Database
Scopus

Search date
26 September 2026

Coverage
2020–2026

English journal articles
Publisher full-Gold OA

40 records

02 SCREENING

Adapted PICO framework

Two AI-assisted analytical passes

Researcher-defined eligibility criteria

Agreement: 32/40

80% descriptive agreement

03 DATASETS

40 documents

Bibliometric mapping

26 studies

Full-text synthesis

Different analytical purposes and datasets

04 BIBLIOMETRICS

VOSviewer 1.6.21

Author-keyword co-occurrence analysis
Full counting

Research Question 1

Publication and keyword relationships

05 SYNTHESIS

Full-text evidence synthesis

Research Questions

2–6

Conceptual integration

SWDIF Framework

development

PRISMA 2020-INFORMED REPORTING
Transparent reporting of the documented study-selection process

METHOD OVERVIEW →

Study Selection Summary

PRISMA 2020-informed reporting

DOCUMENTED SELECTION PROCESS

40 records identified from Scopus
Bibliometric corpus (2020–2026)

↓

AI-Assisted Analytical Screening
Researcher-defined criteria • Agreement: 32/40 records (80%)

↓

14 records excluded

23 initial inclusions + 3 checks
3 full-text checks later confirmed eligible

↓

26 STUDIES INCLUDED IN FULL-TEXT SYNTHESIS

HOW TO READ THE COUNTS

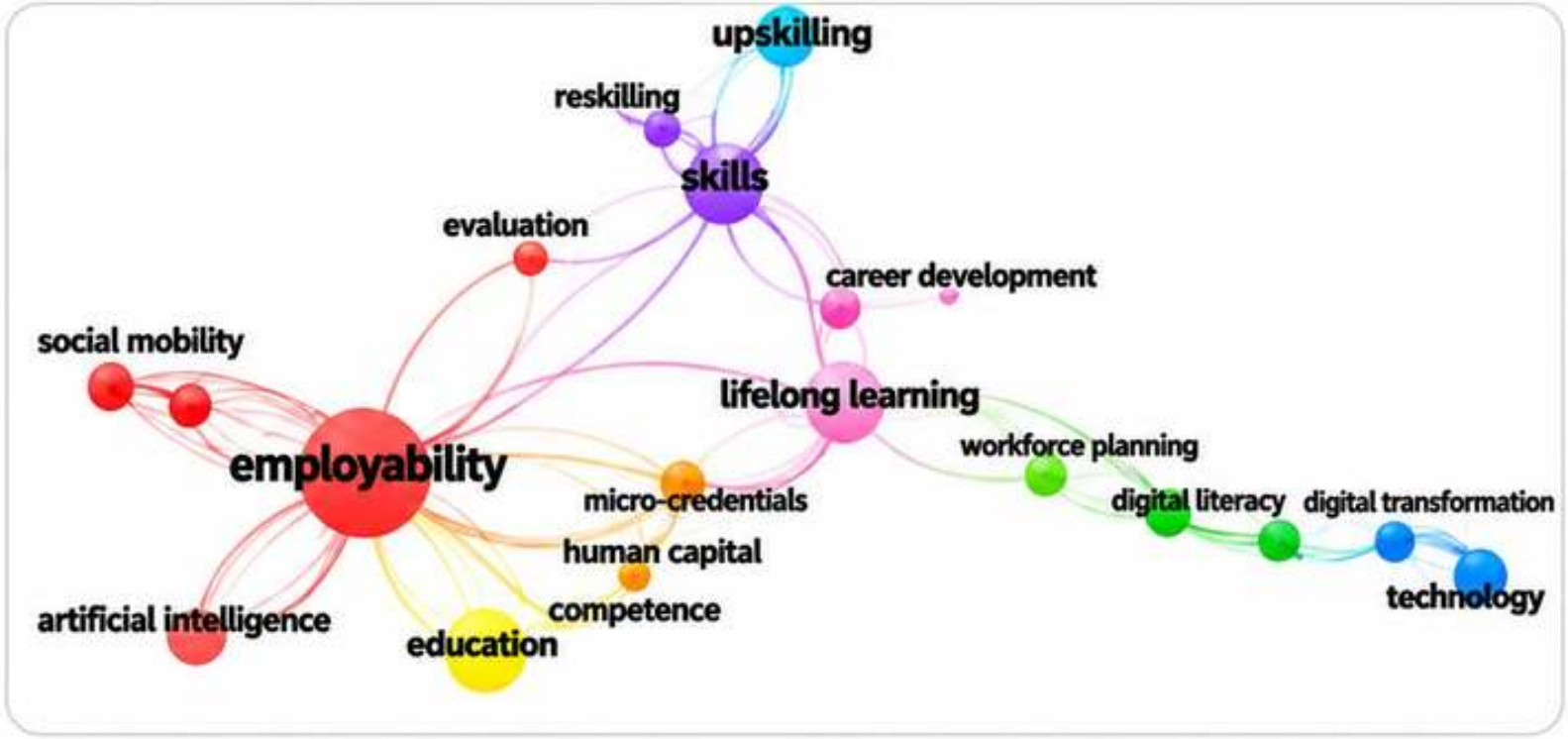
40 | **Scopus records**
used for bibliometric mapping

26 | **Full-text studies**
used for synthesis (RQ2–RQ6)

IMPORTANT NOTES

- 40 records and 26 studies serve different purposes.
- **80%** is the descriptive agreement between two AI-assisted passes.
- 3 full-text checks were later conducted to confirm eligibility.
- Original record-level screening logs are available for independent reconstruction.

RQ1: A Multidisciplinary, Uneven Field



40 | **Scopus documents**
Bibliometric corpus 2020–2026

31.5% | **Social Sciences**
Largest subject area in the corpus

7 | **Employability**
keyword occurrences

Total Link Strength (TLS): 38

RQ1 INSIGHT | ***Employability is the most prominent keyword in the network.***
Reskilling and upskilling each appear once; co-occurrence does not imply causality.

RQ2: Converging Functions, Fragmented Terms

Workforce Planning

Anticipatory, diagnostic function

Forecasting, analytics, skill-gap intelligence, foresight

Reskilling

Capability reorientation

Training interventions, policy responses, skill transition

Upskilling

Capability enhancement

Competency development, microcredentials, work-based learning

Employability

A family of outcomes

Readiness, adaptability, mobility, job security, placement

RQ3: From Workforce Signals to Development

Sense

Environmental, employer and labour-market change

Translate

Forecasts, analytics and competency assessment

Diagnose

Capability gaps against future demand

Respond

Differentiated development responses: upskilling, reskilling, and adjacent pathways

Planning diagnoses the capability problem; it does not predetermine the solution. Coordination, resources, access, recognition and motivation intervene between diagnosis and development.

RQ4: Four Pathways to Employability

1 Skills to Readiness

Work and career readiness

2 Digital Capability

Employability, job security, future readiness

3 Capability Renewal

Response to skill obsolescence

4 Career & Personal Resources

Motivation and adaptability

These pathways are evidence-informed patterns, not a single causal sequence.

Skill value depends on labour-market relevance, credential recognition, and opportunities to apply what was learned.

RQ5: Conditions and Conversion

Organisational
Learning culture, HR support

Technological
AI, automation, obsolescence

Labour-market
Demand, shortages, mismatch

Institutional
Credential recognition

Individual
Motivation, adaptability

Social / Contextual
Gender, geography, access

Cross-Cutting Conversion Processes

Translation | Access | Recognition | Utilisation

These processes are cross-cutting mechanisms, not a validated sequential pathway.

RQ6 The SWDIF Framework

SWDIF = *Strategic Workforce-Development Integration Framework*

An integrated framework for capability development and employability

SHAPED BY SIX BOUNDARY CONDITIONS

- Organisational
- Technological
- Labour-market
- Institutional
- Individual
- Social/Contextual

Synthesis-derived; not an empirically validated causal model. The diagram shows integration, not a fiixed sequence.



CROSS-CUTTING CONVERSION PROCESSES

TRANSLATION > ACCESS > RECOGNITION > UTILISATION

Research Gaps and Next Steps

01	**Relational Integration**	Integrative mixed-method and theory-testing designs
02	**Constructs and Terms**	Construct validation and taxonomy development
03	**Conversion Mechanisms**	Mediation and longitudinal mixed-method studies
04	**Outcome Measurement**	Proximal vs. distal; subjective vs. objective outcomes
05	**Temporal and Contextual**	Multilevel, cross-country, and cross-sector comparisons

Key Takeaways

Connected in Function

Sensing, gap diagnosis, differentiated development and employability-related capacity recur across studies.

Fragmented in Language

Heterogeneous labels and outcomes; similar wording is not equivalence.

Framework to Test

SWDIF is evidence-informed; test it with longitudinal and comparative designs.

Research Limitations

Database Coverage
Scopus only.

Language and Access
English-language Gold OA articles.

Corpus Size
Limited number of eligible studies.

Time Coverage
Partial-year 2026.

Quality & Study Design
No formal risk-of-bias appraisal; study designs were heterogeneous.

Thank You

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> *"Skills create opportunities.*
> *Adaptability sustains them.*
> *Continuous learning shapes the future."*

