The Framework: Mapping Educational Dynamics

Before constructing the ontology, we established a theoretical foundation informed by research in education theory, digital pedagogy, and sociology. This framework explores the evolving interplay between paid educational systems and free learning resources, focusing on their accessibility, credibility, and relevance to learners' career trajectories.

Evolution of Educational Paradigms

Education can be categorized into **formal**, **informal**, and **non-formal** models:

- **Formal Education**: Structured, credentialed, and traditionally provided by institutions like universities.
- **Informal Learning**: Characterized by self-directed platforms (e.g., YouTube), offering flexibility but often lacking structured credibility.
- **Non-formal Education**: Hybrid models like paid online courses, which balance structure and accessibility.

Theories Informing Knowledge Dynamics

1. **Zone of Proximal Development (Vygotsky, 1978)**: Highlights guided learning in formal systems and contrasts it with the autonomy of informal education.
2. **Knowledge as a Social Construct (Berger & Luckmann, 1966)**: Explains how societal values shape perceptions of credibility.
3. **Economic Models of Education (Illich, 1971)**: Critiques institutionalized education and highlights the democratization potential of open-access learning.
4. **Cognitive Load Theory (Sweller, 1988)**: Suggests that self-paced, informal systems may increase cognitive overload without adequate structure or mentorship.
5. **Media Literacy (Buckingham, 2003)**: Emphasizes critical engagement with media, guiding learners to assess the credibility and intent of digital educational content, a key concern for self-directed and online platforms.

Key Dichotomies in Modern Education

1. **Cost vs. Accessibility**: Financial barriers limit access to paid systems, while free platforms democratize learning.
2. **Credibility vs. Flexibility**: Structured programs offer recognition, while self-paced learning fosters adaptability.
3. **Depth vs. Breadth**: Universities provide in-depth expertise, whereas informal platforms like MOOCs offer a wider range of topics.

Towards Ontology Design

The ontology models:

- **Attributes of Learning Systems**: Cost, accessibility, credibility, and depth.
- **Learner Pathways**: How learners choose between options based on needs and resources.
- **Platform Interactions**: Links between formal, informal, and hybrid systems.

By integrating these theoretical insights, the ontology will serve as a tool to analyze and visualize how learners navigate the modern education landscape.

1. Comparison Chart

Purpose: illustrate differences across platforms like universities, YouTube, MOOCs, etc.

Platform	Cost	Credibility	Flexibility	Depth	Accessibilit y
Universities	High	Very High	Low	Very High	Medium
YouTube	Free	Low to Mec		Low to Mec	
Paid Courses	Medium to High	Medium to High	High	Medium to High	Medium
Free Platforms	Free	Medium	Medium to High	Medium	High
DIY/TikTok	Free/Low	Low	Very High	Very Low	High

2. Flowchart: Learner Decision-Making

Purpose: an insight on how people choose between platforms.

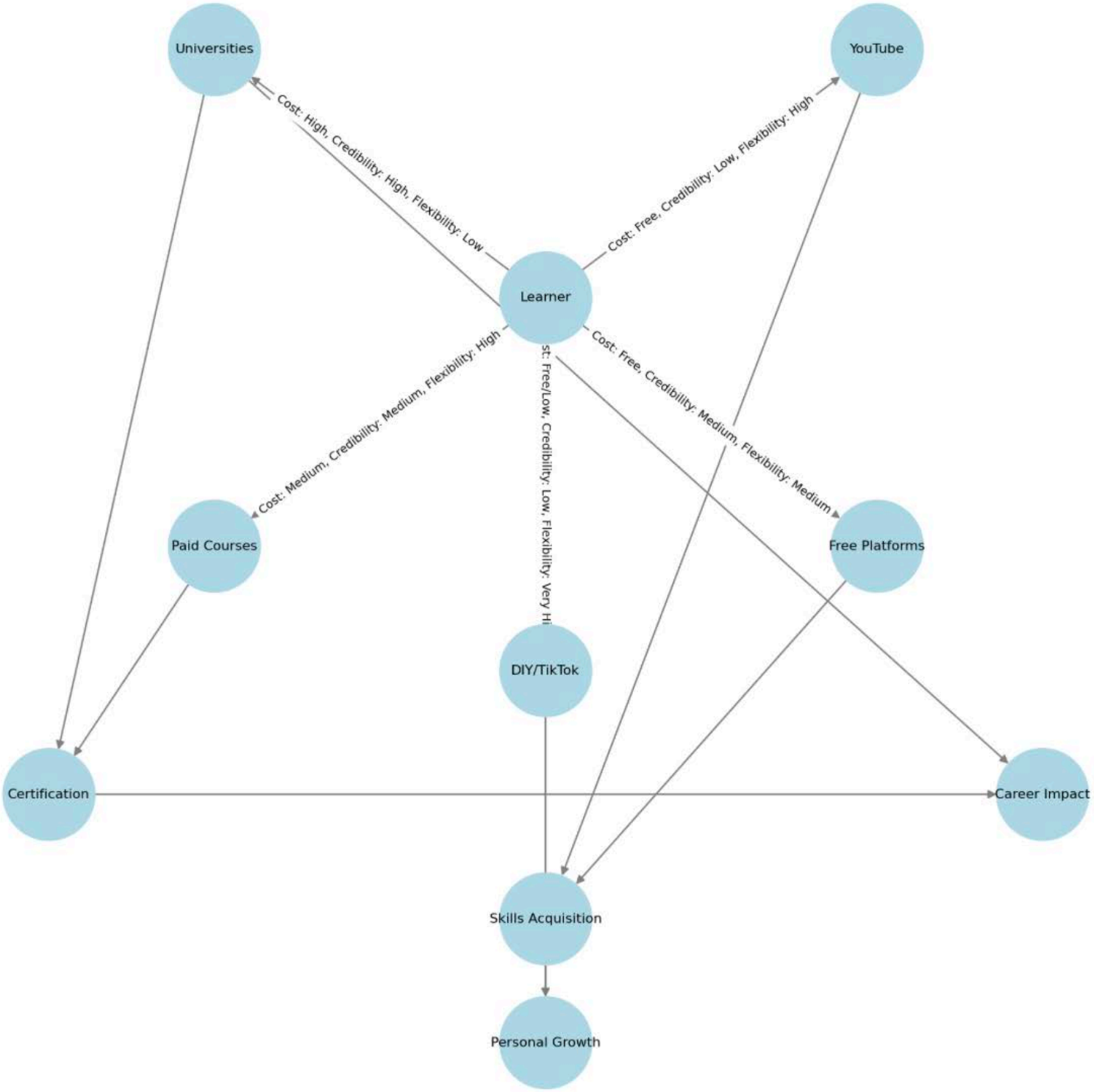
Example logic:

1. **Goal Identification**
    - Career Development → Paid/University
    - Personal Curiosity → YouTube/DIY
2. **Time and Cost Consideration**
    - Limited Budget → Free Platforms/YouTube
    - Flexible Budget → Paid/University
3. **Credibility Requirements**
    - Certification Needed → Paid/University
    - No Certification Needed → YouTube/DIY

3. Ontological Map: Connecting Key Characteristics

Purpose: show relationships between attributes like cost, flexibility, and credibility.

• **Nodes**: Platforms (Universities, MOOCs, YouTube).
• **Edges**: Links based on characteristics ("High Flexibility" => Free Platforms and YouTube). • **Visualisation Tool**: Lucidchart, Xmind or MindMeister.


Universities
YouTube
Cost: High, Credibility: High, Flexibility: Low
Cost: Free, Credibility: Low, Flexibility: High
Learner
Cost: Medium, Credibility: Medium, Flexibility: High
st: Free/Low, Credibility: Low, Flexibility: Very Hi
Cost: Free, Credibility: Medium, Flexibility: Medium
Paid Courses
Free Platforms
DIY/TikTok
Certification
Career Impact
Skills Acquisition
Personal Growth