

Comparing Curricula for Digital Library and Digital Curation Education



DIGITAL LIBRARIES
Curriculum Development

Jeffrey Pomerantz, Sanghee Oh,
Barbara M. Wildemuth,
Seungwon Yang, & Edward A. Fox
Digital Library Curriculum Project
UNC-CH & Virginia Tech

DigCCurr
say: dij-seeker

Carolyn Hank, Helen Tibbo,
& Cal Lee
Digital Curation
Curriculum Project
UNC-CH

Two projects: alike yet different

- **Scope**
 - DL project describes a curriculum
 - DC project describes a lifecycle
- **Emphasis**
 - DL project blends people/information/technology
 - DC project focuses on information objects
- **Context**
 - DL project is multi-disciplinary and multi-institution
 - DC project develops an emerging discipline
- **Educational goal**
 - Educating digital librarians
 - Educating digital curators



Curriculum Framework, 1

CORE TOPICS

1	Overview	1-a (10-c): Conceptual frameworks, models, theories, definitions	1-b: History of digital libraries and library automation
2	Digital Objects	2-a: Text resources 2-b: Multimedia 2-b (1): Images	2-c (8-c): File formats, transformation, migration
3	Collection Development	3-a: Collection development selection policies 3-b: Digitization 3-c: Harvesting	3-d: Document and e-publishing presentation markup 3-e (7-e): Web (push) publishing 3-f (7-f): Crawling
4	Info/ Knowledge Organization	4-a: Information architecture (e.g., hypertext, hypermedia) 4-b: Metadata 4-c: Ontologies, classification, categorization	4-d: Subject description, vocabulary control, thesauri, terminologies 4-e: Object description and organization for a specific domain
5	Architecture (agents, mediators)	5-a: Architecture overviews 5-b: Application software 5-c: Identifiers, handles, DOI, PURL	5-d: Protocols 5-e: Interoperability 5-f: Security



DIGITAL LIBRARIES Curriculum Development

Curriculum Framework, 2

CORE TOPICS

6	User Behavior/ Interactions	6-a: Info needs, relevance 6-b: Online information seeking behavior and search strategy	6-c: Sharing, networking, interchange (e.g., social) 6-d: Interaction design, usability assessment 6-e: Info summarization and visualization
7	Services	7-a: Search engines, IR, indexing methods 7-a (1): Image retrieval 7-b: Reference services 7-c: Recommender systems	7-d: Routing, community filtering 7-e (3-e): Web (push) publishing 7-f (3-f): Crawling 7-g: Personalization
8	Preservation	8-a: Approaches to archiving and repository development 8-b: Web archiving	8-c: Sustainability 8-c (2-c): File formats, transformation, migration
9	Management and Evaluation	9-a: Project management 9-b: DL case studies 9-c: DL evaluation, user studies 9-d: Bibliometrics, Webometrics	9-e: Intellectual property 9-f: Cost/economic issues 9-g: Social issues
10	DL education and research	10-a: Future of DLs 10-b: Education for digital librarians	10-c (1-a): Conceptual framework, theories, definitions 10-d: DL research initiatives

Matrix of Digital Curation Knowledge & Competencies

- 1) Mandates, Values and Principles
- 2) Functions and Skills
- 3) Professional, Disciplinary or Institutional/Organizational Context
- 4) Type of Resource
- 5) Prerequisite Knowledge
- 6) Transition Point in Information Continuum

Case 1: Preservation

8 Preservation

8a, Preservation

Issues of preserving meaningful information
Nature of digital objects
Layers and abstraction
Technology obsolescence
Approaches to preserving layers of meaning
Measures for promoting interoperability
Representation information and format registries
Spectrum of technical digital preservation strategies
Significant properties
Persistent identifiers
Cost-benefit analysis of preservation approaches

1, Mandates, Values and Principles

1.2, Core digital curation principles and values

2, Functions and Skill

2.12, Preservation planning and implementation

Case 1: Preservation

8 Preservation

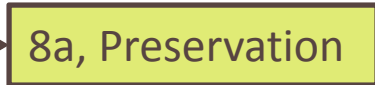
8a, Preservation

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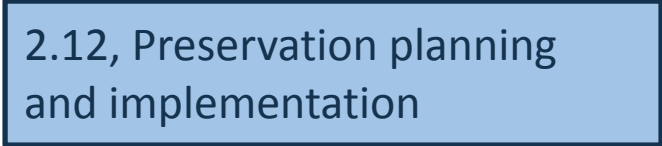
1.2, Core digital curation principles and values

Abstraction
Accountability
Abstraction
Accountability
Adaptability and robustness
Authenticity
Automating and informing of tasks
Collection
Context
Continuum and lifecycle orientations
Critical inquiry
Diversity
Evidence
Long Term
Openness and interoperability
Provenance and chain of custody
Scale and Scalability
Significant Properties
Stakeholders
Trust

Case 1: Preservation

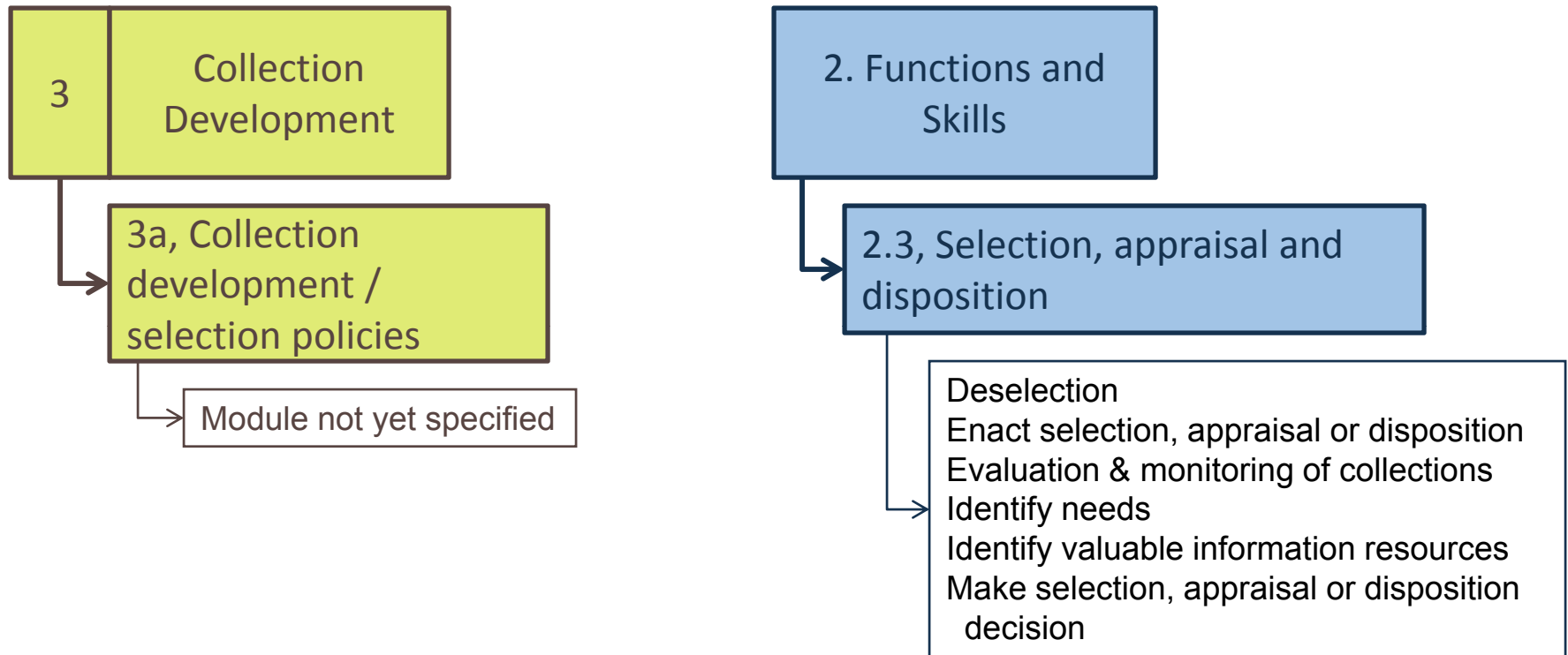


- Issues of preserving meaningful information
- Nature of digital objects
- Layers and abstraction
- Technology obsolescence
- Approaches to preserving layers of meaning
- Measures for promoting interoperability
- Representation information and format registries
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- Significant properties
- Persistent identifiers
- Cost-benefit analysis of preservation approaches

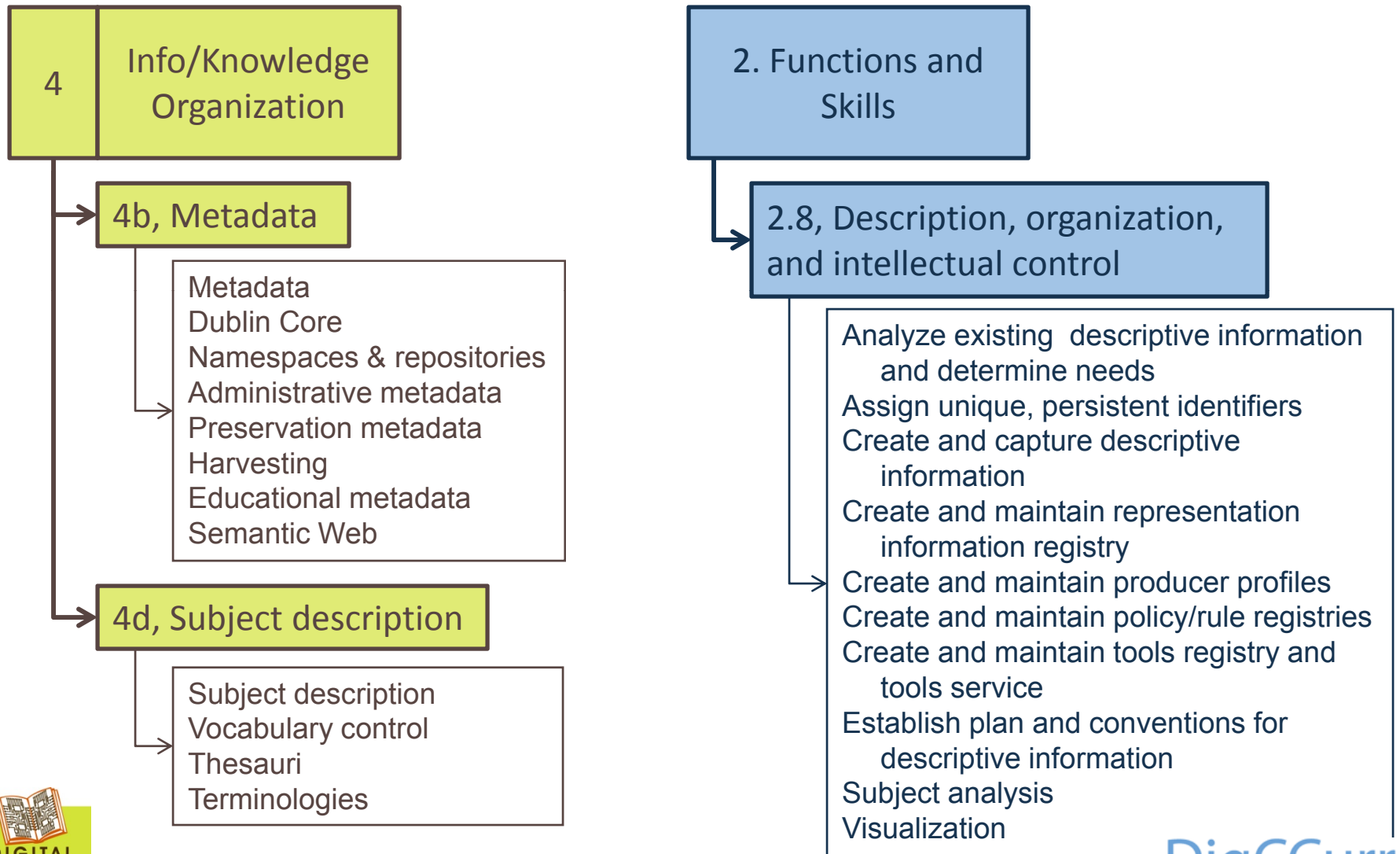


- Develop packaging designs & migration plans
- Develop preservation strategies & standards
- Monitor designated community
- Monitor technology

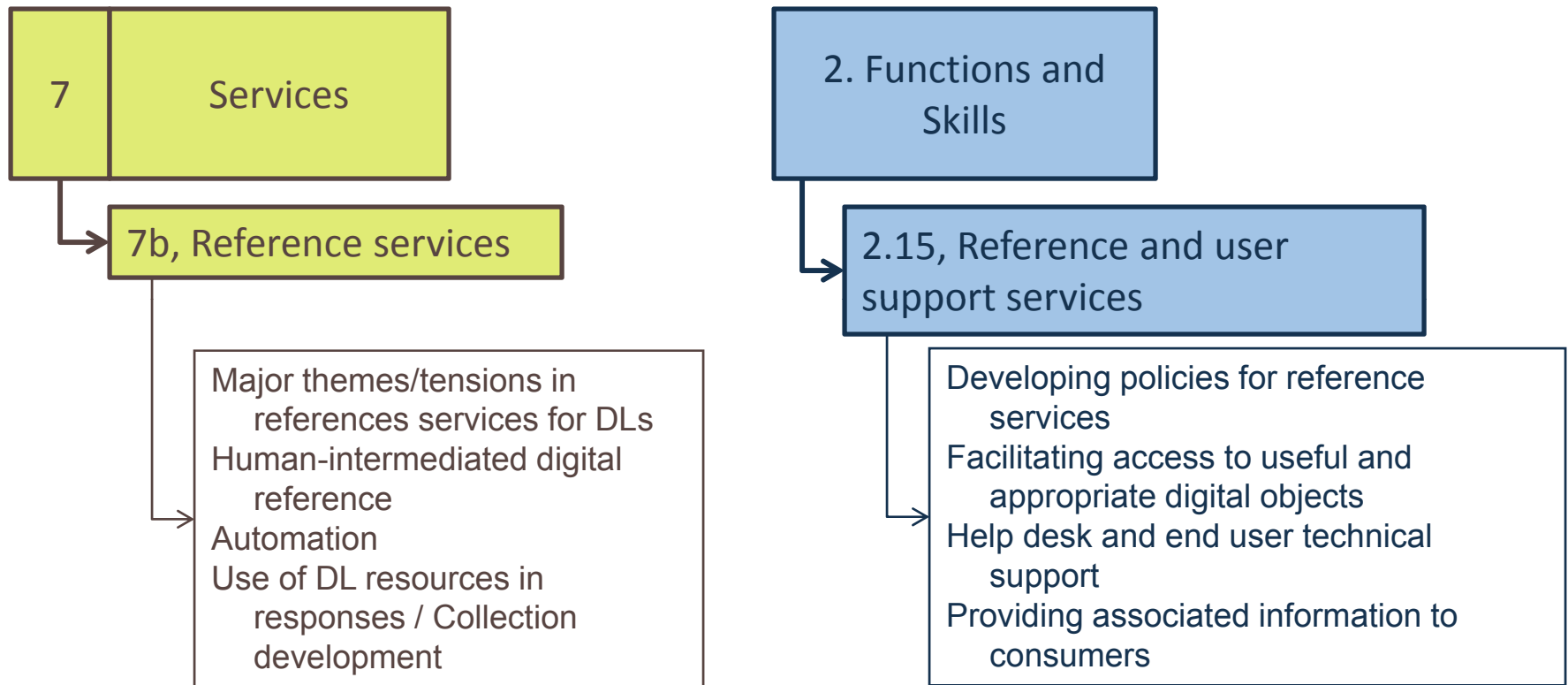
Case 2: Selection of Materials



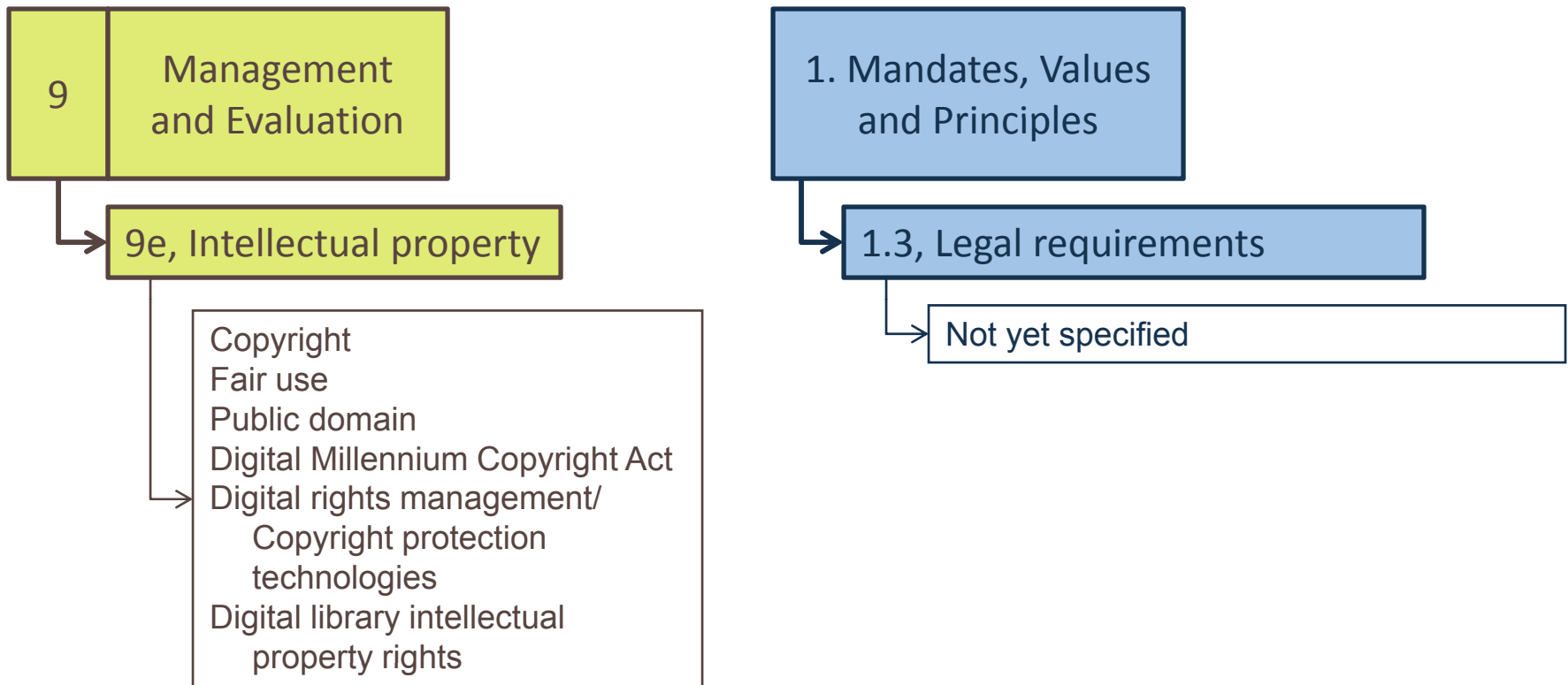
Case 3: Description of Objects



Case 4: Reference Services



Case 5: Legal issues



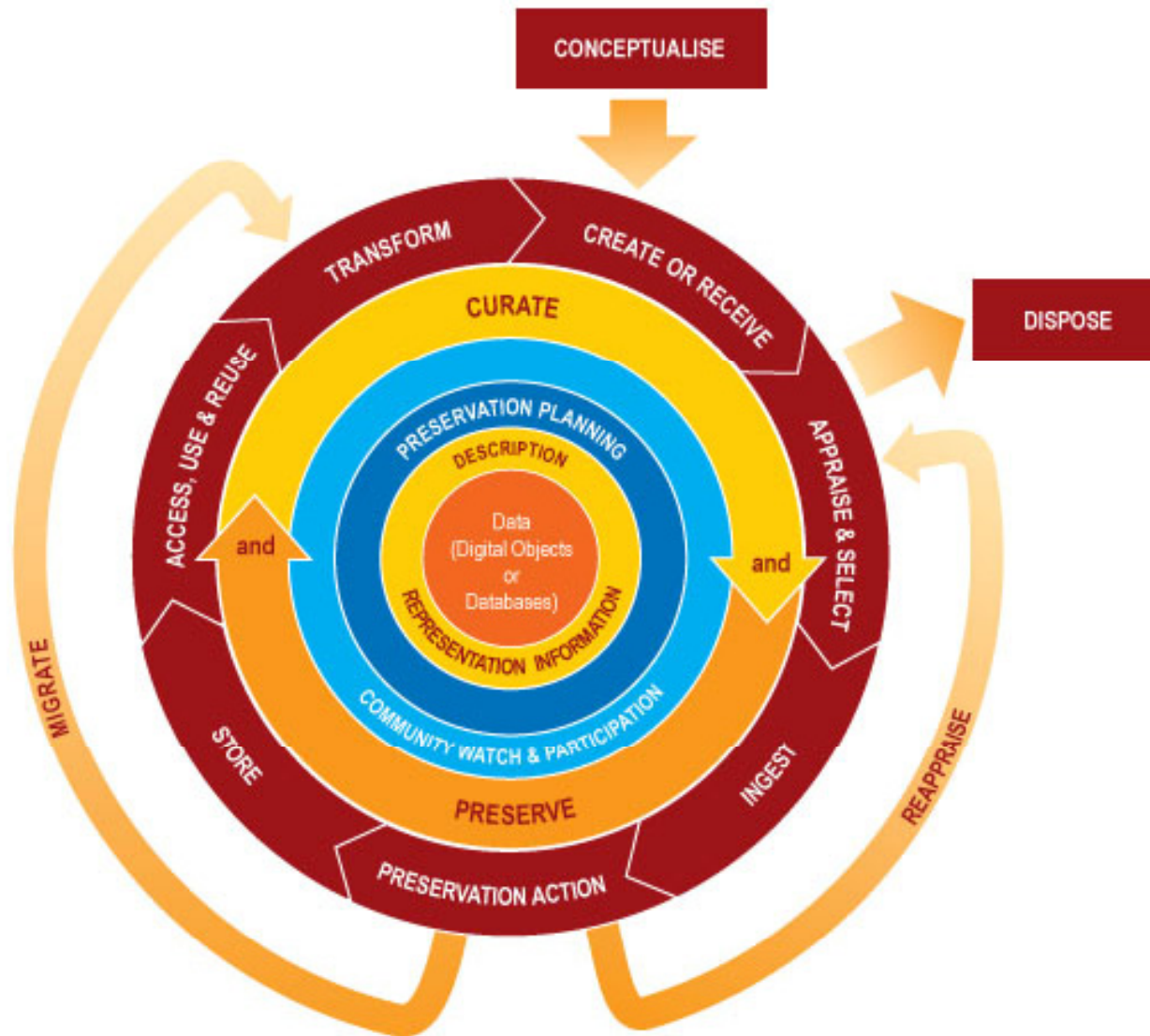
An area not covered in DL curriculum framework

- Lifecycle
 - Dimension 6, Transition Points in Information Continuum
 - Pre-Creation Design and Planning
 - Creation
 - Primary Use Environment (Active Use)
 - Transfer to Archives
 - Archives (Preservation Environment)
 - Transfer Copies or Surrogates to Secondary Use Environment
 - Secondary Use Environment

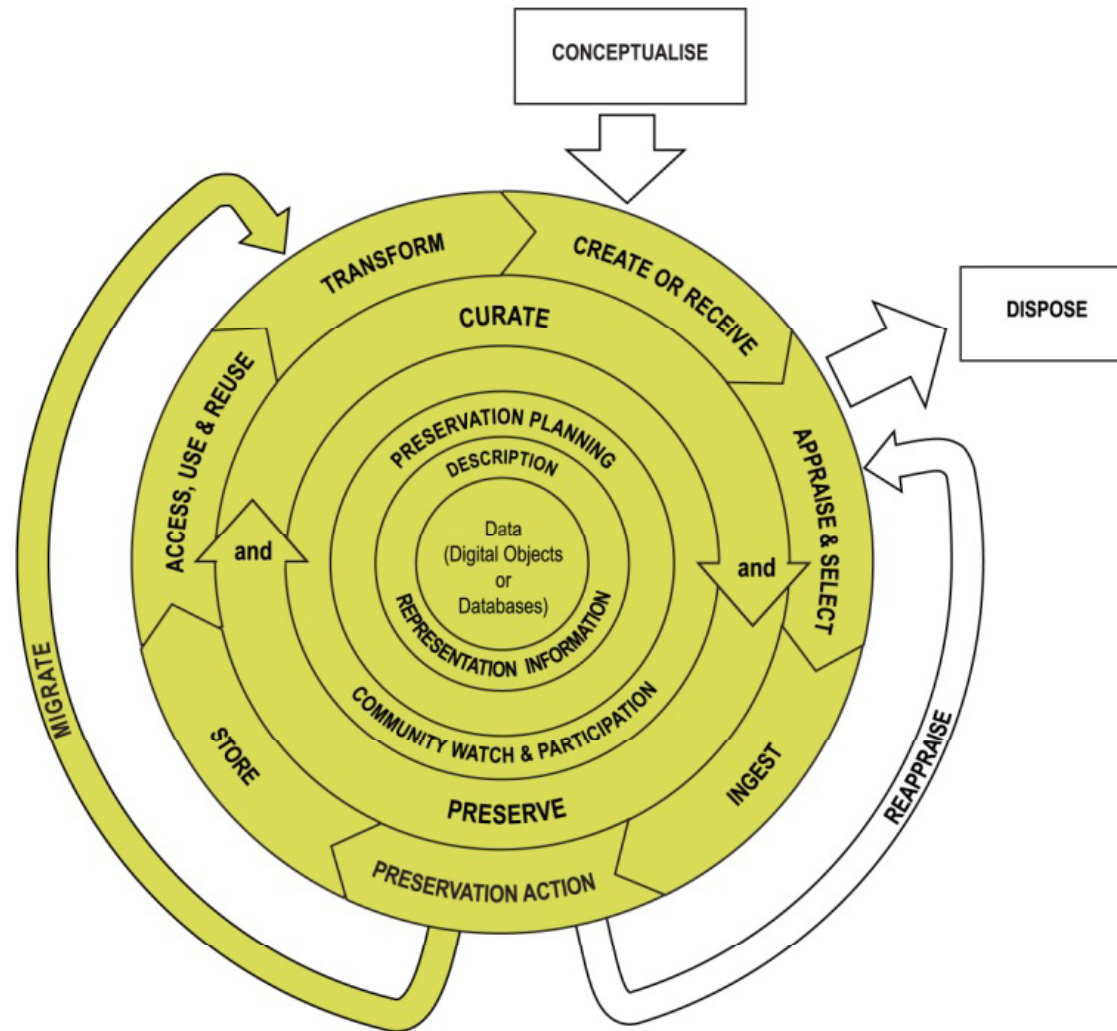
Two areas with little coverage in DC curriculum matrix

- User behaviors
 - Core topic 6, User Behavior/Interactions
 - 6a, Information needs, relevance
 - 6b, Online information seeking behavior and search strategy
 - 6c, Sharing, networking, interchange
 - 6d, Interaction design
 - 6e, Information summarization and visualization
- Technology/systems
 - Core topic 5, Architecture
 - 5a, Architecture overviews
 - 5b, Application software
 - 5c, Identifiers, handles, DOI, PURL
 - 5d, Protocols
 - 5e, Interoperability
 - 5f, Security

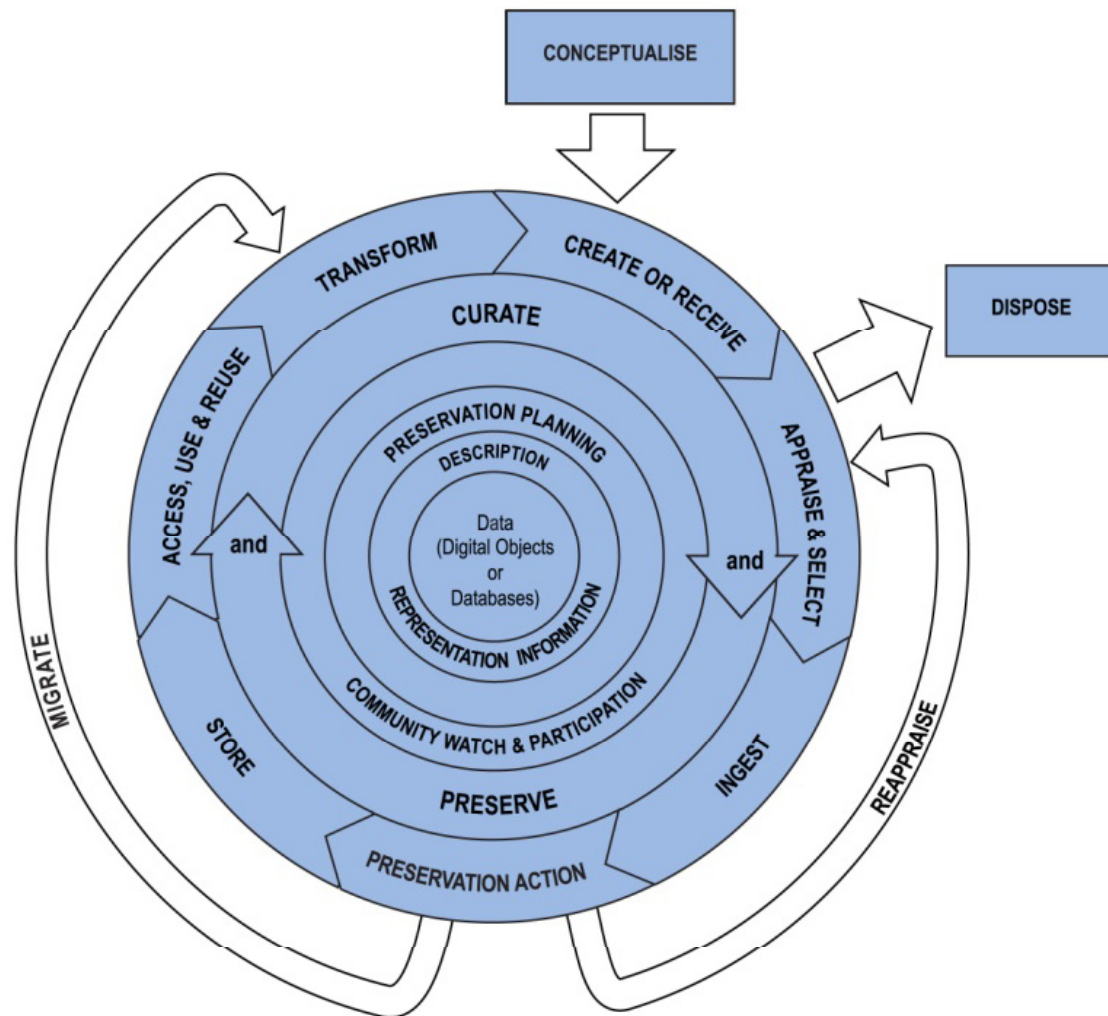
DCC Curation Lifecycle Model



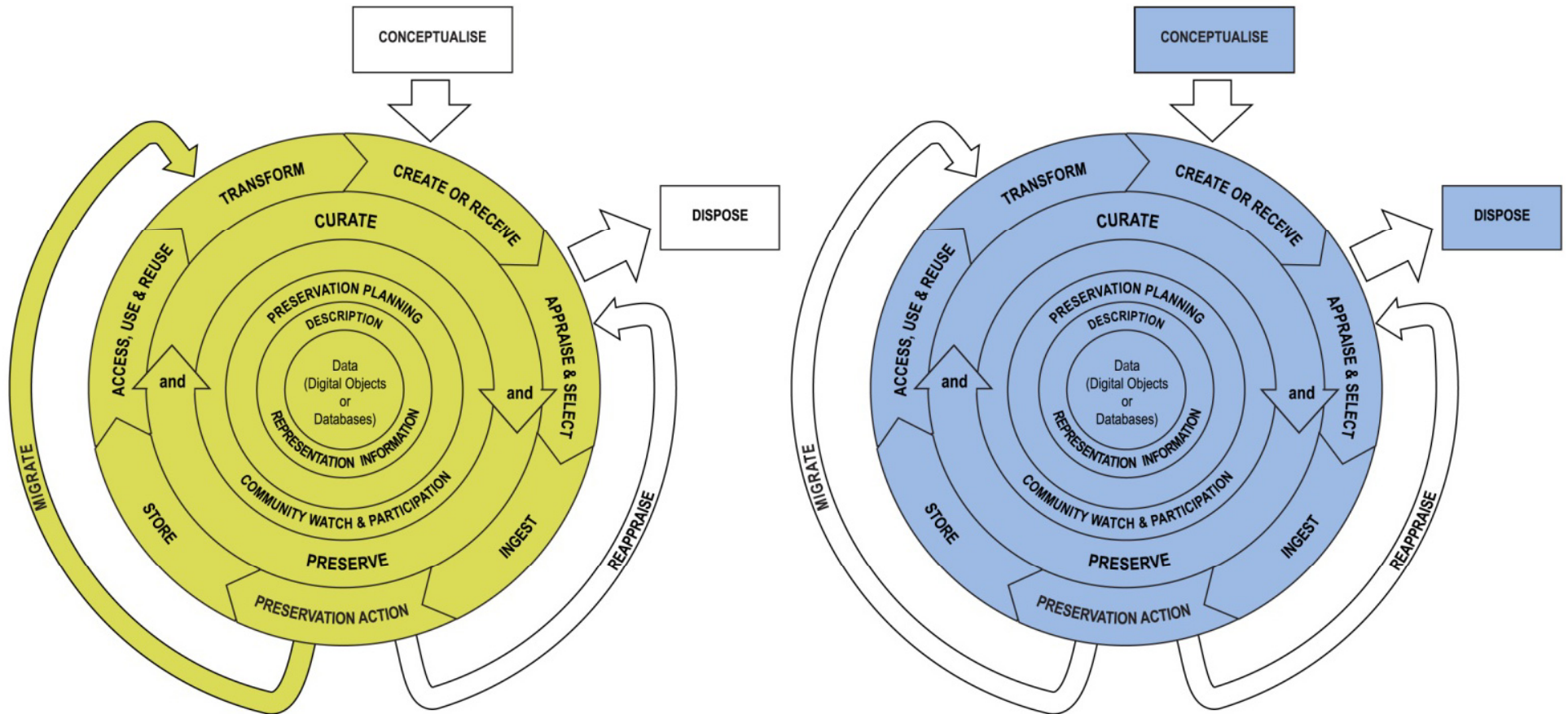
DL Curriculum Framework → DCC Curation Lifecycle Model



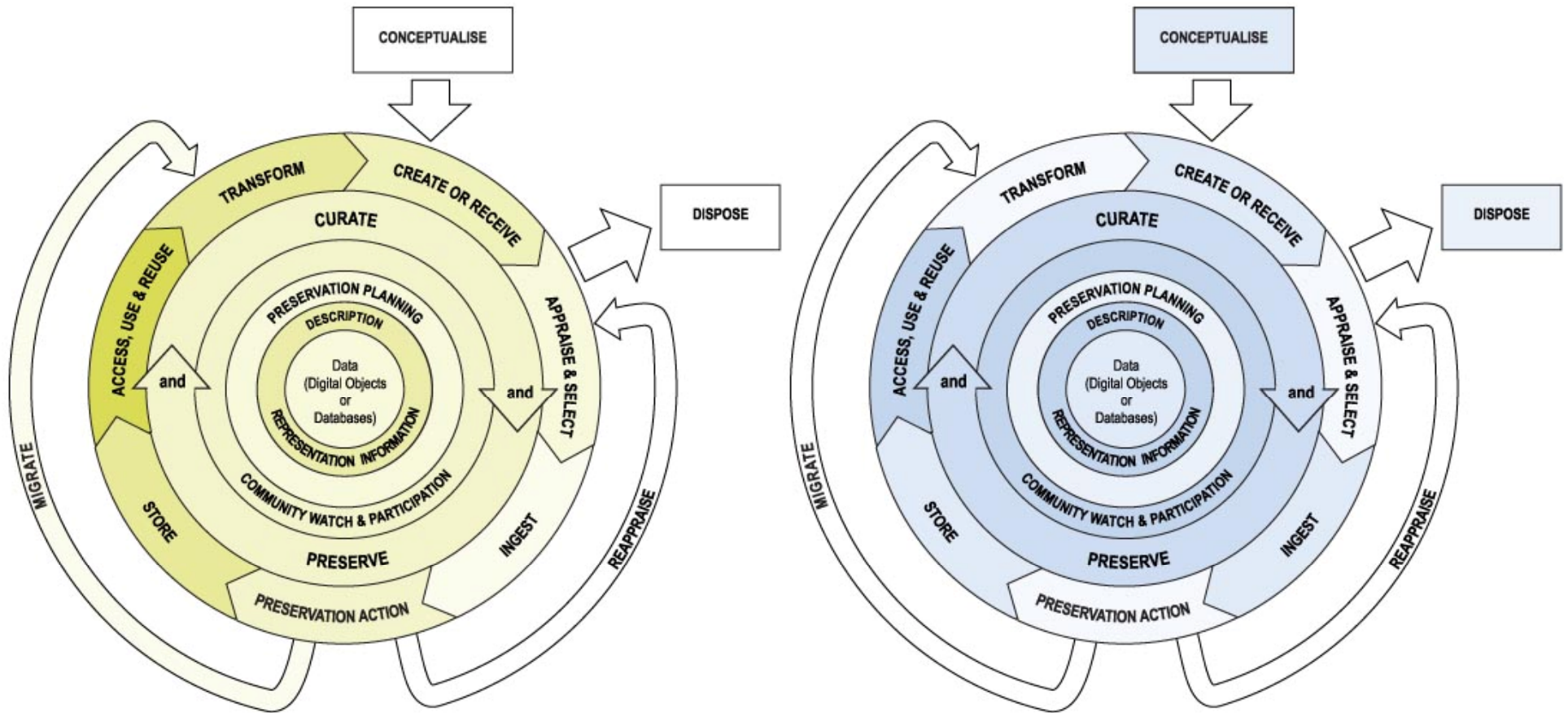
DigCCurr Matrix → DCC Curation Lifecycle Model



Side-by-side mapping to DCC Curation Lifecycle Model



Depth of coverage in mapping to DCC Curation Lifecycle Model



Questions?

- Digital Curation Curriculum Project (DigCCurr)
 - Helen Tibbo, Cal Lee, Carolyn Hank at UNC-CH
 - <http://www.ils.unc.edu/digccurr/>
 - With funding from the Institute of Museum and Library Services, IMLS Grant Awards # RE-05-06-0044 and #RE-05-08-0060-08
- Digital Library Curriculum Project
 - Barbara M. Wildemuth, Jeff Pomerantz, Sanghee Oh, at UNC-CH
 - Edward A. Fox, Seungwon Yang, at Virginia Tech
 - <http://curric.dlib.vt.edu/>
 - With funding from the National Science Foundation, grants IIS-0535057 (to Virginia Tech) and IIS-0535060 (to the University of North Carolina at Chapel Hill)

