

# **Multi-perspective KOS to support cross-disciplinary knowledge transfer**

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See the full paper for detail and references

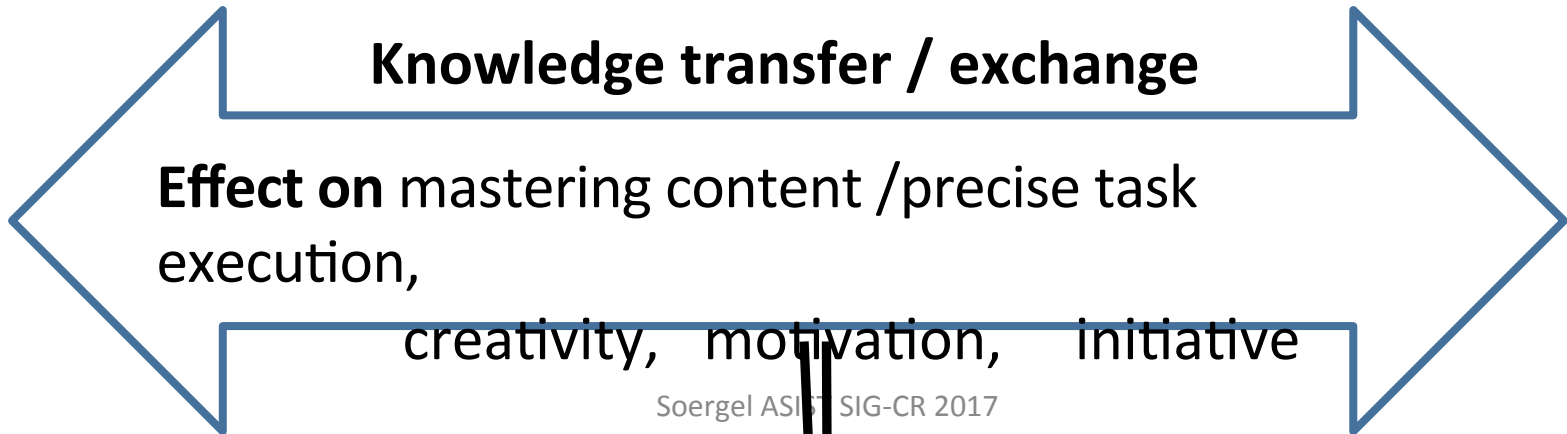
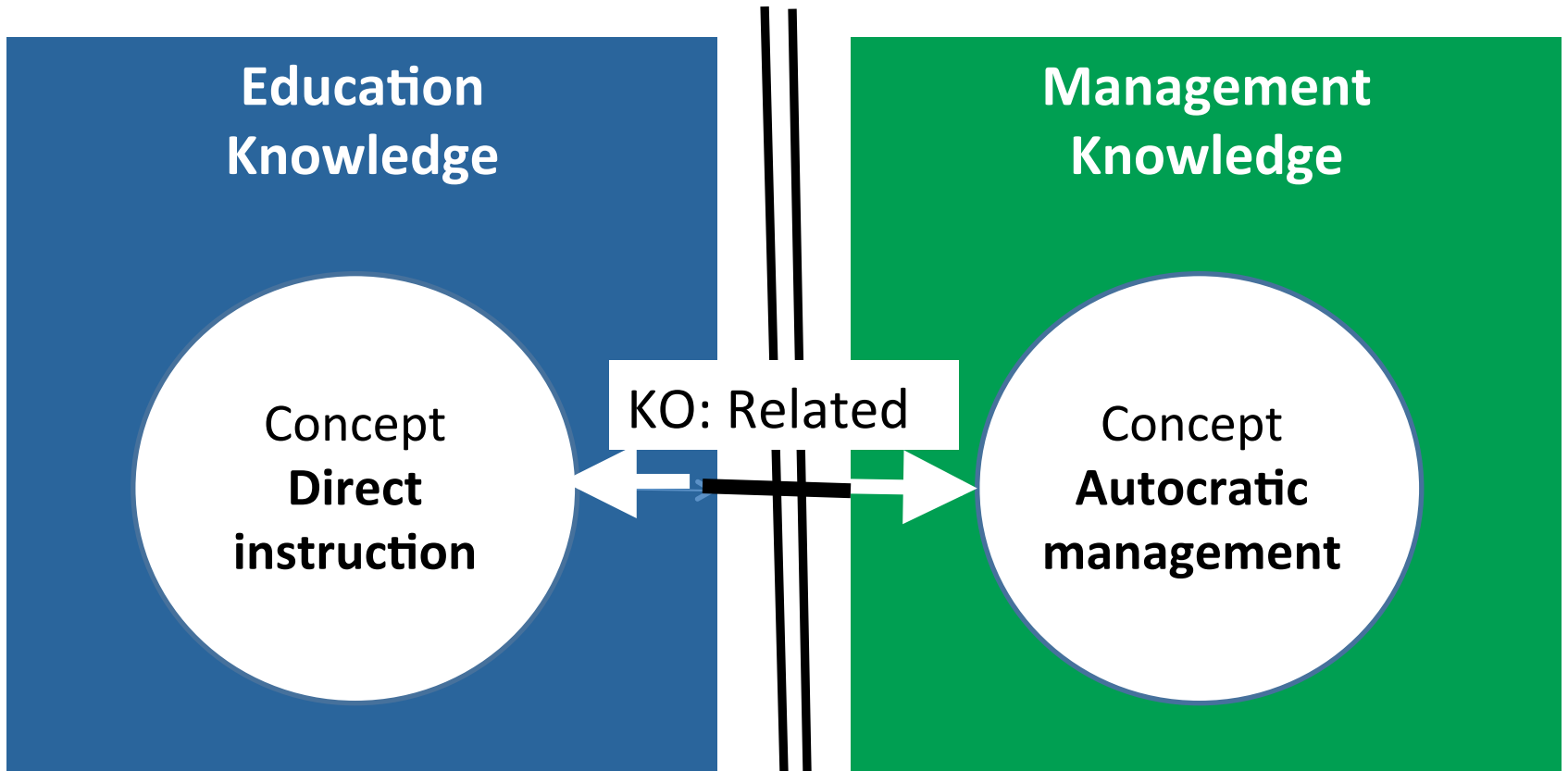
# Intended take-away

Appreciate the power of knowledge organization to foster **knowledge transfer across disciplinary boundaries**

Presentation gives one example of one type of knowledge transfer

**Education  
Knowledge**

**Management  
Knowledge**



# A multi-perspective KOS example

Three perspectives on the same underlying theme

- Educational style, example: **Direct instruction**
- Management style, example: **Autocratic management**
- System of government

Abstraction, broader concept

- **Style of social interaction**

Application to knowledge transfer and exchange

<b>Style of social interaction</b>	<b>Educational style</b>	<b>Management style</b>	<b>System of government</b>
<b>Autocratic, authoritarian, directive</b>	<b>Direct instruction,</b> Teacher as authority,	<b>Autocratic,</b> directive (coercive), top-down	Dictatorship Autocracy
<b>Military style</b>	Military style	Military style	Military government
<b>Paternalistic</b>		Paternalistic	Feudalism
			Monarchy
<b>Authoritative (vision)</b>		Authoritative (vision)	
<b>Coaching</b>	Teacher as facilitator	Coaching	
<b>Inner discipline, self-motivated</b>	<b>Montessori</b>	<b>???</b>	
<b>Participatory, democratic</b>	Democratic and Free Schools	Participatory (democratic), consultative	Democracy
<b>Collaborative, teamwork, delegation</b>	Cooperative Learning Teacher as facilitator	Collaborative, teamwork, delegation	
<b>Self-directed groups</b>	<b>???</b>	<b>Holacracy, self-managed groups</b>	
<b>Try your own thing</b>	Inquiry-based learning,		

# How I got here

- 1 Semantic factoring find elemental concepts**  
**One result: Discover general concepts used across disciplines**
- 2 Arrange in facets**
- 3 Find more sources to flesh out a facet**  
**Make connections to other disciplines**  
**Align**

# 1 Semantic factoring

Discover **cross-cutting concepts**

	Dewey Classes	Elemental Concepts
372.19	Curriculums of elementary schools	Curriculum : School : Elementary level
372.35043	Science in the elementary school curriculum	Curriculum : School : Elementary level : <b>Science</b>
373.19	Curriculums in secondary schools	Curriculum : School : <b>Secondary level</b>
373.243	Military schools (Secondary Education)	School : Secondary level : <b>Military style</b>
378.19	Curriculum of colleges and universities	Curriculum : School : <b>Post-secondary level</b>



# 2 Arrange in facets

Facets		
Grade level	Subject	Style of education / Style of social interaction (Concepts from supplemental sources added)
Elementary level	Science	<b>Military style</b>
Secondary level	Arithmetic	Open style
Post-secondary level	Reading	Montessori style
		<i>From management styles</i>
		Authoritarian style
		Participatory style



# 3 Connections to other disciplines

- 3 Find more sources to flesh out the facet **Style of education**

Make connections to other disciplines:

Management style

System of government

Find supplemental sources to flesh out the concepts for each area

Align

## Style of education

[http://www.ratical.org/  
many\\_worlds/PoL.html](http://www.ratical.org/many_worlds/PoL.html)

[http://teach.com/what/teachers-  
teach/teaching-methods](http://teach.com/what/teachers-teach/teaching-methods)

## Management style

- 1 Autocratic**
- 2 Consultative**
- 3 Persuasive**
- 4 Democratic**
- 5 Chaotic**
- 6 Laissez-faire**
- 7 Management by Walking Around (MBWA)**
- 8 Asian paternalistic**

- 1. Authoritarian Style**
- 2. Democratic Style**
- 3. Paternalistic Style**
- 4. Teamwork Style**
- 5. Directing Style**
- 6. Participatory Style**
- 7. Laissez-faire Style**
- 8. Chaotic Style**

[https://en.wikipedia.org/wiki/Management\\_style](https://en.wikipedia.org/wiki/Management_style)

<https://www.slideshare.net/Meimeibarcoma/management-style-models>

# Conclusion

**Knowledge organization / Conceptual analysis  
can create "knowledge transfer tunnels"  
across disciplinary boundaries**

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**Table 1. Educational style, management style, and system of government compared**

<b>Style of social interaction</b>	<b>Educational style</b>	<b>Management style</b>	<b>System of government</b>
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<b>Collaborative, teamwork, delegation</b>	Cooperative Learning Teacher as facilitator	Collaborative, teamwork, delegation	
<b>Self-directed groups</b>	<b>???</b>	<b>Holacracy, self- managed groups</b>	
<b>Laissez-faire, free-wheeling</b>	Open Schools (Summerhill)	Laissez-faire	
<b>Chaotic</b>		Chaotic	Anarchy
<b>People try their own thing</b>	Inquiry-based learning,		