

Exploring the Basic Elements of Information Literacy Standards

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Background

- Since Zurkowski coined the term information literacy in 1974, quite a few information literacy standards have been developed around the world.
- Information literacy standards play an essential role in shaping information literacy education.
- The formation and construct of an information literacy standard depends on how people interpret the concepts of information literacy. That is, the concept of information literacy seems to be interpreted differently by people with different kinds of traditions, training and cultural background.
 - Some schools of thoughts focus on learning and knowledge acquisition skills in the digital age,
 - while others are concerned with information technology, information ethics, web security and safety.
 - For example, the Ministry of Education (MOE) in Taiwan promotes information technology in K-9 information literacy, and information ethics in higher education.

Research questions

- The primary concern of the current study is to identify the basic elements of information literacy standards/indicators.
- Research questions are:
 1. What are the basic elements of information literacy standards/ indicators?
 2. What are the similarities and differences among the standards/indicators?

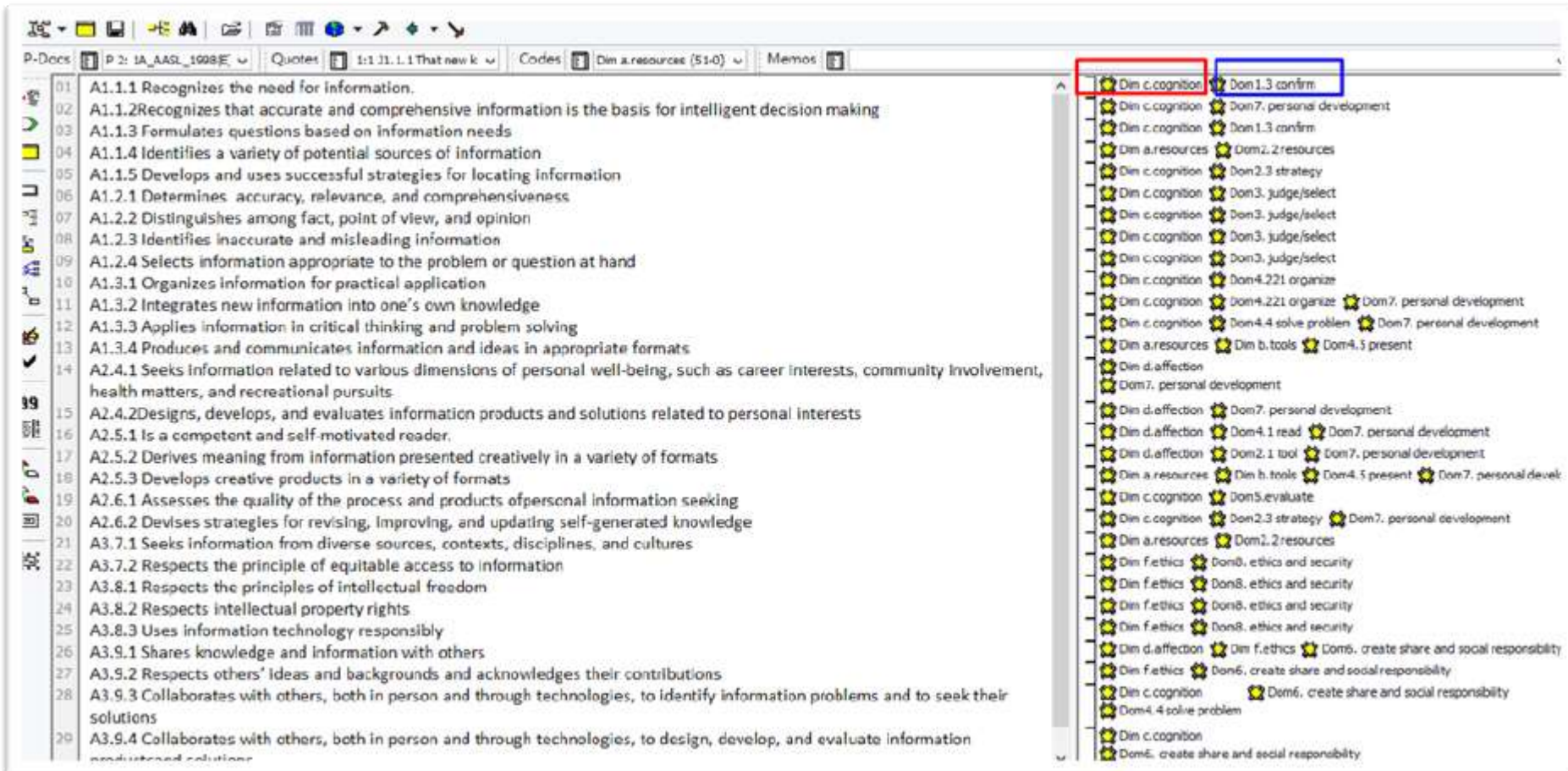
Methodology

- Content analysis, the qualitative approach was applied.
- First, a draft coding scheme was developed by analyzing randomly selected standards.
- Then, a total of ten representative standards/indicators published around the world were analyzed recursively to finalize the coding scheme.
 - Ten standards/indicators :

	Year	Information Literacy Standards/Indicators
A	1998	AASL-Information Literacy Standards for Student Learning
B	2007	AASL-Standards for the 21st Century Learner
C	2000	ACRL-Information Literacy Competency Standards for Higher
D	2004	Australian and New Zealand Institute for Information Literacy
E	2004	Hong Kong
F	2006	IFLA
G	2007	Information Education Guidelines published by MOE
H	2008	UNESCO
I	1999	UK-The seven headline skills
J	2011	UK-The seven headline skills

Methodology

- Data analysis
 - Use Atlas. Ti to code all the information literacy standards/ indicators
 - Export all codes



The screenshot displays the Atlas.ti software interface. On the left, a list of information literacy standards is shown, numbered 01 to 20. On the right, a list of codes is displayed, corresponding to the standards. Two codes are highlighted with boxes: 'Dim c.cognition' (red) and 'Dom 1.3 confirm' (blue).

Standard	Code
01 A1.1.1 Recognizes the need for information.	Dim c.cognition
02 A1.1.2 Recognizes that accurate and comprehensive information is the basis for intelligent decision making	Dim c.cognition
03 A1.1.3 Formulates questions based on information needs	Dim c.cognition
04 A1.1.4 Identifies a variety of potential sources of information	Dim a.resources
05 A1.1.5 Develops and uses successful strategies for locating information	Dim c.cognition
06 A1.2.1 Determines accuracy, relevance, and comprehensiveness	Dim c.cognition
07 A1.2.2 Distinguishes among fact, point of view, and opinion	Dim c.cognition
08 A1.2.3 Identifies inaccurate and misleading information	Dim c.cognition
09 A1.2.4 Selects information appropriate to the problem or question at hand	Dim c.cognition
10 A1.3.1 Organizes information for practical application	Dim c.cognition
11 A1.3.2 Integrates new information into one's own knowledge	Dim c.cognition
12 A1.3.3 Applies information in critical thinking and problem solving	Dim c.cognition
13 A1.3.4 Produces and communicates information and ideas in appropriate formats	Dim a.resources
14 A2.4.1 Seeks information related to various dimensions of personal well-being, such as career interests, community involvement, health matters, and recreational pursuits	Dim d.affection
15 A2.4.2 Designs, develops, and evaluates information products and solutions related to personal interests	Dim d.affection
16 A2.5.1 Is a competent and self-motivated reader.	Dim d.affection
17 A2.5.2 Derives meaning from information presented creatively in a variety of formats	Dim d.affection
18 A2.5.3 Develops creative products in a variety of formats	Dim a.resources
19 A2.6.1 Assesses the quality of the process and products of personal information seeking	Dim c.cognition
20 A2.6.2 Devises strategies for revising, improving, and updating self-generated knowledge	Dim c.cognition
21 A3.7.1 Seeks information from diverse sources, contexts, disciplines, and cultures	Dim a.resources
22 A3.7.2 Respects the principle of equitable access to information	Dim f.ethics
23 A3.8.1 Respects the principles of intellectual freedom	Dim f.ethics
24 A3.8.2 Respects intellectual property rights	Dim f.ethics
25 A3.8.3 Uses information technology responsibly	Dim f.ethics
26 A3.9.1 Shares knowledge and information with others	Dim d.affection
27 A3.9.2 Respects others' ideas and backgrounds and acknowledges their contributions	Dim f.ethics
28 A3.9.3 Collaborates with others, both in person and through technologies, to identify information problems and to seek their solutions	Dim c.cognition
29 A3.9.4 Collaborates with others, both in person and through technologies, to design, develop, and evaluate information products and solutions	Dim c.cognition

Findings

1. There are basic and additional elements for information literacy standards/indicators. Basic elements can be found in almost all the standards/indicators analyzed, while only some of the standards/indicators bear the additional elements.
2. Seven main domains are defined: Access, Use and Evaluate belong to the group of basic elements, while Create share & social responsibility, Personal development, Ethics & security and Stand-alone tech belong to the group of additional elements.
3. Several sub-domains were identified. (Table 1)

Table 1

	domain	sub-domain			
access	1.need	1.1 create			
		1.2 explore			
		1.3 confirm			
	2.locate/search	2.1 tool			
		2.2 resources			
		2.3 strategy			
	3. judge/select				
	use	4.use	4.1 read		
			4.2 write	4.21 analysis	
				4.22 integrate	4.221 organize
				4.222 filtering	
			4.223 compare		
4.23 cite					
4.3 make decision					
4.4 solve problem					
4.5 present					
evaluate			5.evaluate		
	6. create share and social responsibility				
	7. personal development				
	8.ethics and security				
	9. stand-alone tech				

Basic elements

Additional elements

Findings (cons.)

4. Seven dimensions were found to be associated with certain sub-domains , namely: (Table 2)
 - Resources
 - Tools
 - Cognition
 - Affection
 - Skills
 - Ethics
 - Security and Safety

Table 2

Domain)/Sub-domain)		Dimension)						
		a (resources)	b (tools)	c (cognition)	d (affection)	e (skills)	f (ethics)	g (security and safe)
1 need	1.1 create			H				
	1.2 explore			CDEHI				
	1.3 confirm			ACDEFHI				
2 locate/ search	2.1 tools	CDHIJ	BCDGHIJ	CHJ	A			
	2.2 resources	ABCDEF HIJ	DHIJ	BCDHIJ	BJ			
	2.3 strategy	HJ	GHJ	ABCDEFGHJIJ	B			
3 judge/ select		BH	H	ABCDEFGHJIJ	B			
4 use	4.1 read			BCD	ABCE			
	4.2 write		BCDJ	ABCDEFHIJ	B		CDFGJ	
	4.3 decision			DE			B	
	4.4 solve			ABDGHJIJ			H	
	4.5 present	ABCFJ	ABCDFIJ	BCHJ				
5 evaluate			J	ABCDJ				
6 create share and social responsibility		CJ	BCGJ	ABE	ABCEJ		ABCDE J	
7 personal development		ABFJ	ABFGJ	ABCDEFGHJIJ	ABEJ		BH	
8 ethics and security			G	CFGH			ABCDE FGHIJ	BCDEFGIJ
9stand-alone tech			J			GJ	G	

Findings (cons.)

5. Statistics all the codes of 9 domain, “locate/search” 、 “use”, and “Personal development” has the highest number
6. All the standards/indicators have the highest number of cognition dimensions ,except MOE 2007 is skills dimensions (Table 3)

Table 3

Dimensions	AASL 1998	AASL 2007	ACRLHE 2000	ANZIIL 2004	HK 2004	IFLA 2006	MOE 2007	UNESCO 2008	UK 1999	UK 2011	%
resources	4	6	6	8	2	4	0	1	3	17	9.29
tools	2	10	18	14	0	2	5	1	5	18	13.66
cognition	15	38	54	39	23	16	7	5	12	59	48.82
affection	5	24	2	0	6	0	0	0	0	3	7.29
skills	0	0	0	0	0	0	27	0	0	1	5.10
ethics	6	13	13	9	5	4	10	1	1	12	13.48
security & safety	0	1	2	2	1	1	3	0	1	2	2.37

Findings (cons.)

7. Each information standard/indicator bears its own focus, depending on the context and the target group it serves.

e.g.

- 1) Most IL standards focus on cognitive dimension, while MOE on technology (stand-alone tech, 28/52, 53.8%)
- 2) MOE also focus on ethics and security (12/52, 23%).

Potential impacts

1. A potential to develop a taxonomy of information literacy.
2. A guideline for new information literacy standards/indicators.

Thanks for Listening

Q&A

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