

## Information Literacy Competencies in New Era

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### ABSTRACT

*In the new era of change. The globe is under the influence of three major world trends: the revolutionary development of ICTs, the transition to a knowledge society and the new learning mode of the Netgen. These trends have generated a shift in the educational paradigm, giving rise to the need to cultivate new competencies for citizens in knowledge societies. This paper describes the literacy and competencies required for citizens, communities and nations to participate in future knowledge societies. There are many new literacy concepts have been put forward. Some are independent and new, such as digital literacy and information fluency, whereas others are compound concepts such as multiliteracies, transliteracy and media and information literacy. The complexity of the next society, this paper take on an integrated approach towards new literacy training. The key future competencies, the conceptual, practical and human are identified as essential to future society.*

**Key words:** literacy.

Today's world of learning resources is as engaging as it is complex. Learners are both users and creators of information content with a world of dynamic visual, aural, interactive, and text-based resources all within the virtual library. Information literate person who establish strong information literacy skills are better able to guide the development of these skills in the society provide resource-rich inquiry-based learning environments.

The overview and assessment of the future technological environment and new competencies indicate that literacy training in the Current situation is going to meet great

challenges. Future knowledge workers will require mixed, novel competencies to constructively participate in the knowledge societies. Neither the stand-alone nor the compound literacy concepts introduced above address this holistic need. That is not to say that those previous concepts are not useful, they simply are not inclusive enough. It is based on management theory and an analysis of the three major world trends. The UNESCO World Summit on Information Society's report proposes an integrated literacy framework entitled "21st Century Competencies" that introduces the 12 key competencies needed in the future society which is given in the following Table.

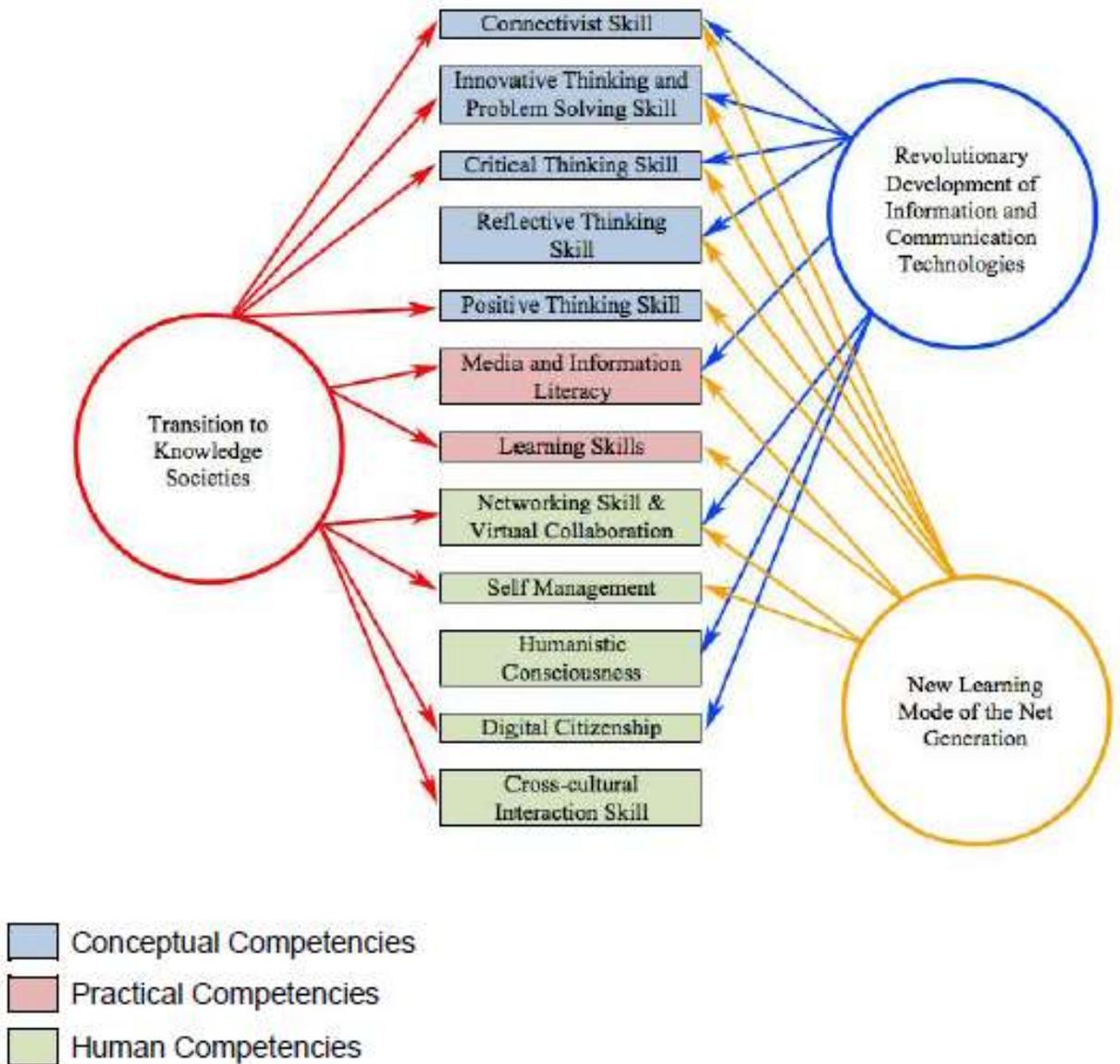
Table : Framework of 21st Century Competencies

21st Century Competencies	
Conceptual Competencies	<ul style="list-style-type: none"><li>- Connectivist Skills</li><li>- Innovative Thinking and Problem Solving Skills</li><li>- Critical Thinking Skills</li><li>- Reflective Thinking Skills</li><li>- Positive Thinking Skills</li></ul>
Practical Competencies	<ul style="list-style-type: none"><li>- Media and Information Literacy</li><li>- Learning Skills (collaborative learning, self-driven learning and lifelong learning)</li></ul>

Human Competencies	<ul style="list-style-type: none"> <li>- Social Networking and Virtual Collaboration</li> <li>- Self-Management</li> <li>- Humanistic Consciousness</li> <li>- Digital Citizenship</li> <li>- Cross-cultural Interaction Skills</li> </ul>
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We all know that Peter Drucker, the father of contemporary management, asserted that “every knowledge worker is an ‘executive’ if, by virtue of his position or knowledge, he is responsible for a contribution that affects the capacity of the organisation to perform and to obtain results” (Drucker, 2002, p. 5). Management theory indicates that the managers and executives should have three types of skills: conceptual, technical and human (Bartol and Martin, 1998). Following Figure exhibits that the three major world trends have make a set of competencies that people will need in the future society. These competencies are divided into three broad categories: conceptual, practical and human.

Figure : The Need for 21st Century Competencies Generated by the Three World Trends



(UNESCO, 2013)

## Conceptual Competencies

Conceptual competencies are ways of thinking. Five thinking skills are regarded as important in this framework. In a network society, connectivist thinking skills, such as those that are trans-disciplinary and systemic, are essential because they cultivate the ability to make connections between ideas, examine an issue multiple perspectives, understand concepts across multiple disciplines and create a whole picture from fragmented pieces. A knowledge society is a world of constant innovation, and knowledge work is defined by its results. Innovative thinking and problem solving skills are a must for knowledge workers. Furthermore, upcoming technologies constantly create new scenarios. New and adaptive thinking skills can facilitate the development of innovative solutions.

The 21st century is characterised by rapid technological development and number of challenges posed by the ICT revolution. People in the Web 2.0 era need an advanced level of critical and reflective thinking skills to develop their own independent judgment by reflecting on the ways in which media and information products are consumed and produced.

Today's young people will be tomorrow's knowledge workers. The Net Genres are characterised by their discontent with the society. However, in the Web 2.0 era, they share the communication power that results from producing user-generated content. Therefore, it becomes very important to equip them with positive thinking skills to guide their use of communication power in a constructive way that will not cause social damage. Effective knowledge workers make strength productive, and one cannot build on weakness (Drucker, 2002). A positive thinking mindset helps knowledge workers explore their own strengths and use the strengths of their teammates. Positive thinking skills based on positive psychology have recently been developed into "appreciative inquiry movements" in the business, social work, counseling and education sectors (Pao, 2009; Seligman, 2002).

## Practical Competencies

Practical competencies are ways of handling information in work and life. They include MIL and learning skills. Mastering media and information as well as handling knowledge creation will be essential life skills in the knowledge societies. Therefore, MIL is the core competency in the 21st century competencies framework. MIL combines information literacy and media literacy with ICT skills. It is a set of competencies that empower citizens to access/retrieve, understand/evaluate and use/create various forms of media information in a critical and effective way.

Based on the recent research on future skills, The new MIL model for the future world in the following table.

Components	Knowledge, Skills and Attitude
<b>Access/Retrieval of Media and Information</b>	
Access	<ul style="list-style-type: none"> <li>- 'Button knowledge': the technical skills needed to use digital technologies</li> <li>- Information search skills</li> <li>- Curation intelligence</li> <li>- Transmedia navigation skills</li> </ul>
<b>Evaluation/Understanding of Media and Information</b>	
Understanding	<ul style="list-style-type: none"> <li>- Understanding media and informational content, format, institutions and audience</li> <li>- Computational thinking: ability to translate vast amounts of data into abstract concepts and understand data-based reasoning</li> </ul>

Assessment and Evaluation	<ul style="list-style-type: none"> <li>- Cognitive load management: ability to discriminate and filter information for importance</li> <li>- Sense-making: ability to determine the deeper meaning or significance of what is being expressed</li> <li>- Critical digital literacy: ability to critically assess the quality and validity of content that uses new media forms, and to leverage these media for persuasive communication</li> <li>- Photo-visual skills: ability to read instructions from graphical displays</li> <li>- Real-time processing skills: ability to process and evaluate large volume of information in real time</li> </ul>
Organization and Synthesis	<ul style="list-style-type: none"> <li>- Knowledge management</li> <li>- Skill of abandonment</li> </ul>
<b>Use/Create/Communicate Media and Information</b>	
Communication and Use	<ul style="list-style-type: none"> <li>- Effective communication and information sharing</li> <li>- Story-telling skills</li> <li>- Specific medium use</li> <li>- Interactive tool use</li> <li>- Security practice</li> <li>- Application and goal achievement</li> <li>- Ethical use of media and information</li> </ul>
Creation and Problem Solving	<ul style="list-style-type: none"> <li>- Creativity</li> <li>- Design mindset: ability to represent and develop tasks and work processes for desired outcomes</li> <li>- Media and information production techniques</li> <li>- Collective knowledge construction and collaborative problem solving</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>- Media and information criticism and monitoring</li> </ul>

**Access/Receive**

Fostering “button(instant) knowledge” – technical skills (including sophisticated ICT skills and data mining) – is a must for future knowledge workers. To one side from traditional information retrieving skills such as “defining and articulating media and information need” and “location and retrieval of media and information”, they should also be equipped with preserve intelligence and transmedia navigation skills because the future promises a world of aggregation.

**Understand/Evaluate**

Information-literate person and media should be able to understand the format, content, institutions and audiences of media and information, and wisely review them. Yet, in the coming Web 3.0 age, such individuals must be equipped with a number of new comprehension skills such as computational thinking, cognitive load management and photo-visual skills,

amongst others. Information overload and anxiety are common pathologies in the digital world, and knowledge management and abandonment skills act as cures (Bawden and Robinson, 2009; Drucker, 1998). Knowledge management is a directed process of figuring out what information a person or organisation has that could be useful and then devising ways of making it easily available. Abandonment skills allow one to take control of one’s media and information environment and discard information according to the principle of relevancy (Yamashita, 2011).

**Use/Create**

Information literate person and a media will know how to communicate well and engage in the ethical use of media information. Moreover, abilities such as knowledge creation and creative expression are also important because individuals must accept the responsibilities of an dynamic citizen and be able to supervise and influence the

development of media and information. The 21st century is a product of the creative class, such that creativity and a design-oriented state of mind are both vital for success.

It is worth noting that MIL competencies are not just skills, but also the ability to meet complex demands by drawing on knowledge, skills and attitudes in a particular context (Kurbanoglu, 2012).

One side from MIL, learning skills is another set of practical competencies. In the new age, knowing how to conduct self learning, collaborative learning and life-long learning will be very important. Therefore, learning skills related to data processing will become a vital competency.

### Human Competencies

Human competencies refer to ways of interacting with people. Our future society is ICT-based. Therefore, living and working in this world will mean mastering the people/networking skills in cyberspace and being good at virtual collaboration and engagement. Knowledge work is outcome-based and must be accomplished via taskforce. Mastering collaborative problem-solving skills and know how to build partnerships is essential in achieving effectiveness.

Humanistic consciousness is another human competency that cannot be neglected. In *Habits of the High-Tech Heart*, Schultze (2002, p. 22) suggested that people should nurture their moral wisdom and humanistic values to help them “act rightly with prudence and good judgment, rather than merely effectively and efficiently” in the quest for informationism.

Knowledge workers are autonomous, independent specialists that tend to be self directed as opposed to being told what to do, as is the case with manual workers in the industrial societies. Moreover, an increasing number of knowledge workers will be self-employed, thus self-management and self-discipline, life planning and self development are regarded as the key to becoming a competent knowledge worker.

In the postmodern world, an unprecedented abundance of information,

contrasting perspectives and overwhelming choices are causing severe social damage. Citizens must take responsibility for themselves, as the basic tenant of personal autonomy, and for those around them, as the basic tenant of morality (Aviram, 2010). The erosion of self and the neglect of responsibility could lead “directly to the weakening of the main sustaining fabric of Liberal Democracy and Humanistic society” (Aviram, 2010, p. 285).

Now a day electronic citizenship is of growing importance in relation to competency. As e-government grows more prevalent and an increasing number of people move online to connect, compete, collaborate and debate, they must know all of the aspects of citizenship – not only understanding their rights and obligations in their own communities, but also at the global level.

In the next society, advanced technologies will connect the world and increasing globalisation breaks down geographical and political barriers. Skilful cross-cultural interaction suggests the ability to operate in various cultural settings with cultural literacy, and future knowledge workers and global citizens must be equipped with this capability.

### Different Social Groups' Literacy

In today world of the knowledge societies, all citizens will need the 21st century competencies in work and life, yet specific social groups may require profession-specific competencies.

Dudash (2010) argued that young reporters should also display freedom of information (FOI) competency. The 24-hour news cycle leads media organisations to deliver news too soon, and many journalists are moving away from using FOI to dig up more facts and relying, instead, on easily available sources.

Media persons are expected to be highly media and information literate and hypercapable in areas such as information searching, communication and story-telling. In the Web 2.0 era, curation, engagement, partnership and mobile communication are amongst the most

important concepts for the news profession (So, 2012). Therefore, curation/aggregation intelligence, networking skills and virtual collaboration are all important. In addition, data journalism also requires computational thinking skills, cognitive load management and connectivist skills.

Traders and businessmen are expected to have excellent information aggregation skills, a variety of vital thinking skills and a good design mindset. According to Ohmae (2011), success in the business and management sector requires the ability to conduct logical analyses of information, make sensible decisions and produce innovative ideas.

Research has shown that medical doctors need to improve their communication skills, particularly in dealing with patients who exhibit low literacy skills. Such poorly educated patients often have difficulties following doctors' orders (Ofri, 2011).

Blue-collar jobs such as driving, however, require fewer 'digital' skills. Traditional literacy skills such as reading, writing and speaking remain more significant. There have been reports that some veteran taxi drivers lose their jobs due to low literacy skills (Cayman News Service, 2012), yet given globalisation, taxi drivers, particularly those working in the big cities, have come to need cross-cultural interaction skills. Meanwhile, many women are not only barred from high-tech jobs, but also excluded from other literacy training. Women and men are equally capable of contributing to the knowledge societies, but they need the ICT skills to participate in the emerging knowledge economy. Hence, global advocates are developing training programmes.

According to the World Health Organization (WHO), about 15% of the world population deals with disabilities. ICTs can improve their lives and enhance their social and economic integration into communities by making more activities available to them (UNESCO, 2012b). Assistive technologies should be provided to them, and offering personalising learning through technology to them is also important. All

students need to learn the life-skill of personalising their technology and of self-accommodation.

University students are supposed to be well trained in ICT skills so that after their graduation they can become leading knowledge workers. However, surveys have found that in many developing countries, marginalised college students remain low in digital literacy.

## Conclusion

Due to uneven economic development across regions, an increasing number of people are migrating to other locations within their countries or overseas to seek job opportunities. The migrant worker population has rapidly increased in recent years. These people need high cultural literacy and language skills to work well in another regions and countries. Most importantly, they need to have access to information if they intend to survive in a variety of cultural settings, and they must also keep in touch with their family members in their home towns. Because the majority of these workers have less access to fixed line communication services, mobile technologies offer great help and being mobile literate can certainly improve their work and life. In many developing countries, m-banking services have also been offered, which allows them to send money home. However, many may not be able to use such services due to low literacy levels and language skills (many of these services are in English) and they would benefit from proper mobile literacy training.

In the era of Web 3.0 and beyond, technological development will accelerate globalisation. People in developed or developing countries and citizens in urban or rural areas will be connected by a global village. Marginalised groups such as the persons with disabilities, migrants, ethnic groups, poor families and the less educated are also global citizens, all of whom deserve equal opportunities to join and contribute to the future knowledge societies. It is important that every global citizen receive training in the 21st century competencies, especially the MIL, in which ICT skill training is a key component.

**References**

1. Aviram, A. (2010). *Navigating through the storm: Reinventing education for postmodern democracies*. The Netherlands: Sense Publishers.
2. Bartol, K. M., & Martin, D. C. (1998). *Management*. Boston: Irwin McGraw-Hill.
3. Bawden, D., & Robinson, L. (2009). The dark side of information: Overload, anxiety and other paradoxes and pathologies. *Journal of Information Science*, 35(2), 180-191.
4. Cayman News Service (2010, November 29). Veteran taxi driver loses job over literacy skills. *Caymannewsservice.com*. cited in UNESCO(2013).
5. Drucker, P. F. (1998). The coming of the new organization. In *Harvard Business Review* (pp. 1-19). Boston, MA: Harvard Business School Publishing.
6. Drucker, P. F. (2002). *The effective executive*. New York: Harper Collins Publishers.
7. Dudash, A. (2010). Where are the watchdogs? *Quill*, September/October.24-26.
8. Kurbanoglu, S. (2012). An analysis of concept of information literacy. Paper presented at the International Conference of the Media and Information Literacy for Knowledge Society. June 24-28, 2012, Moscow, Russia.
9. Ofri, D. (2011). A problem in following doctor's orders. *Nytimes.com*. Retrieved February 14, 2014, from <http://well.blogs.nytimes.com/2011/07/07/a-problem-in-following-doctors-orders/>
10. Ohmae, K. (2009). *Ohmae no zunou (Ohmae's thinking on trends)*. Tokyo: Nikkei Business Publications, Inc.
11. Pao, W. Y. (2009). *Appreciating my strength*. Hong Kong: Enrich Publishing Ltd.
12. Schultze, Q. J. (2002). *Habits of the high-tech heart: Living virtuously in the information age*. Michigan: Baker Academic.
13. Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. New York: Free Press.
14. So, C. Y. K. (2012, June). The revolutionary technology: The new trend of the American press. *Media Digest*. [Rthk.hk.org](http://rthk.hk.org). Retrieved March 18, 2015, <http://rthk.hk/mediadigest/201206.html>
15. UNESCO (2012). Access for people with disabilities. *Unesco.org*. Received August 24, 2014, from <http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/access-for-people-with-disabilities>.
16. UNESCO (2013). Conceptual relationship of information literacy and media literacy in knowledge societies. *Unesco.org*. Retrieved on July 08, 2015, from [http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/wsis/WSIS\\_10\\_Event/wsis\\_Series\\_of\\_research\\_papers\\_Conceptual\\_Relationship\\_between\\_Information\\_Literacy\\_and\\_Media\\_Literacy.pdf](http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/wsis/WSIS_10_Event/wsis_Series_of_research_papers_Conceptual_Relationship_between_Information_Literacy_and_Media_Literacy.pdf)
17. Yamashita, H. (2011). *Shin-ikikata-jutsu fukan-ryoku souk-danshari* (The power of overlook based on the philosophy of discarding it). Tokyo: Magazine House Ltd.

**A man is not old until regrets take the place of dreams.**

**~ John Barrymore**