VII Bebras Workshop

Druskininkai, May 11, 2011

Dr. Antonio Cartelli, University of Cassino, Italy

The Bebras Competition and the Acquisition of Digital Competences

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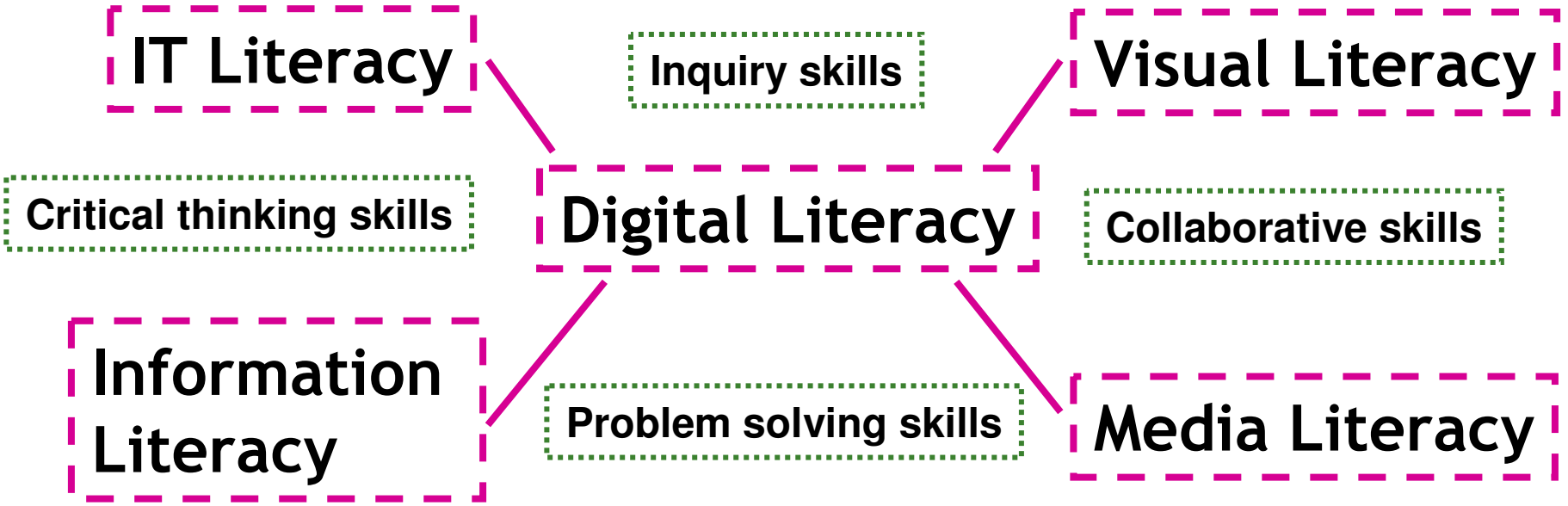
Today there is general agreement on the complexity of digital competences and on the convergence of IT/ICT related skills and competences towards them (EU 2006, Martin 2005 etc.)



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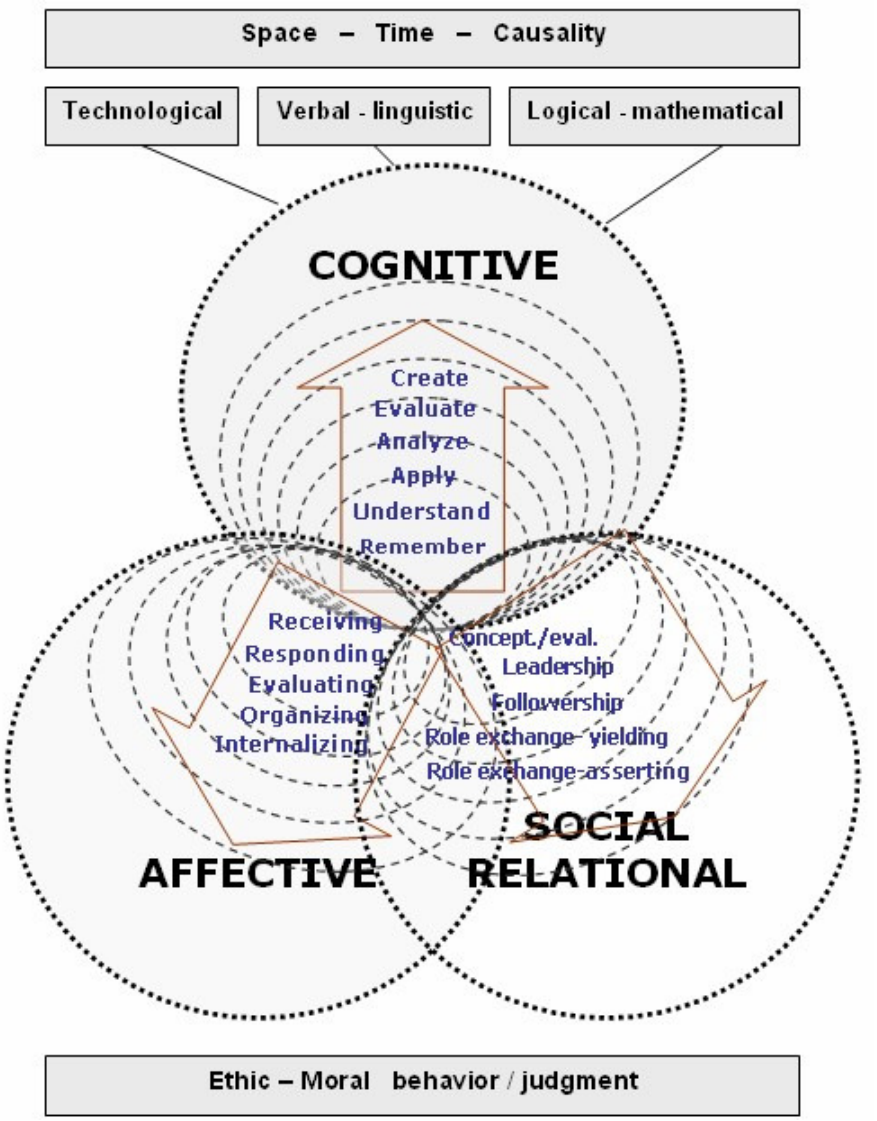
Model for digital competence structure and assessment, more **human-centered** than **discipline-centered**, based on the well known taxonomies:

- cognitive,
- affective,
- social-relational,

and on the studies and results obtained during last 50 years in psycho-pedagogy



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Questions

1. Is it possible to merge the needs and the perspectives from “Bebras contest” with the former model?
2. Can only multiple choice (or interactive) questions lead to the assessment of digital competences?
3. How can school help “digital natives” to develop the digital competences they need in the knowledge society?
4. How can we help teachers to “re-organize” their teaching while considering the more complex and articulated situation they have to face in everyday teaching?

The Bebras Competition and the Acquisition of Digital Competences – Question 1

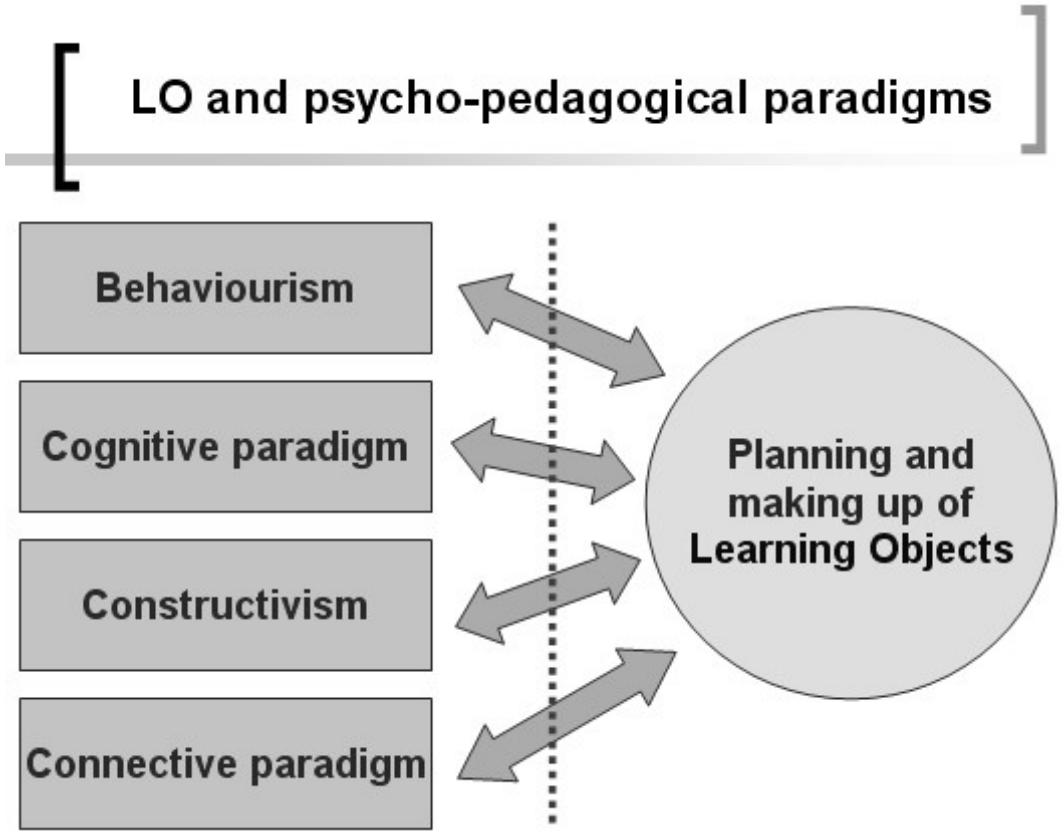
INF	**Information comprehension**	Representation of data (symbolic, numeric, visual), coding, encryption
ALG	**Algorithmic thinking**	Everything including programming aspects
USE	**Using computer systems**	Search engines, email, spread sheets, etc. (general principles, but no specific systems)
STRUC	**Structures, patterns and arrangements**	Combinatorics, discrete structures (graphs, etc)
PUZ	**Puzzles**	Puzzles and games (e.g., mastermind, minesweeper, etc.)
SOC	**ICT and Society**	Social, ethical, cultural, international, legal issues

Recognizing geometric shapes and patterns and being able in making operations with them
Understanding a text and being able in representing it
Reading graphics and being able to deduce numerical values and phenomena from them
Understanding graphics and connecting them with given operations
Being able in understanding operations to be made at a computer and using it in a responsible way
Being able in understanding and making logic operations

The Bebras Competition and the Acquisition of Digital Competences – Question 4

An example comes from the experience had with the InnovaScuola and InnovaDidattica Italian projects by the Ministry of education:

Helping teachers planning and carrying out teaching-learning activities based on the use of IWBs and the creation of Los by means of Open Source instruments



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References

International Journal of Digital Literacy and Digital Competence

http://www.igi-global.com/bookstore/titledetails.aspx?titleid=1170

Italian web site on Digital Competences

http://www.competenzedigitali.it/

The site for Technology Enhanced Learning in the Laboratory for Education Technology and Knowledge Management

http://tle.let.unicas.it/ (in Italian)