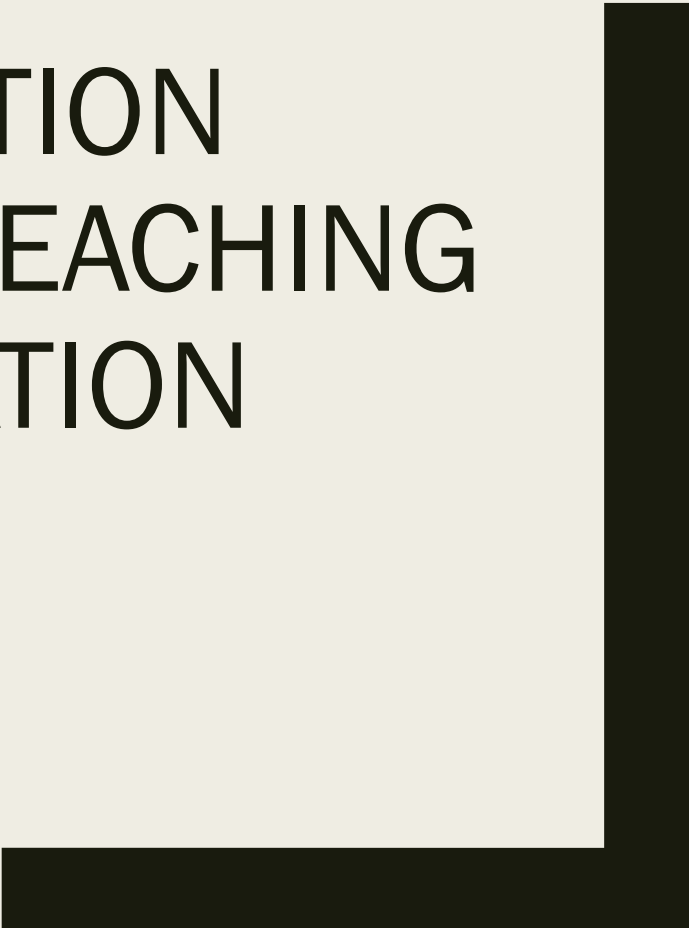# COGNITIVE APPLICATION DESIGNED TO DIGITIZE TEACHING IN REGIONAL EDUCATION

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Outline

- Background

- Educational System

- Cognitive Services

- IBM Watson

Background

- VRK plus s.r.o.

  Software Development Company specializing on Educational Domain

- Faculty of Economics, VŠB – Technical University of Ostrava

  Department of Applied Informatics

Educational system in Regional Education

- Framework Educational Programs (FEP)

- Scholar Educational Programs (SEP)

Structure of Educational Programs

Educational Area

Educational Field

Thematic Whole
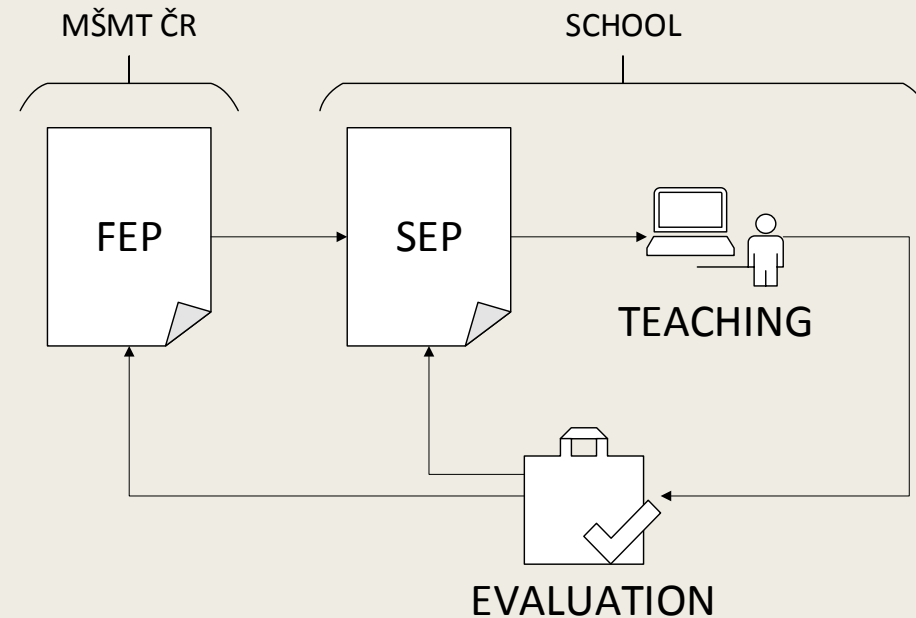
- Expected Outcomes
- Subject Matter
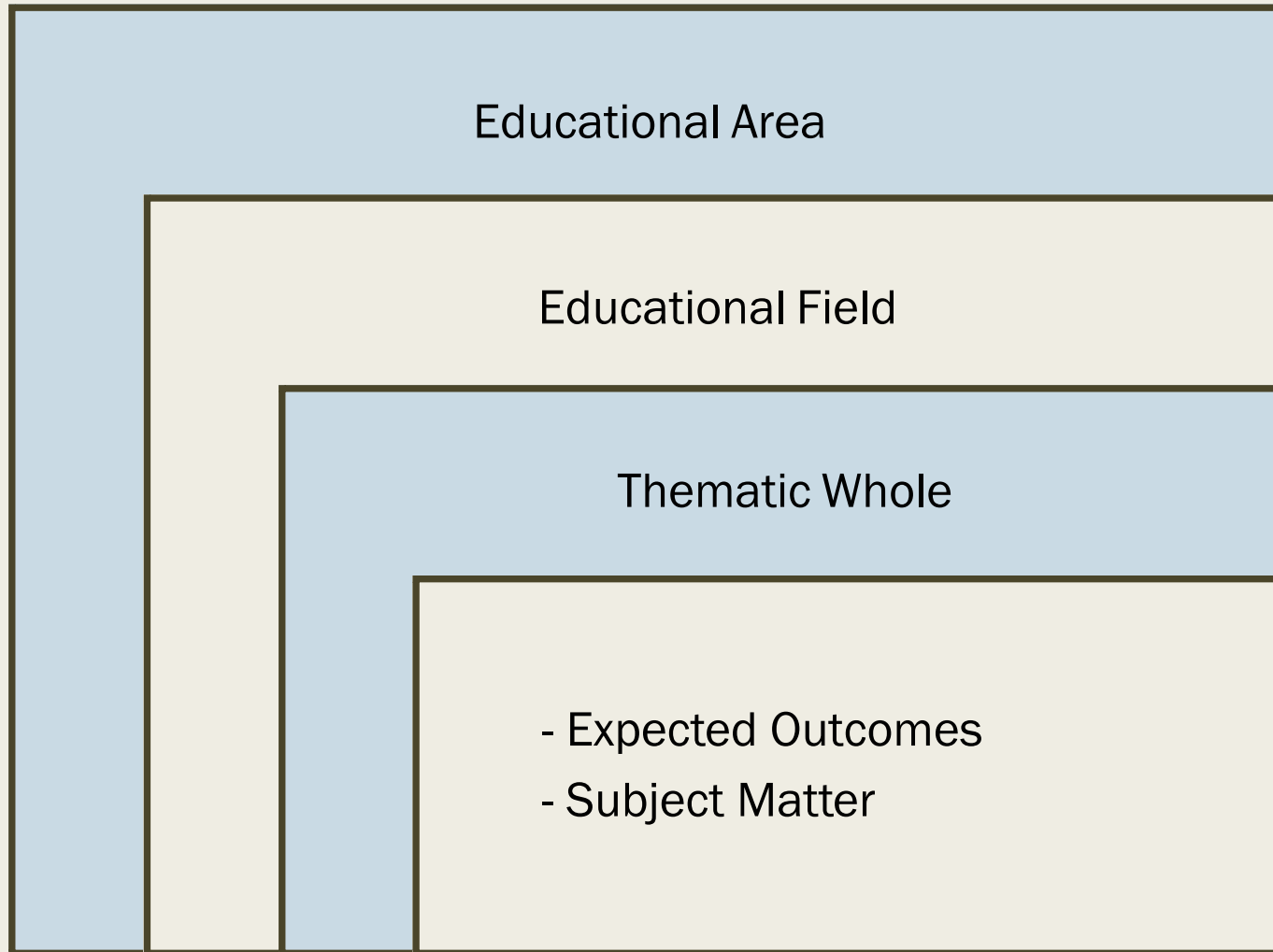
Structure of Educational Programs

FEP for Secondary General Education (Grammar Schools)

Man and Society

History

Antiquity

- Expected Outcomes

- Subject Matter
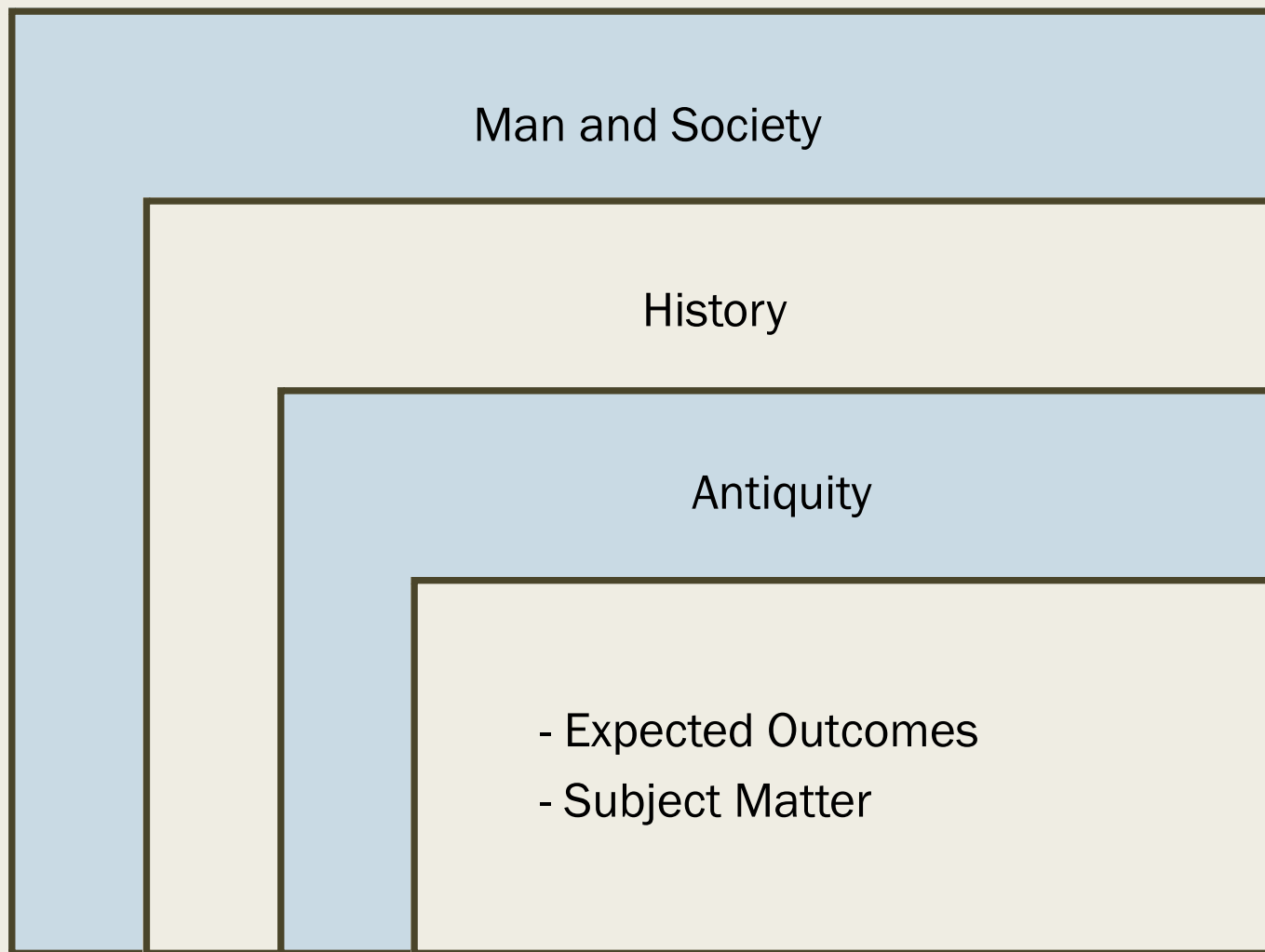
Learning Outcomes

ANTIQUITY

Expected Outcomes

The pupil shall:

▶   explain the contribution of selected ancient societies, of Antiquity and Christianity to civilisation as the basic phenomena from which European civilisation has developed

▶   elucidate Judaism (the link between Judaism and Christianity) and other non-European religious and cultural systems

▶   describe the determining processes and events, and list the important figures of ancient history
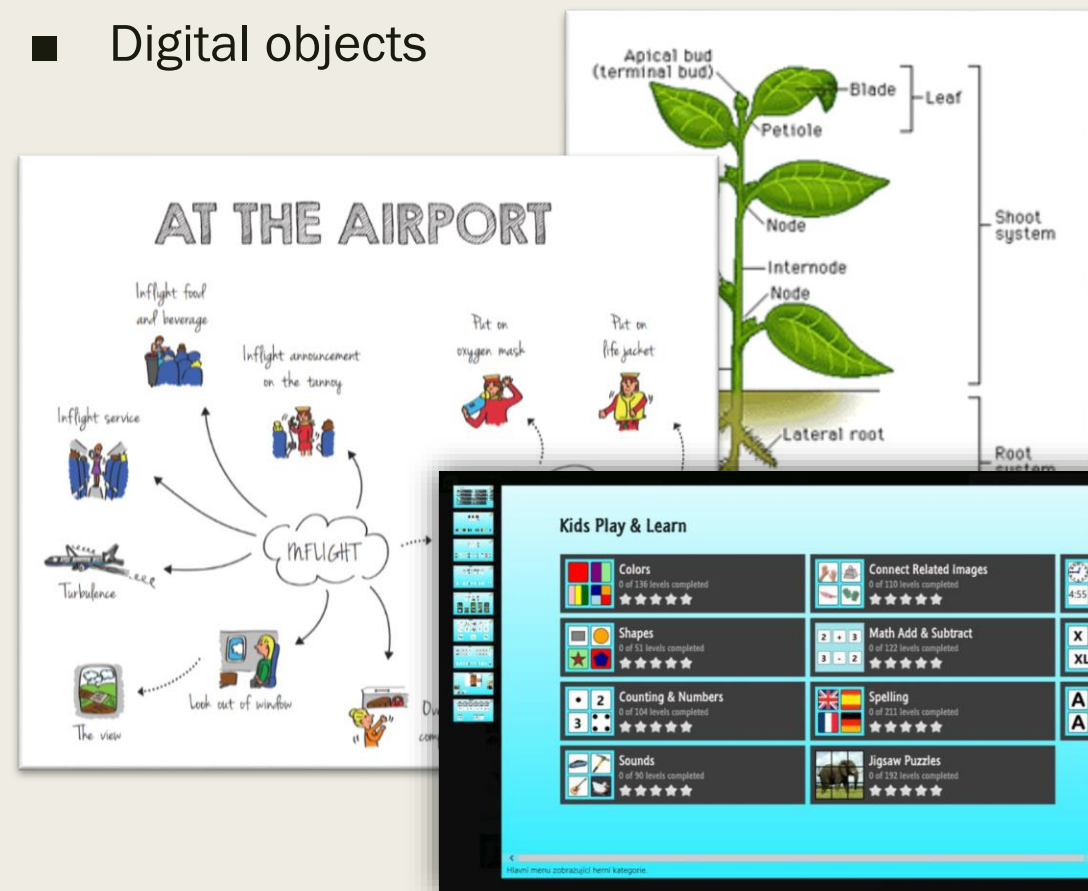
Subject Matter

- **ancient Oriental states (Mesopotamia, Egypt, India, China)**
- **ancient Greece**
- **ancient Rome**
- **our lands and the rest of Europe in Roman times; civilisation and barbarism, the Limes Romanus as the boundary of Western civilisation**

Teaching Support Materials

- Standard materials

- Digital objects

Project Electronization of Education in the Czech Republic

- **CS** Elektronizace výuky s vazbou digitálních vzdělávacích objektů na rámcové vzdělávací programy

- **EN** Electronization of Education with the Link of Digital Educational Objects to Framework Educational Programs

- CZ.01.4.04/0.0/0.0/15_005/0002733

EUROPEAN UNION
European Regional Development Fund
OP Enterprise and Innovations
for Competitiveness

Main Goals of the Project

- Launching portal ceske-skoly.info

- Publishing FEP in structured form

- Sharing materials with colleagues and other schools

- Linking digital educational objects (DEO) to FEP

Use of Cognitive Computing

- Processing FEP and SEP

- Identifying different types of DEO

- Searching relations between EP and DEO

- Big Data Analysis

- Natural Language Processing

- Visual Recognition

Cognitive Services on Cloud

Watson Services in IBM Bluemix

- Conversation
- Discovery
- Document Conversion - deprecated
- Language Translator
- Natural Language Classifier
- Natural Language Understanding

- Personality Insights
- Retrieve and Rank - deprecated
- Speech to Text
- Text to Speech
- Tone Analyzer
- Visual Recognition

- Knowledge Studio

Natural Language Understanding

- Keywords
- Entities
- Categories
- Concept
- Semantic Roles
- Sentiment
- Emotion

Examine a news article or other content

Text   URL

Classifies the materials into metals and non-metals on the basis of physical and chemical properties

Keywords

Text	Relevance
chemical properties	0.94
non-metals	0.89
metals	0.76
basis	0.75
materials	0.48

Categories

Hierarchy	Score
/ business and industrial / chemicals industry / plastics and polymers	0.84
/ technology and computing	0.11

Examine a news article or other content

Text	URL

Explain the contribution of selected ancient societies, of Antiquity and Christianity to civilisation as the basic phenomena from which European civilisation has developed.
Elucidate Judaism (the link between Judaism and Christianity) and other non-European religious and cultural systems.
Describe the determining processes and events, and list the important figures of ancient history.

English

For results unique to your business needs consider building a custom model.

Analyze

Keywords

Text	Relevance	
European civilisation		0.93
Elucidate Judaism		0.92
basic phenomena		0.79
ancient societies		0.77
cultural systems		0.72
important figures		0.70
ancient history		0.66
Christianity		0.59
Antiquity		0.46

Concept

Concept	Score	
Ancient Rome		0.94
Ancient history		0.91
Religion		0.86
Civilization		0.86
Anthropology		0.83
History		0.83
Switzerland		0.79
Alexander the Great		0.72

Categories

/ religion and spirituality / islam

0.49

/ technology and computing / operating systems

0.47

/ science / social science / history / ancient history

0.34

Conclusion

- Extending EU project

- Application based on cognitive services

- Using IBM Watson in IBM Bluemix

- At first in English

Thank you for your attention.

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