9th IT STAR WS on ICT Strategies and Applications
16 October 2015, Warsaw, Poland

Procedural Reasoning and Programming for Kids: AICA's "LOGIC" initiative

CEPIS Call for action

Computing in Schools
A Call for Action from Informatics Societies

"As ICT increasingly pervades society and the economy, the demand for IT personnel is growing fast, outpacing the current supply of qualified professionals and producing chronic shortages in the computing industry. The low numbers of students choosing computing as a career is exacerbating the situation.

*Immediate action is needed **to better integrate Computer Science in the school system and change the perception of computing among young people**"*

CEPIS Call for action

CEPIS
Council of European Professional Informatics Societies

Computing in Schools
A Call for Action from Informatics Societies

*"The school ICT curricula need to reflect a balance between the development of **Digital Literacy** and **Computer Science**.*

*Students should all acquire a set of digital literacy skills, to enable them to participate in today's increasingly digital society, but also **understand the fundamentals** of the technology so that they have the choice **to develop more advanced skills related to Computer Science**".*

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Digital competence & Computer science
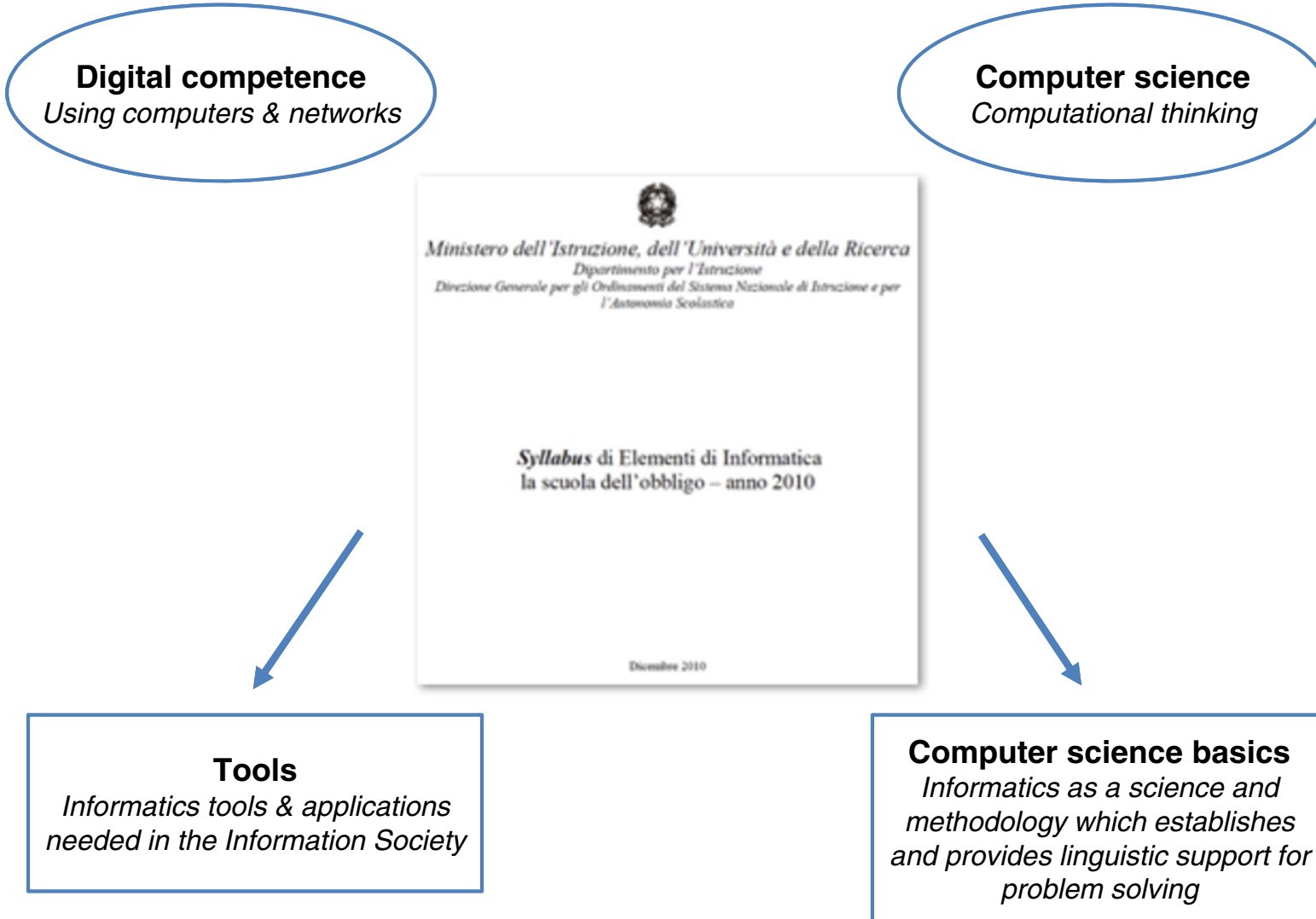
Digital competence

Digital competence involves the confident and critical use of Information Society Technology for work, leisure and communication. It is underpinned by basic skills in ICT: the use of computers to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet" (European Parliament Recommendation 2006)
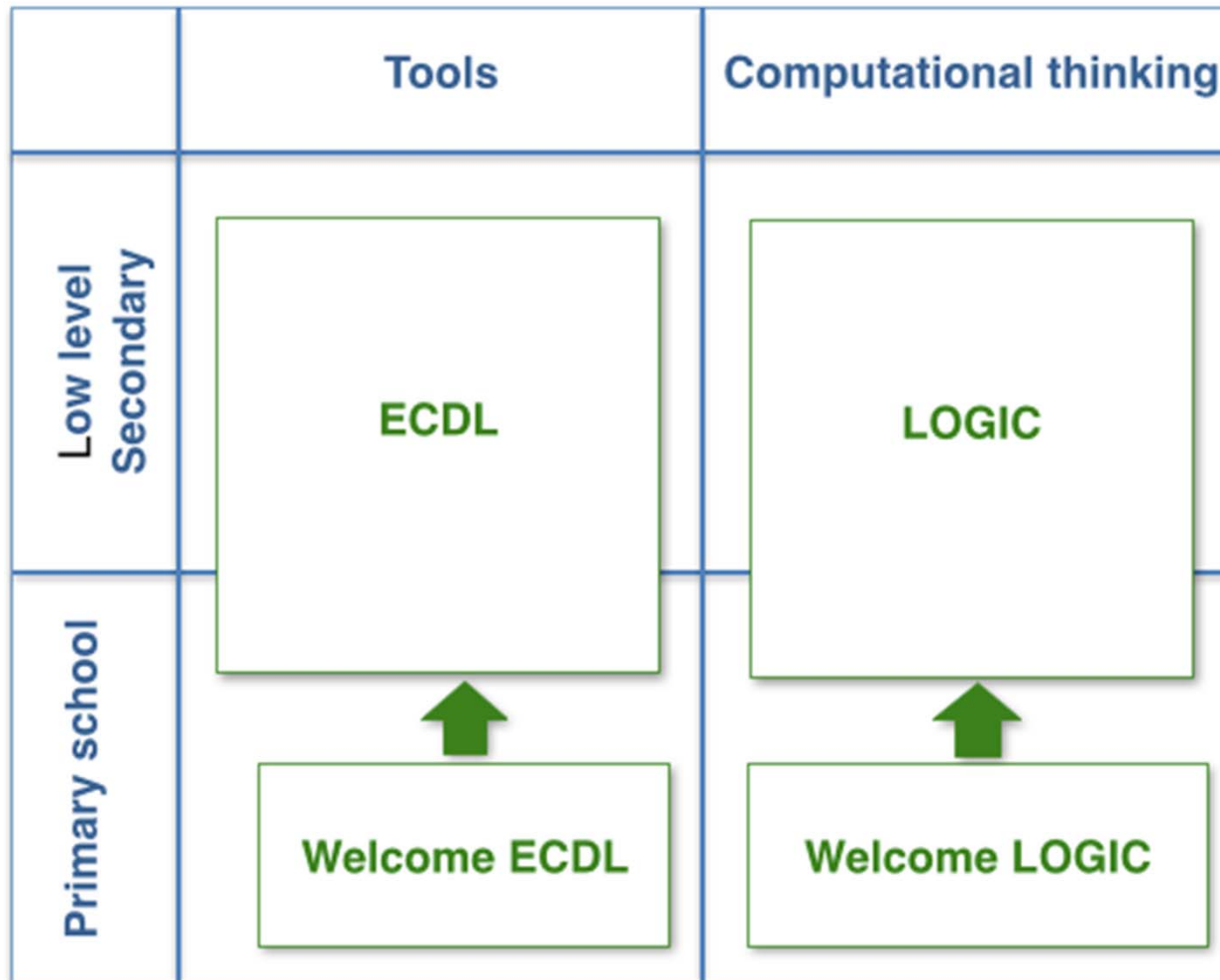
Computer science

"Computer science deals with the theoretical foundations of information and computation, together with practical techniques for the implementation and application of these foundations" (Wikipedia)

Italian Syllabus

Digital competence
Using computers & networks

Computer science
Computational thinking

Ministero dell'Istruzione, dell'Università e della Ricerca
Dipartimento per l'Istruzione
Direzione Generale per gli Ordinamenti del Sistema Nazionale di Istruzione e per l'Autonomia Scolastica

Syllabus di Elementi di Informatica
la scuola dell'obbligo – anno 2010

Dicembre 2010

Tools
Informatics tools & applications needed in the Information Society

Computer science basics
Informatics as a science and methodology which establishes and provides linguistic support for problem solving

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AICA proposal for Primary & Low Sec.

LOGIC Modules

Mod A
Pedagogical theories
(Teachers)

Mod 1
Bee bot

Mod B
Algorithms &
Problem solving
(Students)

Mod 2
Drape

Mod 3
Logo

Mod 4
Robomind

Structured exam
(Teachers)

Mod 5
Snap! by Scratch

Teacher Certificate

Mod A
Pedagogical theories
(Teachers)

Mod 1
Bee bot

Mod B
Algorithms &
Problem solving
(Students)

Mod 2
Drape
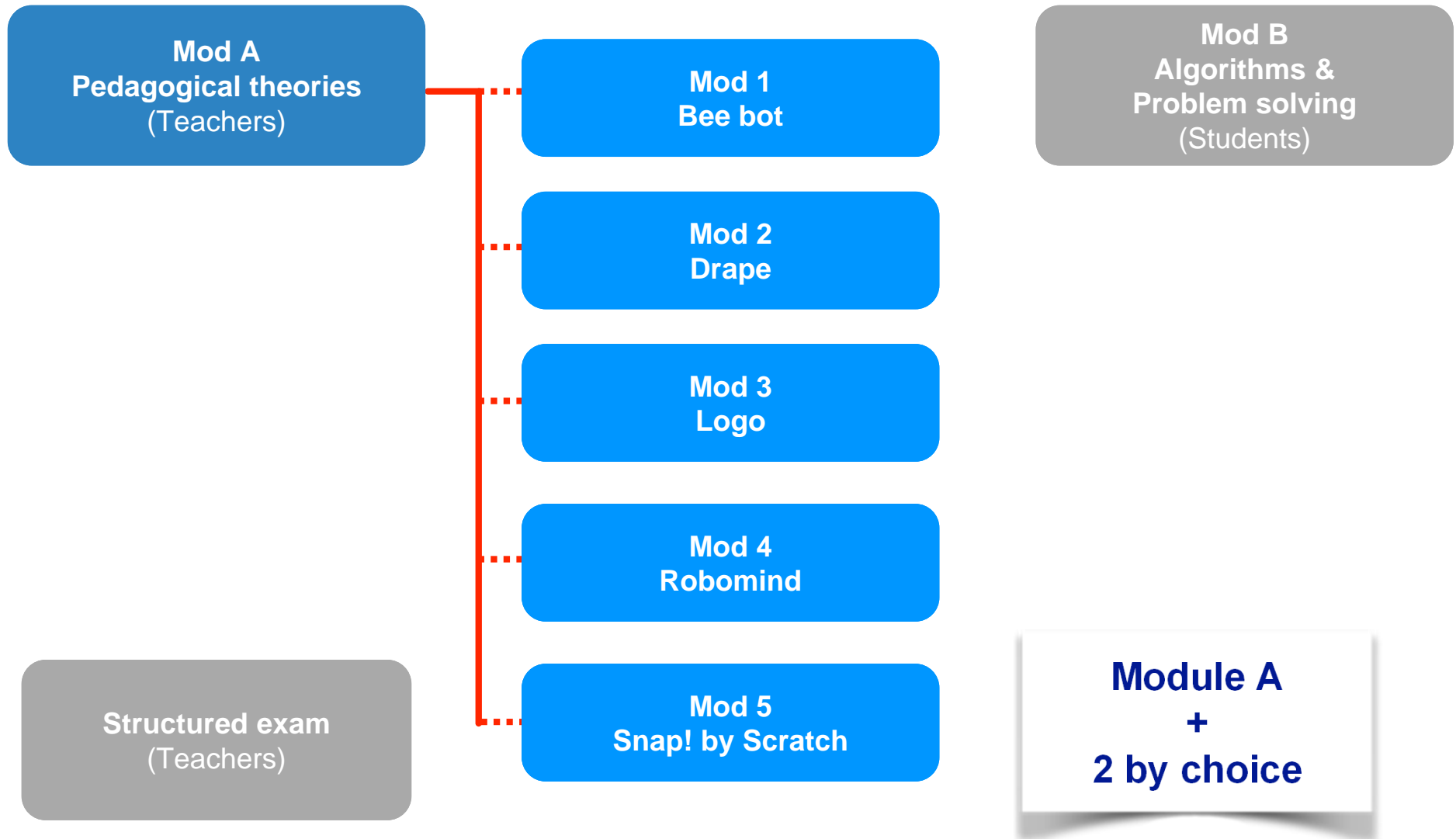
Mod 3
Logo

Mod 4
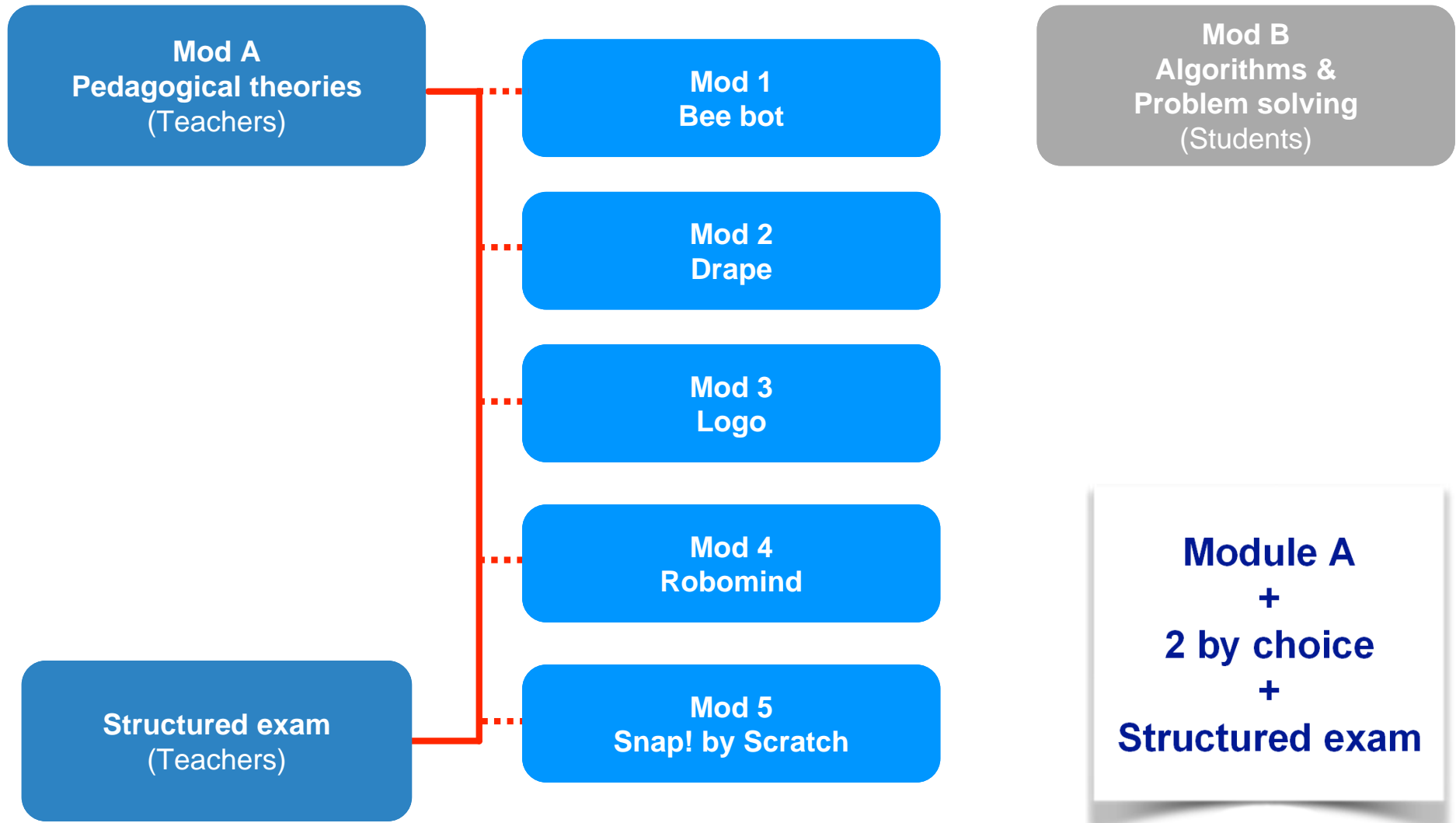**Robomind**

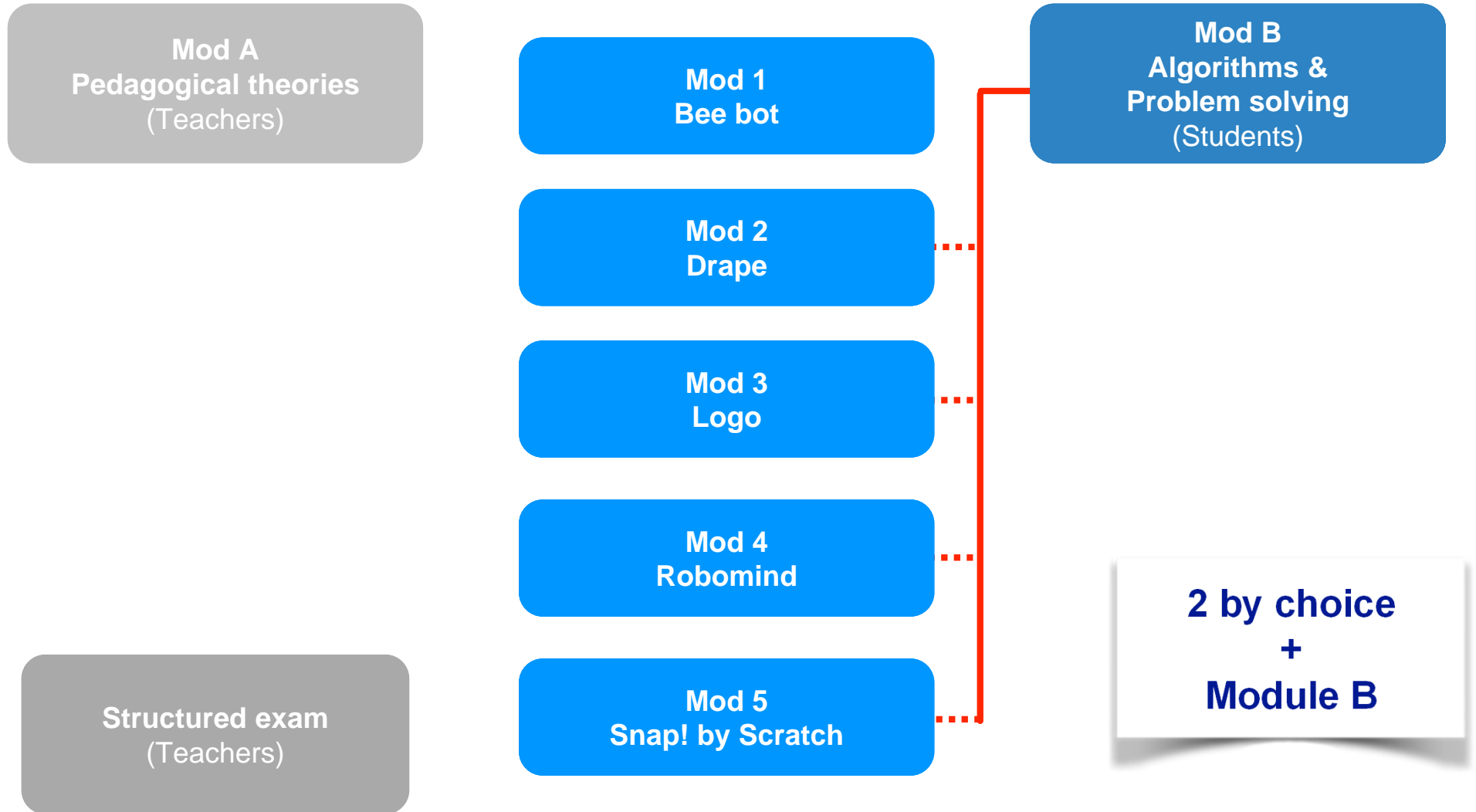**Structured exam**
(Teachers)

Mod 5
Snap! by Scratch

Module A
+
2 by choice

Expert Certificate

**Mod A
Pedagogical theories**
(Teachers)

**Mod 1
Bee bot**

**Mod B
Algorithms &
Problem solving**
(Students)

**Mod 2
Drape**

**Mod 3
Logo**

**Mod 4
Robomind**

**Module A
+
2 by choice
+
Structured exam**

Structured exam
(Teachers)

**Mod 5
Snap! by Scratch**

LoGIC

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Student Certificate

Mod A
Pedagogical theories
(Teachers)

Mod 1
Bee bot

Mod B
Algorithms &
Problem solving
(Students)

Mod 2
Drape

Mod 3
Logo

Mod 4
Robomind

2 by choice
+
Module B

Structured exam
(Teachers)

Mod 5
Snap! by Scratch

Thank you for the attention

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