GI Pedagogy
Section 4

GI Learner & GI Pedagogy

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Section 4:
GI Learner & GI Pedagogy

GI Learner - ERASMUS+ 2015-2018

A focus on resources & pupil centered learning.

Now: GI Pedagogy (2020-2022)

More attention paid to pedagogy.

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GI Learner: Learning line

GI Learner competencies			K7-8	K9	K10	K11	K12
1	**Critically read, interpret cartographic and other visualisations in different media**	**interpretation**	A	B	C		C
	A: Be able to read maps and other visualisations	Example: use legend, symbology ...					
	B: Be able to interpret maps and other visualisations	Example: use scale, orientation; understand meaning, spatial pattern and context of a map					
	C: Be critically aware of sources of information and their reliability	Example: critically evaluate maps identifying attributes, representations (e.g. inappropriate use of symbology, or stereotyping) and metadata of the maps					
2	**Be aware of geographic information and its representation through GI and GIS.**	**learning about**	A	B	C		C
	A: Recognize geographical (location-based) and non-geographical information	Example: describe GPS, GIS, Internet interfaces; be able to identify geo-referenced information					
	B: Demonstrate that geographical information can be represented in some ways	Example: employ some different representations of information (maps, charts, tables, satellite images...)					
	C: Be critically aware that geographic information can be represented in many different ways	Example: be able to evaluate and apply a variety of GI data representations					
3	**Visually communicate geographic information**	**produce**	A		B		C
	A: Transmit basic geographic information	Example: produce a mental map, be aware of your own position					
	B: Communicate with geographic information in suitable forms	Example: basic map production for a target audience - using old and new media, Share results with target group					
	C: Be able to use GI to exchange in dialogue with others	Example: discuss outcomes like survey results/maps online or in class, referring to a problem in own environment					

https://www.gilearner.ugent.be/wp-content/uploads/GI-Learner-competencies.pdf

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GI Learner: Materials

Age group	Module subject	Teacher version (EN)	Extra material	DE	EN	ES	FR	NL	RO
K7	Student location	✓	✓	✓	✓	✓	✓	✓	✓
	Physical landscapes	✓		✓	✓	✓	✓	✓	✓
K8	Tourism	✓	✓	✓	✓	✓	✓	✓	✓
	Urbanisation	✓		✓	✓	✓	✓	✓	✓
	Biosphere biodiversity	✓		✓	✓	✓	✓	✓	✓
K9	Economic disparities	✓		✓	✓	✓	✓	✓	✓
	Water security	✓		✓	✓	✓	✓	✓	✓

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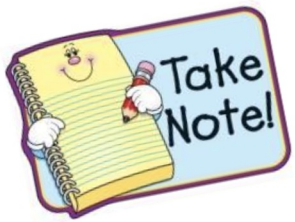
GI Learner Case Studies

1 E.S.O.: Mi localidad

Edad, grupo, nivel de conocimiento y habilidades.	K7 (1º ESO)
Tiempo estimado	50 minutos – 1 tema
Envío de resultados	Documentos de word



Crea un texto (por ejemplo en Word o en OpenOffice) y guárdalo como Mi localidad

Responde a las cuestiones 1 a 4 en tu Portfolio sobre tu localidad, añade los volcados de pantalla que sean necesarios en cada momento.

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How to use GIS in education?

- Teach ABOUT GIS
- Teach WITH GIS
- Using innovative pedagogical approaches
- Apply GI Pedagogy model, vignettes and training course

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GI Pedagogy

- GI Pedagogy is about planning learning, not lessons.
- Start with younger students and build up their (and your) skills over time by repeated exposure to GIS.

If using GIS doesn't improve the learning, then don't feel you have to use it!

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GI Pedagogy

GI Pedagogy learning materials / Vignettes are related to Sustainable Development Goals because these are considered key goals for the future of our students and our world.

Geography as a discipline, geomedia as real world connection and critical & spatial thinking as a competencies are part of the solution.

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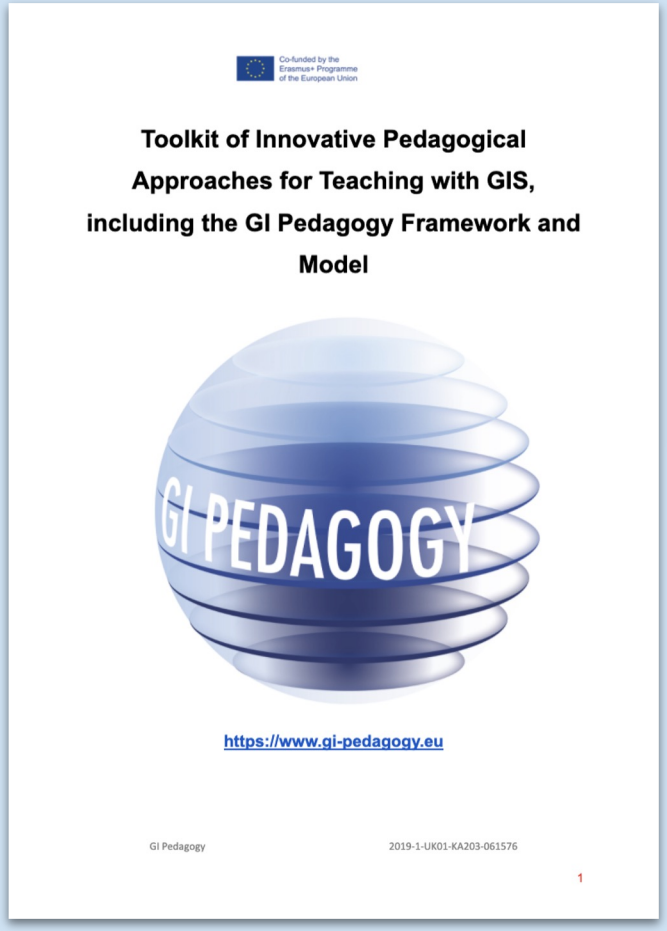
GI Pedagogy toolkit

Very **practical** guide on how to use GIS in education

Easy to read and understand

Available online here for free



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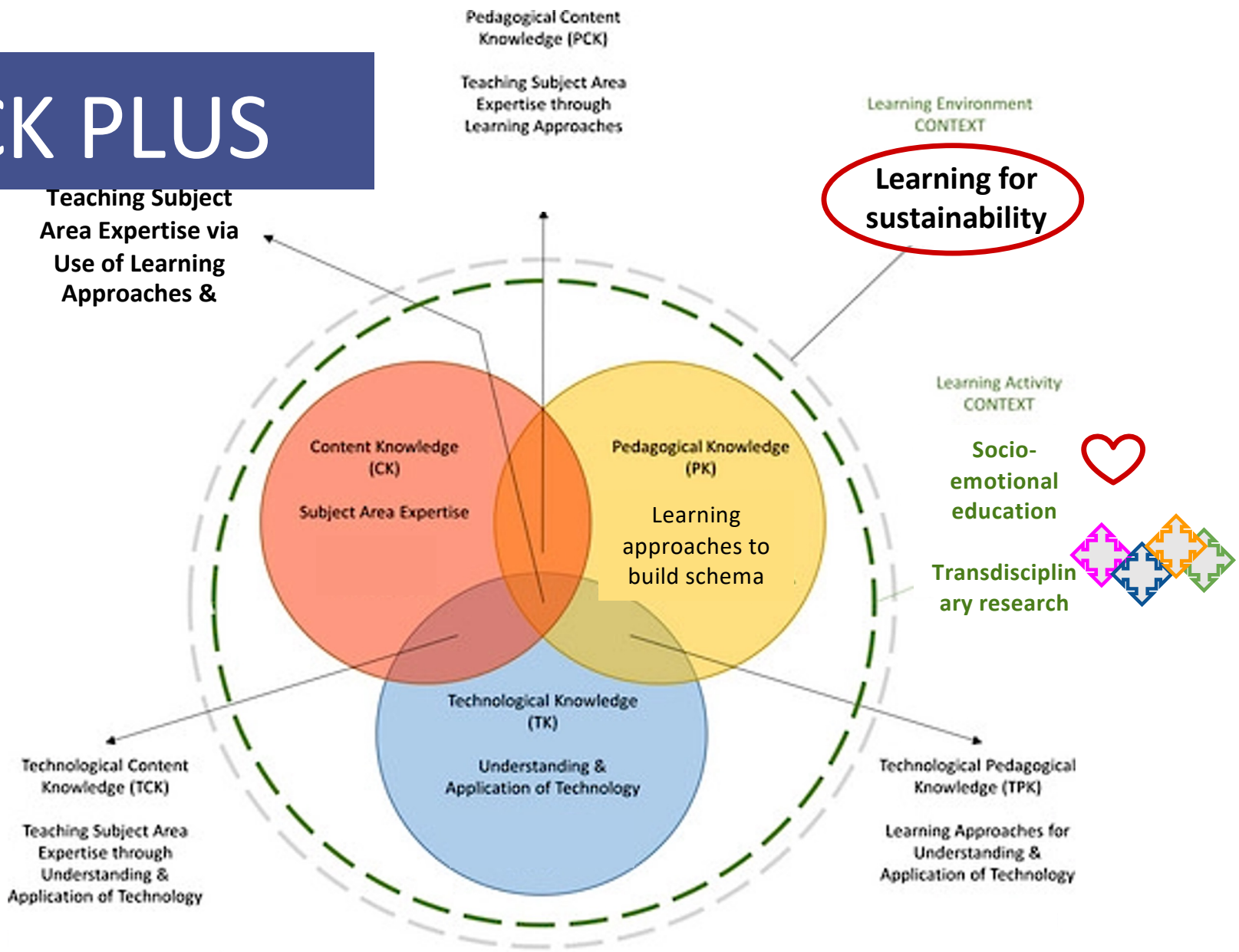
TPACK PLUS


Pedagogical Content Knowledge (PCK)
Teaching Subject Area Expertise through Learning Approaches
Learning Environment CONTEXT
Learning for sustainability
Teaching Subject Area Expertise via Use of Learning Approaches &
Content Knowledge (CK)
Subject Area Expertise
Pedagogical Knowledge (PK)
Learning approaches to build schema
Learning Activity CONTEXT
Socio-emotional education
Transdisciplinary research
Technological Knowledge (TK)
Understanding & Application of Technology
Technological Content Knowledge (TCK)
Teaching Subject Area Expertise through Understanding & Application of Technology
Technological Pedagogical Knowledge (TPK)
Learning Approaches for Understanding & Application of Technology

Learning Sustainability

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Learning Sustainability

LOs	*Learning objectives*	
	● Observe economic inequalities in the world. ● Define and describe indicators related to inequalities. ● Interpret the same indicators mapped in different viewers. ● Explain how changing the intervals on a map can contribute to providing different results using the same data (critical thinking) Can link to SDGs especially: 	
Res	**Key resources**	
	GIS resources: ArcGIS Online platform with data layers related to inequalities and learning how to change intervals on a map, e.g., in this one: https://arcg.is/015vqy Data and maps in other viewers: ●World Bank: World Development Indicators: https://databank.bancomundial.org/source/world-developme 	

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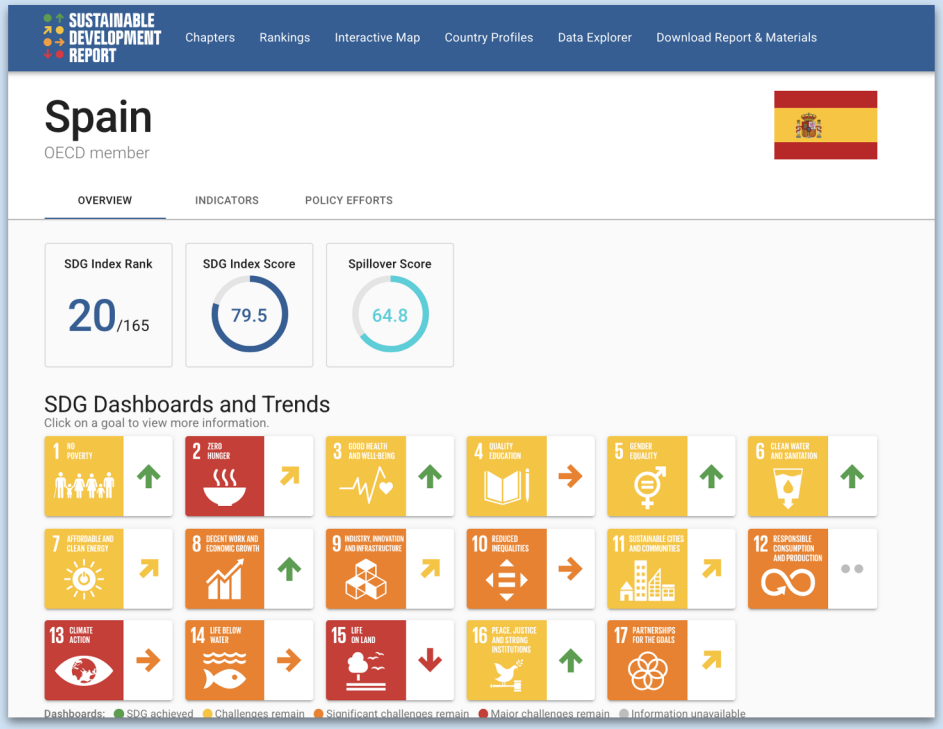
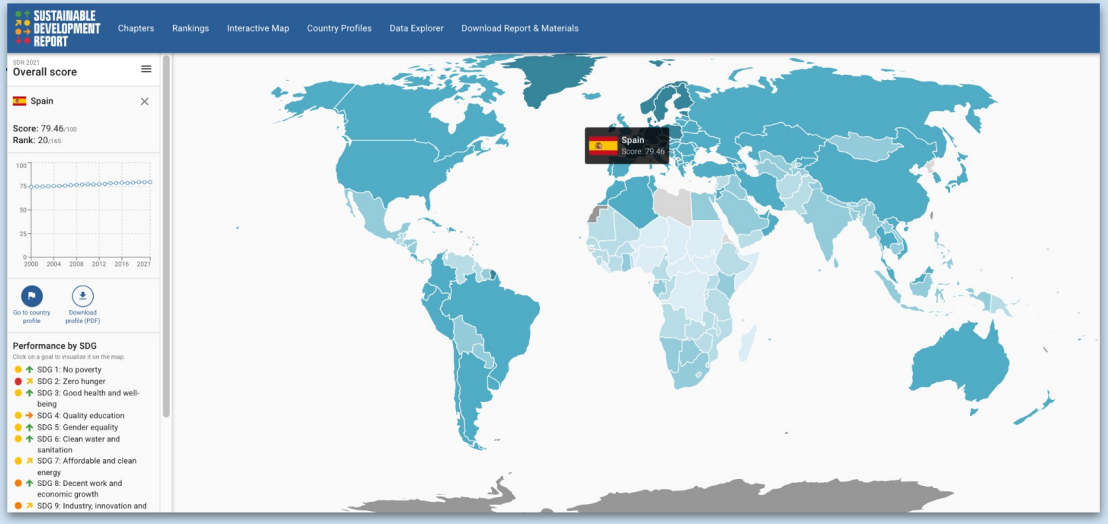
SDGs: Tracking progress



https://dashboards.sdgindex.org



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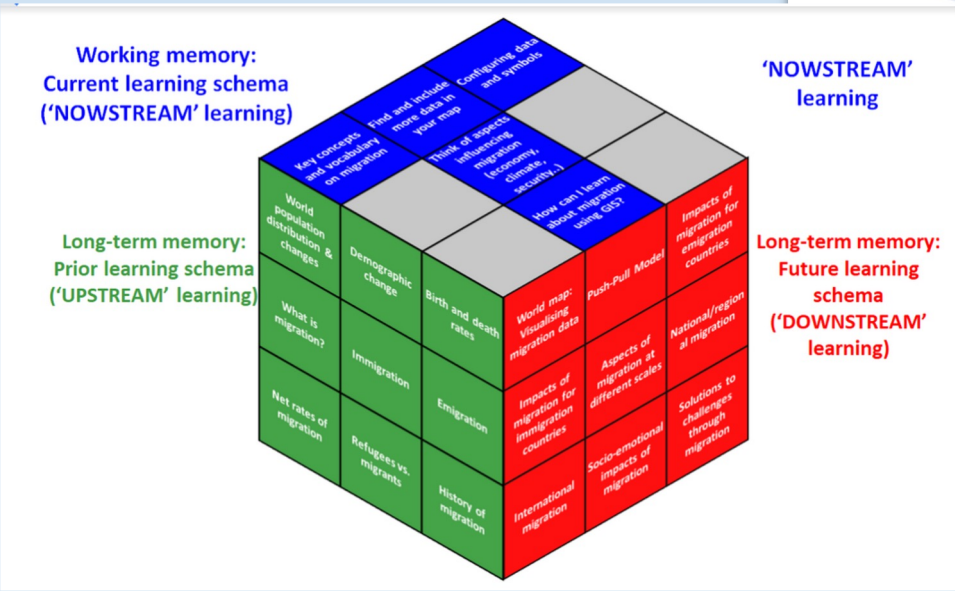
Vignettes

Learning materials using

- Concept cube
- Step model
- Principles of instruction

Available online & for free!



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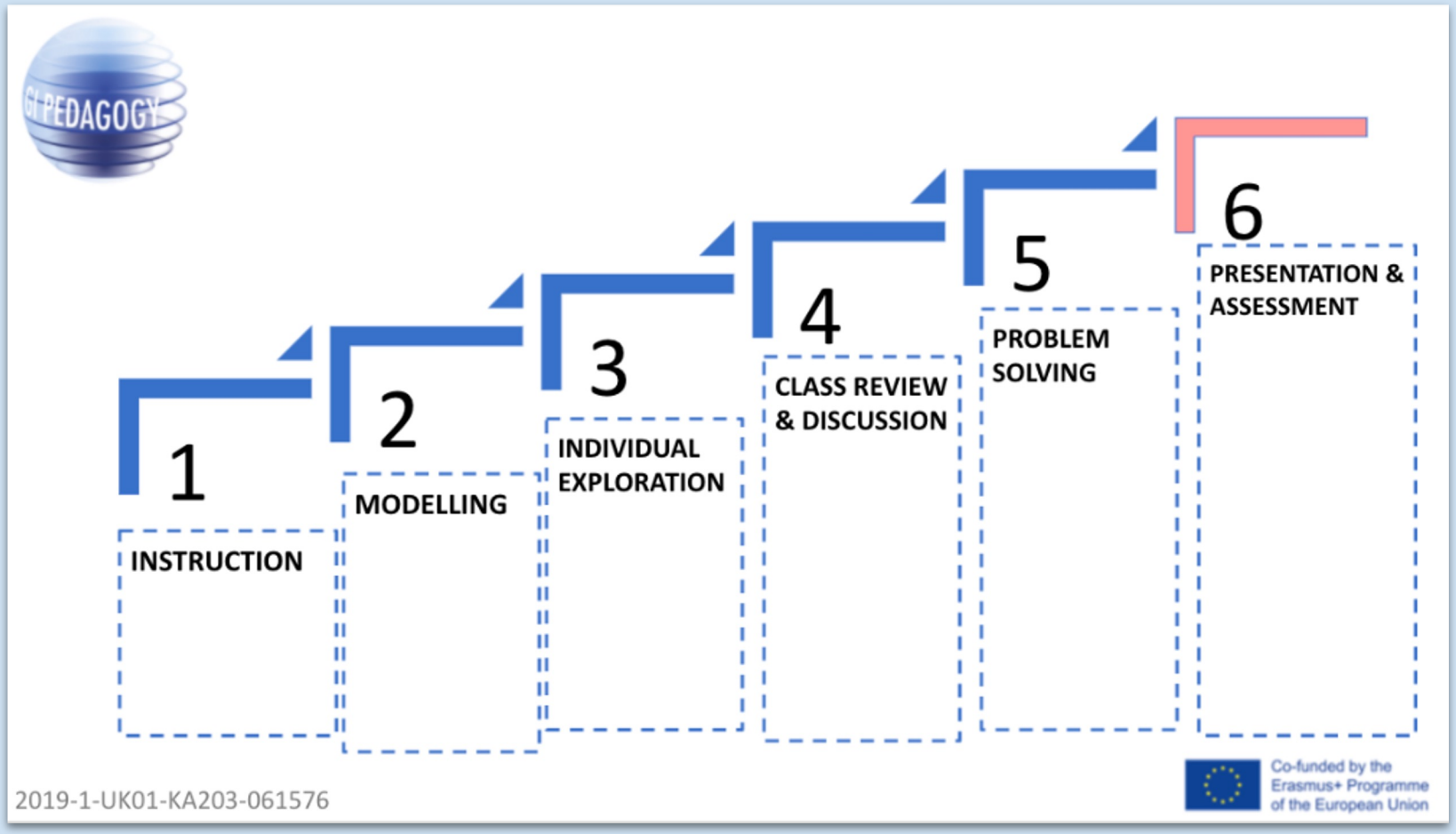

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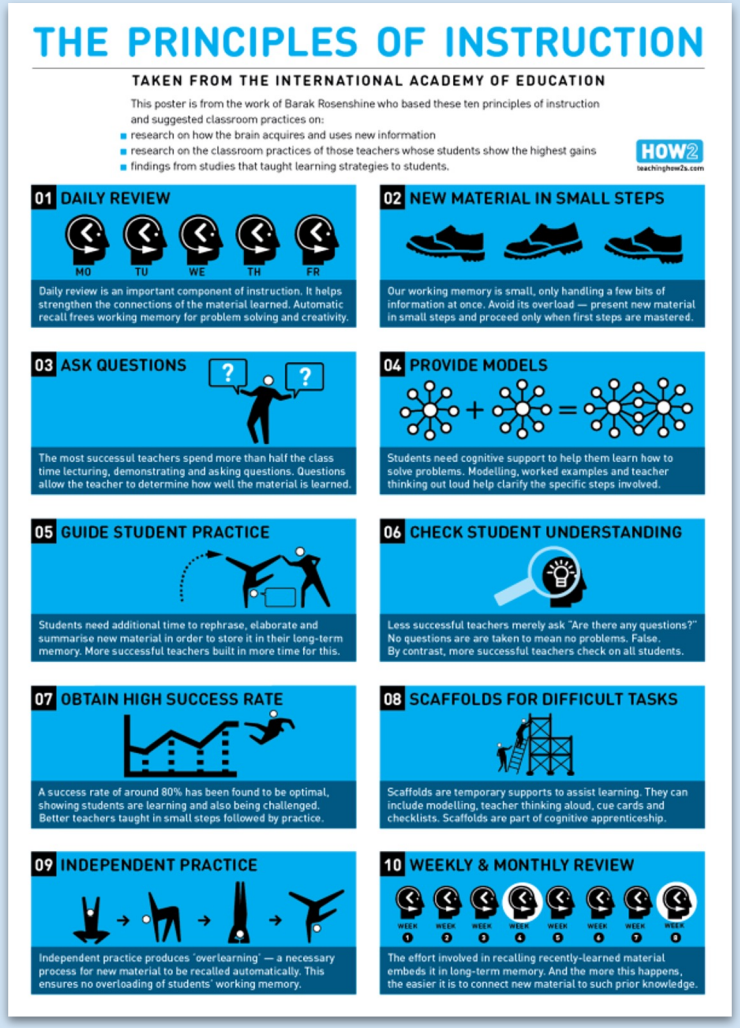

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Conclusions

Use GI Learner & GI Pedagogy materials for your teaching!

Available online & for free!

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