4. Quality criteria: How to assess a case study and an example of teaching and learning results in training teachers

- Teaching approach in Web GIS and sustainability issues.
- Criteria to take into account.
- UNED results in using GI-Pedagogy model to enhance trainees learning.

Teaching approach (Key aspect)	About / theory (Doing Things Better)	Using/ apply (Doing Better Things)	Investigate and Transform (Doing Things Differently)
Web GIS	Teaching and learning about Web GIS	Teaching and learning using Web GIS	Investigate and visualize in Web GIS to understand and transform with knowledge
Sustainability	Learning about sustainability	Learning embedding concepts related sustainability approach	Learning for sustainability in transformative actions (theory and practice)
Responsibility/ commitment (lies in)	Teacher	Teacher	Teacher and student

Quality criteria or indicators for learning outcomes evaluation: selfevaluation. coevaluation. crossevaluation. external evaluation and supervised evaluation. Mark/grade	Excellent The vignette fully addresses all relevant aspects of the objectives. Any shortcoming is minor. (1)	Quite aceptable (very good) The vignette addesses the question very well. although certain improvement are still possible. (0.75)	Moderatly aceptable (good) The vignette addresses the question well. but improvements would be necessary. (0.5)	Partially done (poor) The vignette broadly addresses the question. but there are significant weaknesses. (0.25)	Not done (fail) The vignette fails on the informati on required (0)	Total
Adequacy of the chosen title (the title is a good umbrella of the content) and it is inside the current curricula						
Provides key information on the development and implementation of the vignette (scaffolder)						
Contains activities with the detail required in the quality standards						
Explanatory coherence of discourse. fluency. clarity of ideas and argumentation (It is understandable). Focuses the topic on student learning (powerful learning).						
Correct application of the concepts learnt in the subject by the author of the vignette (The key concepts explained in the vignette are clear. well defined and official sites have been used)						
It encourages **critical thinking.** Suggests new questions and reflections that open bridges to subsequent debates.						
Correct application of geoinformation. digital interactive maps. geotechnologies. particularly GIS for learning aims						
Content. spelling and grammatical expressions are correct.						
In relation to education for the Sustainable Development Goals (SDGs): Have you made any reference to how to educate for the Sustainable Development Goals (SDGs) by providing concrete steps to achieve any of the sustainability competences? Have the following competences on sustainability been achieved: a) Critical analysis; b) Systemic reflection; c) Responsibility for future generations; d) Ability to make decisions collaboratively? Are there activities to assess the SDG learning progress? See UNESCO document for a further knowledge: https://unstats.un.org/sdgs/indicators/Global%20Indicator%20Framework%20after%202022%20refinement_Eng.pdf						
Meets the standards of the work requested (template / Rosenshine principals)						

Academic results in the subject of Complements for the Disciplinary Formation in Geography
(UNED Master for initial training teachers of secondary school)

Academic year	Students submitted (registered)	Final oficial results February (presentados)	Standard Deviation (Jun)	Self evaluation	Calific-ations in peers Aropä	Standard deviation in Aropä	Average discrepancy	Final work done (SDG integration)
2020-2021	56 (64)	8.02 (51)	1.47	-	7.98	1.61	1.25	Traditional working plan
2021-2022	58* (75)	8.74 (58)	0.90	7.48	8.84	0.88	1.33	Vignette

Academic results in the subject of Complements for the Disciplinary Formation in Geography
(UNED Master for initial training teachers of secondary school)

Academic year	Students submitted (registered)	Final official results	Standard Deviation	Final work done
2020-2021	51 (64)	8.02 (51)	1.47	Traditional working plan
2021-2022	58 (75)	8.74 (58)	0.90	Study cases (GI-Pedagogy model)

Academic year (n)	Indicators	Viewing other students' didactic units has been helpful to my own learning	The feedback provided on my own work has been helpful	The review has provided me with a better understanding of how I am progressing in this course	It has served me to improve my ability to reflect on my own learning and skills	The reviews provided have helped me to improve my analysis and critical skills	It has improved my learning about rubric assessment	I agree with the grade I received	Overall. the peer review experience has been helpful
2020-2021 (17)	Average	4.35	4.06	4	4.06	4.12	3.71	3.88	4.12
	Mode	4	4	4	4	4	4	4	4
	Standard deviation	0.49	0.75	0.79	0.83	0.60	0.77	0.78	0.60
2021-2022 (22)	Average	4.5	4.64	3.84	4.76	4.88	4.07	4.76	4.25
	Mode	5	5	5	5	5	4	5	5

Thank you very much

GI PEDAGOGY

St Mary's University London

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