ORGANISING PROGRAMS AND METHODS FOR CREATIVELY TEACHING LANDSCAPE ECOLOGY IN E.U. MEDITERRANEAN COUNTRIES

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Abstract

Structuring of programs and methods for teaching Landscape Ecology creatively at high school level in E.U. (European Union) Mediterranean countries are discussed in this article. Consequently, solutions and examples of how should Mediterranean Landscape Ecology be taught creatively and how should these tutorials be incorporated in the actual curricula are given. Five distinct indicative examples are provided showing how landscape ecology can be taught creatively at high school level, either as a module within a course of geography, biology or ecology, or as a separate module on its own.

Mediterranean Landscape Ecology and Education

The teaching of Landscape Ecology in these countries is usually split up in to the teaching of geography and biology. Neither geography nor biology courses, however, are well suited to organise explicit landscape ecological tutorials, because the relevance of landscape ecology to either of these disciplines becomes less and less important, so long as landscape ecology becomes a science on its own. This occult situation poses questions about the structuring of landscape ecology tutorials, with particular reference to the curricula of the E.U. Mediterranean countries.

Mediterranean landscapes present a very wide range of landscape ecological problems, which are of great interest to ecologists, planners and teachers: ecosystem degradation, intensification of agriculture, abandonment of agriculture, land use changes, rapid urbanisation, pressure exercised by increasing touristic activities, waterlogging and salinization, soil erosion, desertification and drought, etc. (Papadimitriou and Mairota, 1998; 1998a). These problems have been subject to extensive studies funded by virtually every relevant national, regional and international environmental agency. Planning Mediterranean landscapes for sustainability (Papadimitriou, 1998) is complicated and leaves much room for further research.
Any assessment of geography schoolbooks actually used in Mediterranean E.U. countries would reveal that landscape-related problems are under-represented in most of these schoolbooks. It can also be shown that there is no overall plan for teaching landscape-oriented ecology, much less so landscape ecology. Consequently, it is suggested that landscape ecology tutorials can be taught creatively and for this task to be achieved, tutorials may contain problems and exercises, which may require the student to apply principles of landscape ecology, either in the classroom or afield.

**Teaching landscape ecology creatively**

Tutorials of landscape ecology may contain problems, of which examples are given below.

1. **Data:** Map of landscape A in time \( t=t_1 \).
   Creative activity: Draw a map of landscape A in time \( t=t_2 \), considering that certain land covers/ uses will increase, whilst other ones will decrease in area. Imagination is cultivated in this exercise and the student should make scenarios and ponder different probabilities of spatial changes.

2. **Data:** Map of landscape A in time \( t=t_1 \) and a transect on it, preferably along an ecosystem degradation/ succession area of the landscape.
   Creative activity: Draw the land cover along the transect. The student appreciates how ecosystem degradation and/or succession develops, whilst drawing the trees, shrubs etc. along the transect.

3. **Data:** Maps of landscape A in time \( t=t_1 \) and \( t=t_2 \).
   Creative activity: Identify changes and interpret the changes by speculating on the possible physical, social, economic and other causes of these changes.

4. **Data:** Map of landscape A in time \( t=t_1 \).
   Creative activity: Draw lines and areas to connect corridors and isolated patches, to enhance and/or retain ecosystem function.

5. **Data:** An empty rectangle drawn on a piece of paper.
   Creative activity: Draw boundaries, patches and corridors of any imaginary landscape, so as to depict as many modes of landscape ecology-oriented land management as possible (e.g. creation of corridors, increase of connectivity, preservation of hedgerows).

**Conclusion**

Teaching landscape ecology can be incorporated within the course of Geography or Biology, although neither of these courses appears rich enough in landscape ecological
organising programs...

approaches. There seems to be a very long way ahead for curriculum designers until they actually incorporate notions and methods of landscape ecology in high school curricula. It is imperative however, that landscape ecology forms part of any well designed course or subcourse in ecology. The few examples brought forth within the context of this study have no other aim but to show how landscape ecology can be taught creatively. Creative teaching is important for students to realise their own intellectual and artistic potential and see the applicability of landscape ecological principles for themselves.

References

