

SPACE: AN INTERDISCIPLINARY PROGRAM FOR TEACHERS

Bernadette DENYS

**I.R.E.M.
Université Paris 7-Denis Diderot
FRANCE**

Bernard DARRAS

**Centre de Recherche sur l'Image
Université Paris1-Panthéon-Sorbonne
FRANCE**

1. The difficulties and questions arising from the implementation of single-discipline programs in educational institutions have led to the search for a different approach to teaching. In France, the Ministry of National Education has set up interdisciplinary studies at various levels of secondary education in order to bring about this new approach.
2. MAG7 (Paris 7 IREM), a multidisciplinary group consisting of seven teachers and researchers in education, directs its efforts toward elucidating the relationship with space as it appears both specifically within the three disciplines taught (maths, plastic arts, and geography), and in ordinary communication. MAG7 uses the results of its work to construct a common training program on the subject of the relationship with space for teachers in these disciplines at the middle-school level (years six through nine of compulsory education).
3. The objectives of the program are the following:
 - to promote awareness of the ways each discipline approaches the concept of space
 - to compare and articulate the various points of view, and attempt to define an axis of communication and collaboration among the disciplines.
4. This training program consists of eight three-hour sessions.
 - The goals of the course are presented, followed by an interactive introduction to ordinary communication and the analysis of images (diagrams, photos, multimedia) that are considered to be inter- or trans-disciplinary.
 - Each of the disciplines is introduced by means of a case study concerning learning about space. Although placed in a specific context, it can prompt an exchange of ideas from the points of view of the various disciplines.
 - Activities involving the collaboration of teachers from at least two disciplines are proposed, carried out, analyzed, and evaluated.
5. Is it possible to join different sorts of knowledge together, and to build bridges between the disciplines involved in learning about space? If so, how? Herein lies the heart of the debate on interdisciplinarity in education.

References

- B. Darras, *Au commencement était l'image*, Paris, ESF éditeur, 1996.
B. Denys, B. Darras, Space as a locus of poly- and trans- disciplinarity in mathematics, art and geography:, *SOC, Proceedings of PME 24*, 1-152, Hiroshima University, 2000
E. Morin, *Relier les connaissances. Le défi du XXIème siècle*, Paris, Seuil, 1999