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Visualization/Maps and People

The Interaction of the Didactic of Cartography and Geography. ICA Session 38c
Nakos, B; Filippakopoulou, V.; and Michaelidou E. (Greece)

Development of School Atlases for Local Studies. ICA Session 42a
Doin de Almeida, R.. (Brazil)

Découvrir la géographie au moyen d'un atlas scolaire de sa ICA Session 42d
Commune.
Gisèle Le Sann, J. G. (Brazil)

Cartographic Literacy in Children

The Barbara Petchenik Children's Map Award: QUO VADIS? ICA Session 45a
Anderson, J.M. (Canada)

Pour une didactique du langage cartographique à l'école ICA Session 45b
Secondaire.
Benimmas, A.; Raveneau J-L.; and M'hammed Zgor, M. (Canada)

Combining Traditional and Modern Methods in Practical ICA Session 45c
School Cartography.
Bac-Bronowicz, J. (Poland)

Promoting children's collaborative learning in cartography with a ICA Session 45d
software mapping tool.
Wiegand, P.; and Tait, K. (United Kingdom)

Electronic and Analytical Atlases

A New Swedish School Atlas. ICA Session 50d
Elg, M. (Sweden)

* There were several posters relating to Cartography and Children. These, however, could not be included as the abstracts of these presentations were not included in the CD-ROM.

The Interaction of the Didactic of Cartography and Geography

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Abstract

In this paper, the interaction of the basic elements of the didactic of geography and those of cartography, are examined and discussed and an implementation approach of introducing cartography in the elementary schools is proposed. Although the didactic of geography is an independent scientific topic, is based on the theory and the results of other sciences, such as geography which determines the content, general didactic, psychology and pedagogics which help to form the teaching methods on the one hand and evaluate the teaching process on the other. But, what is the role of map inside the body of such a complex mixture of scientific topics? This question could be answered theoretically by examining the relation between geography and cartography. Considering the didactic of cartography in isolation from the didactic of geography, three keywords: why, what, and how of school cartography are determined. A theoretical approach is developed for the determination of these keywords, and methods of introducing the cartographic concepts to primary school students are proposed.

Development of School Atlases for Local Studies

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Abstract

This study consisted of the elaboration of school atlases for three municipalities in the state of São Paulo, Brazil, destined for nine-to-twelve year-old students. For the research team, which consisted of a university professor and elementary public school teachers, this required the development of both products and methodologies. It was necessary to create procedures for the production of the material as well as for its validation. This task made it possible to join technical concerns of cartographic representation with dilemmas of the classroom, opening a space for the establishment of methodologies in cartographic education.

Découvrir la géographie au moyen d'un atlas scolaire de sa commune

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Résumé

Au Brésil, actuellement, les programmes officiels pour l'enseignement de la géographie, dans les classes primaires, recommandent l'étude de l'espace local, dans le but de "développer la capacité d'apprendre (...), de faciliter la compréhension de l'environnement naturel et social, du système politique (...)". Étant donné que les enseignants de ces classes ne reçoivent aucune formation spécifique en géographie et qu'il n'existe pas de matériel didactique qui traite de l'espace communal, ce projet développe une méthode d'approche géographique de la réalité spatiale de la commune, adaptée aussi bien aux élèves qu'aux enseignants.

En continuation de l'étude d'un "Matériel pédagogique pour l'enseignement de notions de base de géographie, dans les classes primaires, au Brésil" (Titre de la thèse de doctorat défendue à l'École des Hautes Etudes en Sciences Sociales - Paris-France, en 1989), plusieurs "Atlas Escolar Municipal" de communes de l'état de Minas Gerais ont été publiés, tels que ceux de Contagem (1996), Gouveia (1997), São Gonçalo do Rio Preto (1999) et Santo Antônio do Itambé (1999). Six autres sont en cours d'élaboration.

Les principaux objectifs du projet sont d'amener l'enfant à former des opinions personnelles et à prendre conscience de la responsabilité de ses actes, et attitudes comme futur citoyen, à partir de la connaissance et de la compréhension du milieu dans lequel il vit. Pour cela, il devra apprendre à percevoir, représenter et connaître son environnement; analyser, traiter et interpréter les données issues de ses observations, de statistiques, ou de n'importe quelle autre source d'information; exercer un raisonnement logique, tout en respectant les divers points de vue de ses collègues.

La méthode de travail est basée sur les principes suivants: partir de la connaissance des enfants; des concepts de base de la géographie pour construire la notion d'espace, pas à pas, du simple au complexe; accroître l'échelle de compréhension de celui-ci; fournir des données actualisées comme support pour la construction de son savoir; proposer des techniques de représentation, analyse et communication des informations adaptées au niveau des enfants; et, diversifier les moyens pédagogiques pour induire la participation active de l'enfant au cours du processus d'acquisition des connaissances.

L'Atlas se compose de trois parties: la première présente des planches inachevées avec les plans des quartiers du noyau urbain. L'élève doit vérifier l'exactitude des informations présentées, compléter les textes, les tableaux de données, les diagrammes et les cartes avec les informations qu'il recherche, en allant sur place. Les planches de la deuxième partie présentent des informations relatives à la commune, variées et actualisées. Des travaux parallèles sont suggérés, dans le but de laisser une certaine liberté de choix aux professeurs

afin de varier les activités au maximum. La troisième partie de l'Atlas est formée de textes courts, destinés aux professeurs, à titre d'orientations pédagogiques.

The Barbara Petchenik Children's Map Award: QUO VADIS?

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Abstract

The Barbara Petchenik Children's Map Award was created by the International Cartographic Association (ICA) in 1993 as a memorial to Barbara Petchenik, a past vice-president of the ICA, much of whose work was dedicated to creating maps for children. The aim of the Petchenik Award is to promote children's creative representations of the world. To date the awards have been presented at the ICA meetings in Köln (1993), Barcelona (1995), and Stockholm (1997).

This paper examines the objectives of the Award and discusses the evolution of the guidelines and rules. It identifies and illustrates the major themes of the children's maps and describes their general content and design components. It provides details about level of participation and a profile of the participating children. It also presents the findings of a national survey commissioned by the ICA's Cartography and Children Working Group in 1997. It reviews the contributions associated with this award and outlines the international use made of maps submitted to the competitions.

It is only natural that the Award has had teething problems. As we move into the new millennium and the prospect of more awards, it is time to reassess, and to identify new directions. This paper makes several recommendations concerning the future directions of the Award and issues a challenge to the international cartographic community.

Pour une didactique du langage cartographique à l'école secondaire

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Résumé

Une lecture efficace des cartes thématiques nécessite l'apprentissage des règles du langage cartographique. Or, on constate que ce langage reste négligé dans les écoles par la majorité des enseignants et des enseignantes faute du manque de formation. Il en résulte que la lecture des cartes ne va pas au-delà de la localisation des phénomènes géographiques. Pour remédier à ce problème, un modèle didactique a été élaboré en se basant sur la littérature cartographique théorique et sur le modèle de Zgor, et expérimenté avec des élèves de la première année. Les résultats de l'analyse quantitative et qualitative témoignent de l'efficacité du modèle didactique proposé.

Combining Traditional and Modern Methods in Practical School Cartography

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Abstract

This article presents a proposal to use easy-to-use GPS receivers as well as satellite and aerial photographs in teaching cartography to children aged between 11 and 12.

Promoting children's collaborative learning in cartography with a software mapping tool

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Abstract

Fifty pairs of students aged 11-14 years were invited to construct a series of thematic point symbol maps using a specially designed software tool in order to explore their mental representations of this common type of atlas map. The results reveal that many children have an imperfect grasp of how such maps 'work'. Some examples of student discourse during the tasks are described from a Vygotskian perspective and the nature of adult interventions in scaffolding their thinking is discussed. As visualisation software becomes more common in schools it is important that teachers have strategies for promoting the development of robust map schemata.

A New Swedish School Atlas

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Abstract

Geography has come back to the curriculum for students 16-18 years old in Sweden. So the need was great for a more advanced school atlas than the ones published for younger students.

With the modern electronic technique the map production has changed the work for the cartographers. But more than ever it is necessary to have experienced cartographers. The electronic technique also makes it possible to use the data to make different kinds of supporting material for the education, like tables, CDs, transparencies, on-line services. By giving the information from which source the data are caught the student can try to make new updated maps themselves to compare with the map in the atlas.

The work with getting data for manuscripts has changed due to Internet and e-mail. Some data (but far from all) are there for you to get and time consuming visits to libraries and statistical agencies have been less. It has also become much more comfortable to communicate with international friends and offices to get information.

The first very difficult question is to decide what to include in the atlas, as the volume cannot be too large. As this has been a joint Nordic production compromises have been common. Compared to older atlases in Sweden this atlas includes a lot of thematic maps, and especially those concerning the environment. There are a few gender aspects in the maps, but as most of the map makers and cartographers have been women, they have had the opportunity to influence the cartographic design. Another important news is that all countries (with a small exception in NE Russia) can be seen in the scale 1:15 M, so the student can see the real difference between areas, for example Canada and Sweden.

A special file with transparencies of about 50 maps support the teacher's work. Beside the transparencies there is a text book with questions around the maps and also advice about which topics the teacher can introduce to a map and where to find other sources for the topic. The atlas was published in spring 1999 by Liber AB.