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The Introduction Chapter of the Swiss World Atlas 2017 – An Innovative Cartographic Education Tool in Switzerland

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Abstract:

Many printed school atlases do not only comprise a collection of topographic and thematic maps or illustrations to convey geographic topics at different school levels, but also infographics and text introducing key concepts and methods of cartography and geo-information. However, this was not the case for previous editions of the printed Swiss World Atlas, the most commonly used student atlas for the secondary school level in Switzerland. This omission of a dedicated introductory part may be explained by the atlas' long tradition of more than 100 years and the strong influence on the atlas design by former editors-in-chief. In this tradition, selected cartographic aspects were covered on different pages throughout the atlas. In contrast, other printed school atlases have included a general introductory part for many decades.

This contribution presents the concept and implementation of a new, coherent, and innovative introduction chapter for the 2017 edition of the printed Swiss World Atlas (Figure 1). A comparison to similar chapters of other widely used school atlas examples from Europe and North America serves to evaluate the didactical value of this introductory part of the Swiss World Atlas.



Figure 1. The Swiss World Atlas 2017 in three language versions. The open double page of the introduction chapter shows a comparison between reality and map models (Photograph by A. Eggenberger, 2017).

The first part of the presentation specifies the didactical and cartographic fundamentals, with a focus on developing the student's map reading and interpretation competences. The new introduction chapter of the Swiss World Atlas 2017 is structured as follows: After four pages of the atlas table of contents and a two-page list of map topics, the different steps in geomatics are illustrated with infographics that explain the data capturing methods of geodesy and photogrammetry and the processing of geodata by GIS. The following double page presents the principles of map projection and reference systems, enriched by illustrative models and graphics. Another two pages provide an introduction to

cartography with basic information on map models and cartographic principles. Then, the cartographic processes of map generalisation, map structuring, legend definition, or map symbolisation are explained. On the following four pages, the students should become familiar with the different map types contained within the atlas as well as the Swiss national map series at the various map scales (Figure 2). A double page about map reading, map use, and map evaluation completes the new introduction chapter. The chapter thus shows the complete process chain from geodata capturing and processing to applying cartographic principles for map representations, in a short but clearly illustrated format aimed at secondary school students. The wording of these technical facts is chosen so that students do not need any previous knowledge. Additional concise text information, written by external experts and the editorial team, helps atlas users to acquire knowledge about the general cartographic theory.

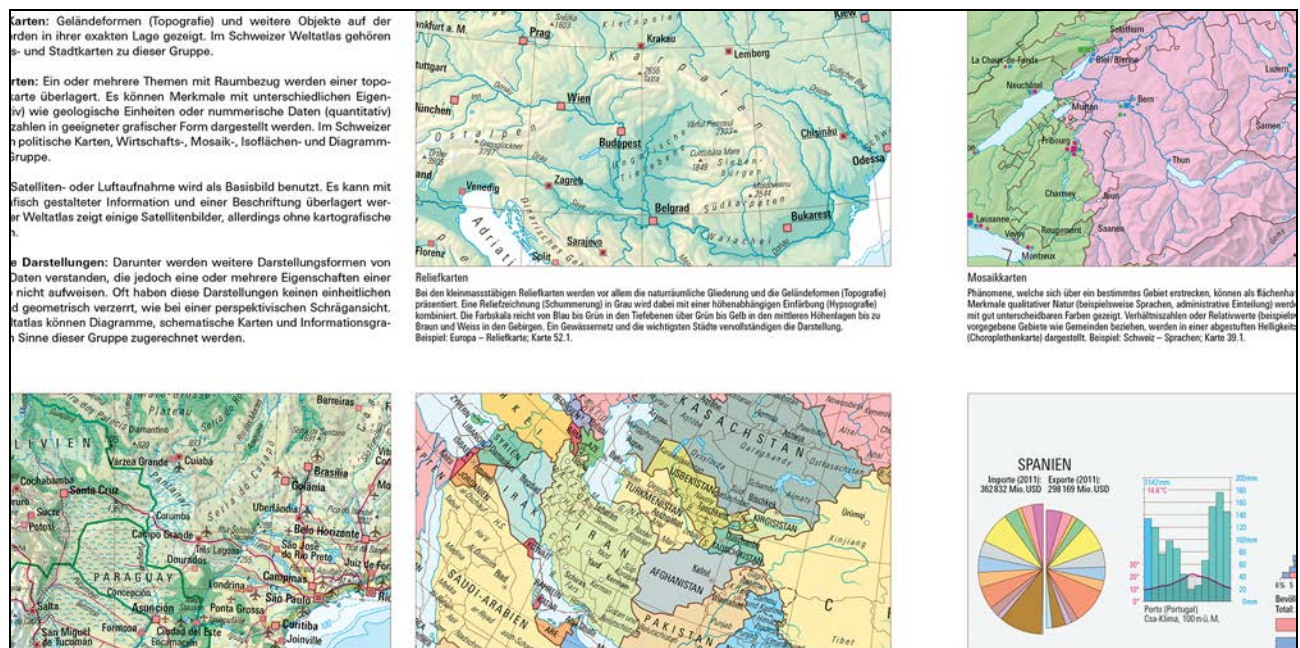


Figure 2. Scaled part of the page about map types (Source: Swiss World Atlas 2017, p. 18).

In a second part of the presentation, the introduction chapter of the Swiss World Atlas 2017 is compared to four similar introductory parts of other printed school atlases. Concerning the content, this part of the Swiss school atlas seems more advanced, covers a broader range of topics, and goes more into details. From a graphics and layout point of view, the introduction chapter of the Swiss World Atlas 2017 combines a clear look-and-feel with a column-based structure, which contrasts with the "frame-and-box" arrangement in other atlases. It offers also a consequent and distinguished colour scheme (rather gentle colour contrasts for area objects), layout and design style (more white space for a clear page structure), and lettering concept (using a space-saving Univers font for the entire atlas). Despite of the comprehensive concept, the introduction chapter of the Swiss World Atlas 2017 is more suitable for higher school levels (10th grade or higher), due to the correctly and professionally formulated theoretical facts as well as the complex infographics. Younger students certainly like shorter and easier-to-read texts with more playful images. Thus, teachers of classes up to the 9th grade may face more challenges to explain the content in a more elementary fashion with the Swiss World Atlas than with other school atlases.

Since the publication of the atlas in summer 2017, very little feedback from the different target groups has been received to the introduction chapter. Thus, an in-depth analysis is planned this year to assess if the expectations of teachers and students are met. The editorial board will then be able to critically evaluate the representation of the specific cartographic topics with the goal of improving the introduction chapter for the next atlas revision.