

# Development of the international schools of cartographic thought from an educational perspective

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## Abstract:

A school of cartographic thought is a group of scholars who share the same ideas about the core of cartographic knowledge, education, and practice. They can be judged based on three criteria: theoretical approach, people – prominent scholars, and cartographic education. Especially, changes in cartographic curricula can show the development of the schools of cartographic thought. To illustrate this the curricula of the last twenty years at several universities in Russia, Germany, Austria, France, and the USA have been studied.

Figure 1 compares the specialization of selected graduate cartographic study programmes from ten years ago and today. The colours show the number of credits for the geo-related domains that are part of the program. An overall trend is an increase of elective courses – therefore the compulsory part of cartography courses has been decreased. The credits for the thesis work and the internship could be considered as cartographic too, but similar to the electives, this is dependent on the student’s choice. The Cartography Master programme has the most credits in cartography in both periods

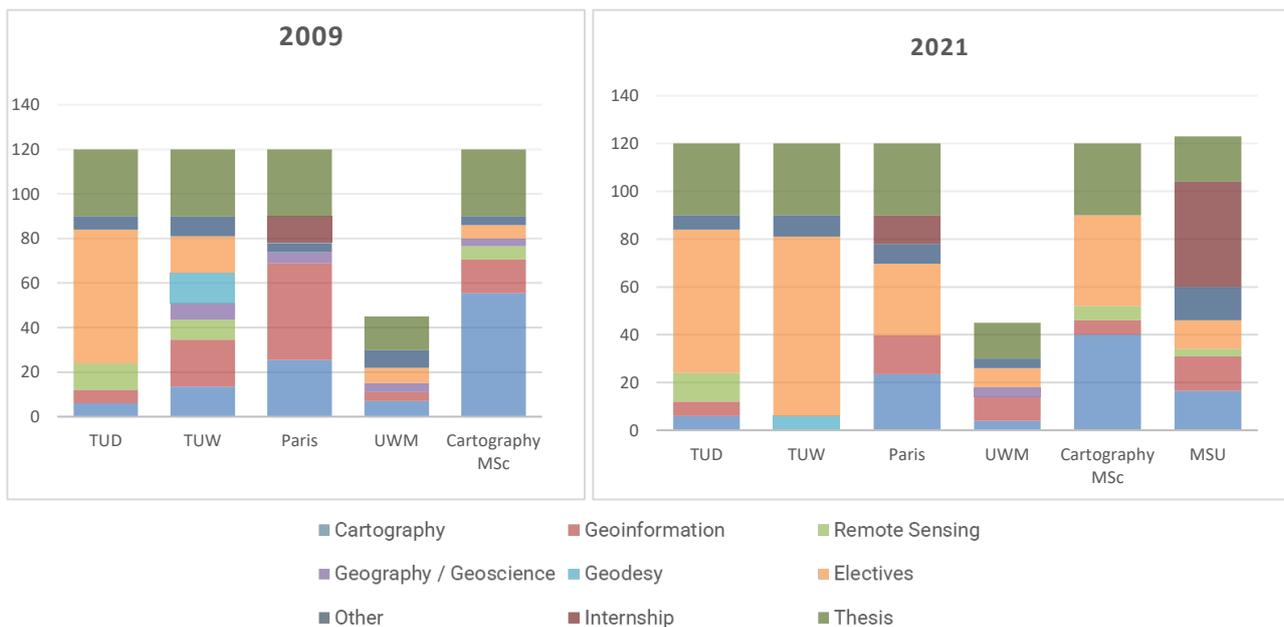


Figure 1. Graduate cartographic study programs’ specialization over time. Acronyms: TUD – Technical University of Dresden, TUW – Technical University of Vienna, Paris – Carthageo study programme, UWM – University of Wisconsin – Madison, MSU – Moscow State University.

To see the developments of the cartographic domain, the cartographic subjects in the selected study programmes were analysed over time. For comparison purposes, the subjects and their credits were grouped into six categories. This allowed one to observe changes. This is illustrated by a line graph in Figure 2, where it is possible to observe emphases on the subjects’ categories in different study programmes. For instance, at the Moscow State University, the main focus is on the Geographic (Thematic) Cartography, while the other programmes focus on Digital Cartography.

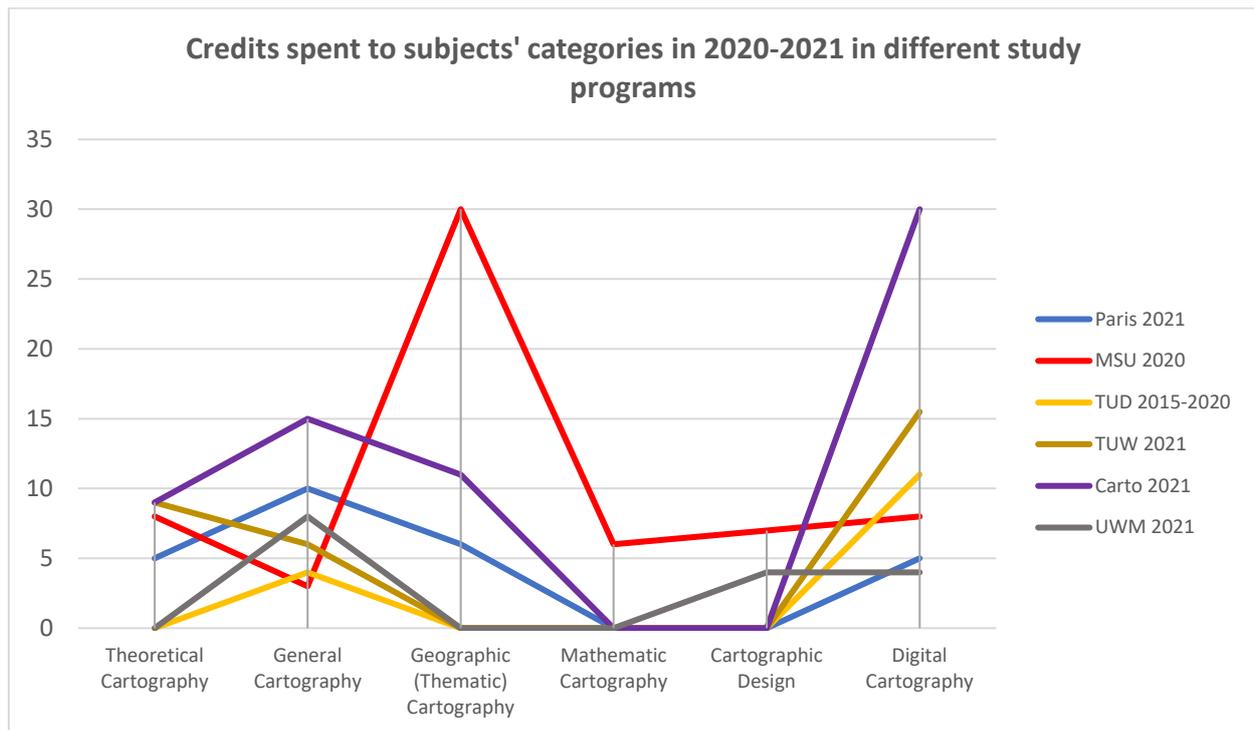


Figure 2. Credits spent to subjects' categories in 2020-2021 in different cartographic study programs in Paris (Carthageo), at MSU, TUD, TUW, Cartography M.Sc. and UW-M.

Overall, some common trends in curricula development could be distinguished. Examples are an increased interconnectedness with the geoinformation discipline, and a focus on digital cartography subjects such as geovisualization and the inclusion of modern technologies like the internet, multimedia, mobile, 3D, and AR/VR. Because of this cartography as a domain became more interdisciplinary.

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