

Basic Problem of Teaching About Map Projections

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Abstract

The theory of map projections was once called mathematical cartography. The name mathematical cartography derives from the fact that it is an area of cartography with a large application of mathematics. In recent years, instead of mathematical cartography, there has been talk of map projections because mathematics has entered other areas of cartography, such as thematic cartography, map generalization, etc.

If we accept the fact that understanding map projections requires a certain knowledge of mathematics, then we cannot be satisfied with the practice that map projections are usually or very often interpreted without mathematics or with its application in traces. The reason for that is the fear of students refusing to enrol in subjects in which there is a lot of mathematics. So, to keep the number of students, we need to avoid formulas and equations?! But that is only one of the possible reasons. There are probably more of them. We see another reason in the fact that future geographers at the university level do not take mathematics courses. Therefore, if geography teachers are not well versed in mathematics, it is clear that they will avoid interpreting to their students what they themselves are not strong enough at.

Furthermore, the reasons for inadequate education on map projections may be aversion to change, proactive interference, lack of critical thinking, etc. However, the basic problem of teaching about map projections is the non-correlation with education in mathematics.

This lecture will show how to approach teaching on map projections at the level of secondary education. That is, not to avoid any application of mathematics, but to apply that level of mathematical knowledge and skills that students at that level of education have.