

Changes in Geo-Information Education, Looking Back and Forward

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SUMMARY

Looking back at a career of more than 35 years in GI education at the edge between the developments in society, work field and in education itself, the only consistency is change. This is good, but also it is important to keep the best practices.

This presentation will give the most important changes during the last years but will also look at the expectations and how these changes can be implemented in formal and informal education. It is most a personal view.

Looking back there are at least 4 changes. In the end of the eighties almost no formal Geo-information education was existing. Digital data was slowly growing, but mostly in the process of conversion of analogue to digital, so no direct digital data collection. Software was not accessible without following a steep learning curve for people that had a logical, programming directed mind with a high effort. Practical applications were sparse, mostly in a scientific environment.

Expectation of possible changes in the next 5 to 10 years are a torrent of available data, integration of spatial solutions in most work processes, a need for more people which can combine domain knowledge with a geo-information approach (spatial thinking) and a diminished need for geo-information specialists.

What will these changes mean for the actual GI education in a bachelor's course like AGIS at HAS green academy, a university of applied science?

Regarding the increase of available data, the emphasis will change from searching for data to assess the quality and correct application of the data for a specific use. Background how the data is

collected, understanding the selection process and use of information models will be more important. Education should bring these higher levels of data into the curriculum by e.g., using cases, not only directed at a solution but also at the quality of the answer.

Data driven work processes are increasing. These processes do not ask for a total GI software but specific blocks of code. The integration of dashboards is already an example.

Within work processes a team of people is active with different competences. This means that the people in a team need even more communicate with each other. So, the domain of the work process asks for people to have both knowledge regarding the domain, but also insight and work with data, analysis, visualization and sharing the results. Geo-information specialists like programmers, people with IT security expertise will be connected to such teams. They need to integrate their skills and tools inside the work processes, but I expect less people compared with the application and domain knowledge.

The conclusion is that education should be even more integrated with the real-life outside academia. The world and the Netherlands see large challenges, almost all with a spatial component. Our education should deal with these. This is also one of the reasons we incorporate the sustainable development goals in our curriculum.