

# What do we teach when teaching traffic safety?

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## Background

High-quality academic education in the subject of traffic safety is in demand. This is true for high-income countries, but even more so for the countries with low and middle incomes (LMICs). Despite the fact that LMICs bear 92% of the global traffic fatalities, they greatly lack trained professionals who can deal with the problem adequately. The lack of systematic knowledge results in that the available resources, quite limited to start with, are being spent on ineffective measures, without having a long-term strategy, and rather on 'immediate' than system-level contributing factors.

Safe System has been firmly established as the state-of-the-art within the traffic safety domain. It is fundamentally different in many aspects from the 'traditional' approach of blaming road users and training them to deal with the environments that are inherently unsafe. Some of the innovative principles of the Safe System are the ultimate responsibility of the traffic system designers to protect all road users, the use of human body tolerance to external violence as the ultimate criteria in deciding what energy levels (vehicle speeds) road user could be exposed to, and focus on *elimination* of fatalities and severe injuries rather than *reduction* of any accidents without distinguishing their severities.

The global research community has started to understand in which way the Safe System is different from the traditional approaches and what benefits its adoption brings. However, has this new approach been implemented in the academic education on traffic safety?

## **Aim**

The purpose of this work is two-fold: (i) to develop a model curriculum for an academic course in traffic safety based on the Safe System; (ii) to perform a survey on how well the current educations provided at universities in countries from different regions and income categories aligns with this model curriculum.

## **Method**

The AfroSAFE project team was tasked by a challenging but also very exciting work to design an academic course curriculum that is based on the Safe System thinking. The target audience for this work are universities in Africa, and the curriculum is expected to be an aid for the lectures who want to start new or upgrade their existing courses related to traffic safety. However, since the Safe System principles are quite universal, we expect that the results of this effort would be equally useful for other countries and continents.

The project team joins high-level experts with many years of research and practical experience of building up Safe Systems in their respective countries. The proposed curriculum is further discussed in interviews with the leading international experts on the Safe System, and their feedback and comments are also integrated in the curriculum.

Finally, we perform a survey among the universities teaching road transportation and other relevant subjects about what topics related to traffic safety are included in their education. The lectures are asked to state what proportion of the teaching time is devoted to each of the topics recommended by the model curriculum. We aim at covering a diverse sample with regards to the geographical regions and country income levels.

## **Results**

The proposed course curriculum is developed and commented by the top-experts in Safe System and can be seen as the state-of-the-art in traffic safety education. The curriculum will be publicly available shortly at: <https://www.ictct.net/afrosafe/education/>.

The preliminary results indicate that specialized courses in traffic safety are still very rare. Particularly for the African context, there are countries where no academic education in traffic safety is available. Education in road transport is often limited to road construction and traffic flow management. On the other hand, relevant education components can be found in other programmes, such as related to the public health domain.

When it comes to the contents, it is still very common to address traffic safety as an engineering problem. Therefore, much emphasis is put on the statistical methods and tools for analysing accident counts, such as regression modelling and black spot identification. On the other hand, the areas central for the successful Safe System implementation are greatly neglected. Some examples of such under-prioritised topics are institutional frameworks, organizational aspect of traffic safety management, development of long-term traffic safety programmes, etc. Surprisingly, even countries with relatively good traffic safety records (particularly in EU, where significant reductions in traffic fatality were reached during the last decade due to Safe System adoption), the education programmes in traffic safety are lagging behind.

## **Conclusions**

- Academic courses in traffic safety are rare, particularly in LMICs.
- A state-of-the-art curriculum for academic education in traffic safety based on Safe System has been developed and is publically available.
- The contents of the available courses is often lagging behind, over-emphasizing the engineering aspects of traffic safety and neglecting more 'soft aspects' that are, however, central for the successful implementation of the Safe System.