

Summary

Evaluation of the Heart Zone project

TØI Report 1877/2022

Authors: Vibeke Milch and Tor-Olav Nævestad

Oslo 2022 75 pages Norwegian language

Heart zone appears to be an effective measure in terms of improving traffic safety culture related to travel to and from school and to driving in the schools' immediate area. This emerges from an evaluation based on the implementation of Heart Zone at several schools in Bergen. The evaluation is based on focus group interviews and individual interviews with representatives of the steering and project group as well as school management and parents at selected schools. In addition, a quantitative survey was conducted among representatives of school management and parents. Although the main impression is that the Heart Zone work has been a valuable contribution to the traffic safety work, the evaluation also points to potential for improvement with regard to further implementation of the Heart Zone, first and foremost with regard to delimiting and clarifying scope in advance and assessing resource needs.

Heart Zone is a measure aimed at creating a safer road environment around the school area for children by reducing parental driving to and from school, and by inspiring more people to cycle and walk. In 2016, the city council in Bergen decided that all the municipality's 66 primary schools should establish a Heart Zone by the end of the city council's sitting period.

In 2018, a steering group and project group was appointed, which has been responsible for organizing and following up the work of introducing the heart zone concept at the schools in Bergen. According to the plan, the project will enter an operational phase at the turn of the year 2021/2022.

On behalf of Trygg Trafikk, TØI has carried out an evaluation of the project so far, before entering a further phase. Such an evaluation can be used to map experiences, identify barriers and drivers for good implementation, and provides a good basis for further implementation of the heart zone concept in other contexts.

In this study, we understand Heart Zone as a measure to create traffic culture in a defined geographical area, i.e. in the Heart Zone. Heart Zone is a measure for traffic safety culture, because it is about changing the traffic culture within the Heart Zone area. The purpose is to eliminate or reduce car traffic related to the delivery and pick-up of children within the Heart Zone, so that it becomes safer for children and adults to cycle and walk within the zone.

The study has four sub-goals:

- 1) Map experiences from project group and steering group,
- 2) Map the organization of the project at different schools.
- 3) Map the factors that promote and inhibit implementation.
- 4) Reflection on and discussion of the Heart Zone measure.

The evaluation is based on a theoretical model that describes which factors are assumed to be important for traffic culture, as well as the connection between these and between traffic culture and behavior. The model has been developed based on previous research at TØI on safety culture.

The study was conducted as a process evaluation with both qualitative and quantitative methodology, and it consisted of focus group interviews, individual interviews and a survey among involved actors.

To gain more in-depth insight into how the project group and the steering group have worked, and about the process of implementing the measure, two focus group interviews were conducted with a total of 9 members from the project group and the steering group. In addition to the focus group interviews, two interviews were also conducted with former members of the project group and the steering group.

Focus group interviews and interviews were also conducted with a total of 19 people from six selected schools and with key people from the school management and from FAU, and in some cases from the student council.

In both the focus group interviews and the personal interviews, semi-structured interview guides were used. A separate guide was developed for the project group / steering group and one for the schools.

The interview guides contained the following main topics:

- Organization of the work with Heart Zone
- The process of introducing the measure
- Experiences related to the process of introducing the measure
- Perceived results as a result of Heart Zone
- Cooperation (both within and between the actors)
- Barriers / driving forces in the process

The survey was conducted at four other schools than where the interviews were conducted. We developed a questionnaire that can be used as a tool in future evaluations of Heart Zone. In the questionnaire, we have, based on the theory of traffic safety culture and based on the knowledge that has emerged from the focus group interviews and the interviews with the schools, developed indicators for change in traffic culture. The questionnaire is aimed at employees at the school and at parents and aims to measure traffic culture and change in traffic culture. This is measured as descriptive norms and self-reported behavior. In addition, knowledge of Heart Zone, implementation and anchoring by the school's management and FAU is measured.

Most of the questions were formulated as statements that the respondents were to assess on a five-point scale with regard to the extent to which they agreed or disagreed with the statement. The form contained statements on the following topics:

- Reasons for choosing a mode of travel to / from school
- Knowledge of Heart Zone
- Anchoring in school management and FAU
- Implementation
- Traffic situation around the school
- Behavior around the Heart Zone
- The infrastructure around the school area
- Experienced stress related to travel to / from school
- Perceived degree of sanctioning of unnecessary driving behavior in the heart zone
- Norms for what is perceived as normal behavior in the heart zone when picking up / delivering children
- Perceived traffic safety
- Perceived effects of Heart Zone.
- The overall impression from the interviews has been that there are varying experiences of how well Heart Zone has worked, but in several of the schools the experience is that Heart Zone work has been a valuable contribution to traffic safety work, and that the measure has had positive effects.

The overall impression from the interviews has been that there are varying experiences of how well Heart Zone has worked, but in several of the schools the experience is that heart zone work has been a valuable contribution to traffic safety work, and that the measure has had positive effects.

However, there are aspects of the organization of the Heart Zone project that could have worked better. This is primarily about the framework for the project not being defined in advance, and that a thorough enough assessment had not been made to identify resource needs in the municipality in advance, and that mapping of the schools' needs was done along the way. A previous impact assessment would probably have helped to clarify the need for resources in the project and at the same time helped to clarify to school employees and parents what the project should be.

However, it varies how well the schools experience that the Heart Zone solution works in practice. The schools have had very different starting points for introducing the measure, which can probably explain the variations we observe among schools.

In some schools, the infrastructure and traffic environment around the school have made it possible to establish a Heart Zone without major physical measures. At other schools, infrastructure, roads and the traffic environment nearby have made it difficult to find good solutions. This suggests that it is complex to introduce such a measure in schools with very different contexts. An important element of success from the project is that Heart Zone has been incorporated into the municipality's formal processes, so that facilitation for Heart Zone is included as part of the planning of new schools.

There are both advantages and disadvantages to the project being initiated on the basis of a political decision, but a clear advantage is that the measure has been anchored in the school's management. We see that the measure is largely strongly rooted in the school management, and that anchoring in the school management and FAU has been important. This shows both the qualitative results and the results from the survey. This has contributed to the measure being incorporated into the school's routines: it is put on the agenda, mentioned in communication to parents and in parent meetings.

It varies how well the schools experience that the heart zone solution works in practice. It is connected with the physical conditions and the traffic environment that has been at the school before. In some schools, it has been difficult to find good solutions that work in practice. It seems to be the schools where it has already been physically well suited to adapt to a Heart Zone, which has had the most positive experiences.

In the interviews, it is emphasized that Heart zone has contributed to raising awareness about traffic safety and driving culture among employees and parents, and in some schools the experience was also that Heart Zone has contributed to less traffic chaos and that fewer people drive. Survey results support this. It turns out that most of the respondents have a good knowledge of what the Heart Zone is and where the drop zones are. We see that a not insignificant proportion report that they drive less and cycle and walk more as a result of the school being given a Heart Zone (see Figure S1), and that several respondents report that they have become more aware of soft road users. Furthermore, the results indicate that Heart Zone has influenced the traffic culture at the schools.

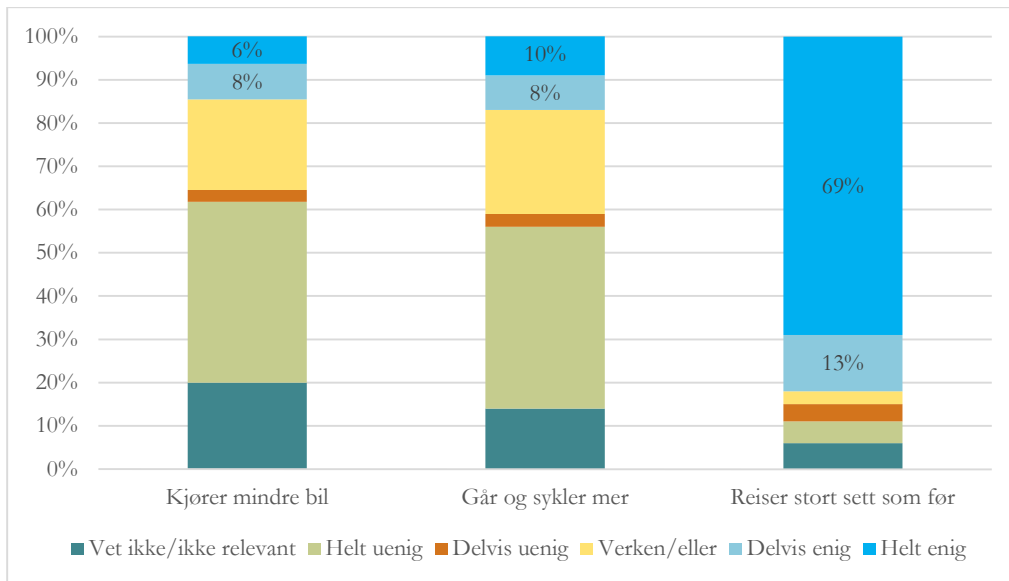


Figure S1: Distribution of answers to the question “After the school got Heart Zone, have you changed the way you travel?” (n=220).

The theoretical model on which the study is based was tested through statistical analyzes. These showed that less driving is related to traffic culture in the Heart Zone, which is related to the implementation and management anchoring of the Heart Zone (see Figure S2).

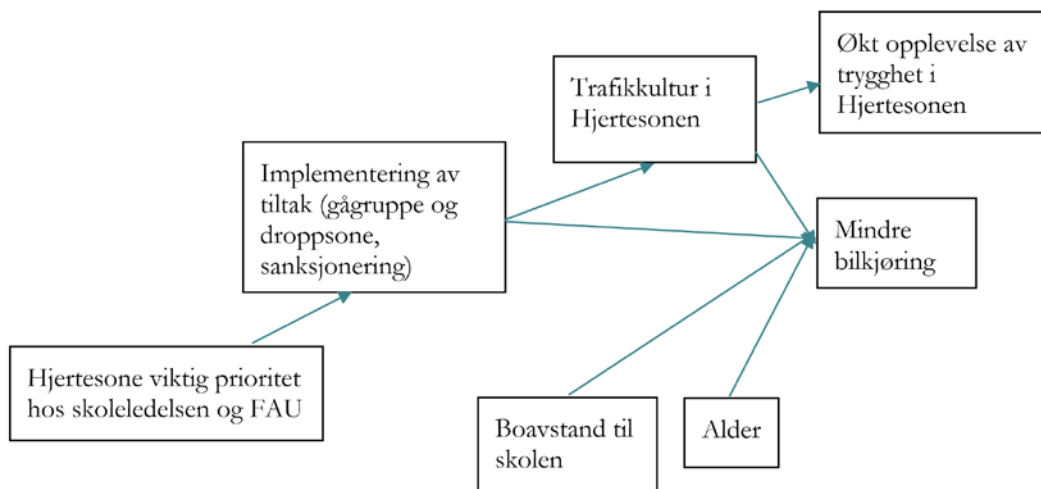


Figure S2: Model of relationships between management anchoring, implementation of measures, traffic culture and behavior, based on multivariate statistical analyzes.

Both the interview material and the results from the survey indicate that anchoring in the school's management and FAU is important for an implementation of Heart Zone. In the interviews, it was also revealed that it varies which of the parties (school management or FAU) seems to have had the largest role in the Heart Zone work. This also coincides with the results from the survey, which shows that it varies which party is perceived as the one that prioritizes the measure the highest. However, results from the survey indicate that anchoring in school management has the greatest significance for implementation. This is in line with much previous research which shows that commitment from top management is a very important prerequisite for safety culture measures to succeed. When the measure receives support from the school

management, it gives a clear signal that this is something the school prioritizes. Furthermore, it seems to be important that the measure is incorporated into the school's routines and that it is addressed in important discussion forums such as parent meetings and student councils, and information channels to parents and students. This indicates that FAU should primarily have a role as a supporting actor in the heart zone work, and that the school's management should be at the forefront of the implementation of the measure.