



Institute of Transportation,  
Ministry of Transportation  
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PRESS RELEASE on  
Dec 22, 2023

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Please release immediately

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## **Enhancing Traffic Safety Education starting at young ages; diverse learning**

### **Incorporating emerging technology into school traffic safety education.**

To support basic traffic safety capabilities in elementary, junior high, and senior high school learning stages, learning objectives, and learning focuses announced by the Institution of Transportation, MOTC (henceforth the IOT) has conducted a 2-year plan “Incorporating Emerging Technology into School Traffic Safety Education R&D Demonstration” since this year (2023). There has been the development of teaching assistant software, and learning themes include elementary school pedestrian walking drills, elementary school bike riding drills, senior high school motorbike riding scenarios, etc. Three learning situations have been established in accordance with traffic safety rules and the most common seen accident patterns. Under the supervision of teachers or through independent practices, students can develop the ability to perceive dangerous situations by using devices commonly used in classroom instruction, such as mobile phones, tablet PCs, personal computers, and even AR or VR devices. Teachers can also use the information feedback system to tally students’ performance over the same learning period, completing the teaching effectiveness evaluation quickly. Currently, the developed learning module prototype is available for students and teachers to test during curriculum activities in one elementary school, one junior high school, and one senior high school in Hualien.

As an illustration, consider the European Union (EU). To attain the goal of “Vision Zero,” EU member states have made a steadfast commitment to adopt integrated road safety measures, with education as the key component. The policy promotion of international traffic safety in developed nations has demonstrated that children who develop responsible road habits earlier are more likely to exhibit responsible behavior as adults. Japan’s implementation of traffic safety education is the prime example of this. The “Basic Act on Road Traffic Safety” was passed at the Legislative Yuan on December 1 this year. The inclusion of road traffic safety education in the curriculum at each level of education has emerged as a fundamental policy objective. The IoT has integrated emerging technologies to facilitate the development of teaching materials pertaining to traffic safety that can be directly implemented by instructions. This approach not only reduces the time required for class preparation but also allows for the integration of pre-existing written materials and real-world modes of transportation operation, thereby encouraging diverse learning. The instructional materials furnish students with the means to scrutinize road usage behaviors, human-vehicle interactions, and failure consequences from various vantage points. Through the utilization of simulated scenarios and road utilization processes, it is possible to stimulate learning interest and improve learning efficiency. Auxiliary teaching software that is interactive, time-flexible, and situational will facilitate the implementation and promotion of traffic safety education at schools.

In 2024, the IOT will continue to optimize software systems, develop operational manuals and teaching guidelines, and strengthen collaboration with schools at all levels. The content of traffic safety education courses will be expanded through teaching demonstrations and discussions. It is hoped that by enhancing traffic safety education and diverse learning at a young age, correct road use concepts and behaviors, as well as a human center safety culture, can be established.



Figure 1 The pedestrian crossing fork (non-signalized intersection)-Angle of the first person (1)

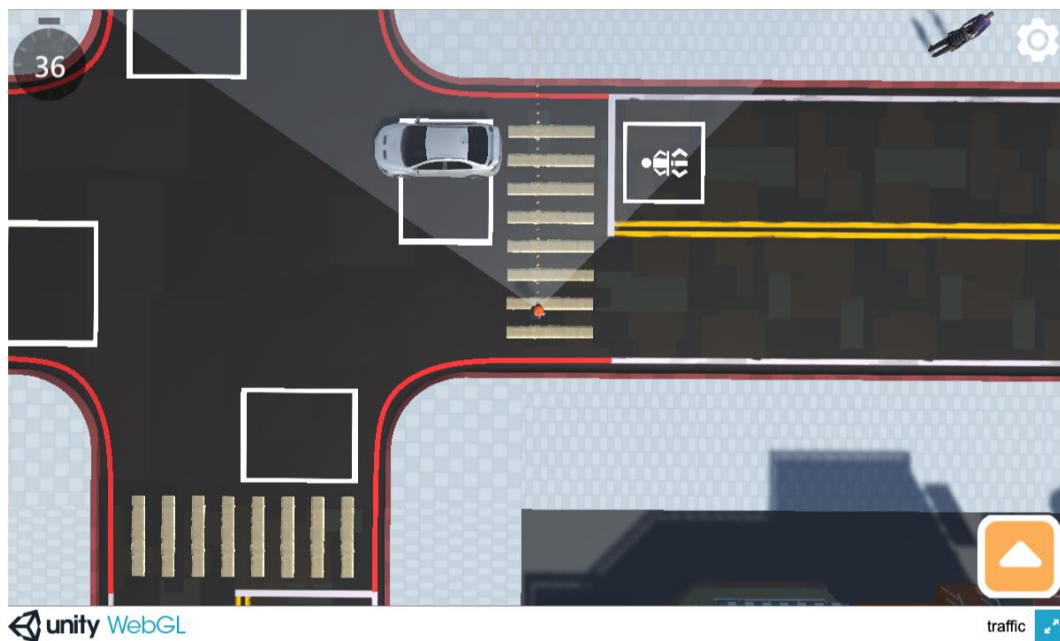


Figure 2 The pedestrian crossing fork (non-signalized intersection)-Angle of looking down (2)



Figure 3 Students gain practical experience with tablet PCs.