

stantly find out who needs what, who has what, and who can deliver what they need. All this requires significant resources. Including software development and analysis of digital infrastructure in the region of the operation. To know what restrictions you will have to face.

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THE STRENGTHS AND WEAKNESSES OF SIMULATOR-BASED EDUCATION IN THE TRANSPORTATION INDUSTRY

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The implementation of simulators in education within the transportation sector can offer significant advantages, particularly in training future professionals in logistics, drivers, and operators of autonomous vehicles. Simulators provide a controlled and safe environment for learners to acquire practical experience, develop necessary skills, and minimize risks and errors in real-world scenarios. This paper explores the strengths and weaknesses of simulator-based education in the transportation industry. Advantages of Simulator-Based Education can be explained in 4 factors. First of all logistics training. Simulators can be utilized to train logisticians in creating efficient routes and delivery planning. Through simulators, logisticians can experiment with various parameters such as time, distance, fuel costs, and other factors to find optimal routes and optimize delivery processes. This enables them to gain practical skills and experience while minimizing risks and avoiding mistakes in the real world.

The second factor is driver training. Simulators can be valuable for teaching drivers vehicle control skills in various road traffic conditions. Virtual simulators can replicate diverse road situations, weather conditions, and the behavior of other road users. Drivers can practice vehicle handling, develop safe driving skills, make real-time decisions, and respond to various

situations, including emergencies or unexpected behavior from other drivers.

And for the last factor integrated training. A system can be developed where logisticians and drivers train collaboratively. Logisticians can create routes and delivery plans within the simulator, and drivers can execute these tasks within a virtual environment. This enables them to understand the interplay between planning and execution and coordinate their actions to achieve optimal results. Such joint training helps foster a better understanding of each other's needs and establishes effective communication channels between logisticians and drivers.

As for the weaknesses of Simulator-Based Education [2]. We must count with limited Real-World experience: While simulators provide a controlled environment for learning, they cannot fully replicate the complexity and unpredictability of real-world transportation scenarios. Some factors, such as human behavior, road conditions, and unexpected events, may be challenging to recreate accurately in simulations. Therefore, learners may still need additional hands-on experience in real-world settings to encounter the full range of challenges they may face in their professional careers.

For sure we need to account cost and accessibility. Implementing simulator-based education requires significant investments in acquiring and maintaining the necessary hardware, software, and infrastructure. The cost of simulators and associated technologies may pose challenges, especially for educational institutions with limited resources. Additionally, access to simulators and related training facilities may be limited, which could restrict opportunities for students and professionals to engage in simulator-based learning. And last challenge is learning transfer. The effectiveness of simulator-based education relies on the successful transfer of acquired skills and knowledge from simulated environments to real-world applications. There is a need to ensure that learners can effectively apply the skills and decision-making abilities developed in simulators to actual transportation scenarios. Assessments and evaluation methods should be employed to measure the transferability of skills and bridge any gaps that may exist between simulation and reality.

The integration of simulators in education within the transportation industry can significantly enhance the quality of training and preparation for future professionals [3]. Learners can acquire practical experience, minimize risks, make controlled mistakes, and develop the necessary skills to excel in real-world conditions. However, it is crucial to acknowledge the limitations of simulators, such as the inability to fully replicate real-world complexity and the associated costs and accessibility challenges. By addressing these weaknesses, simulator-based education can continue to im-

prove and prepare future experts for the demanding reality of the modern transportation sector.

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ABOUT IMPROVING EFFICIENCY CARGO TRANSPORTATION

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Modern conditions of economic activity require the improvement of transport technologies in order to improve the quality and speed up the delivery of goods by rail and provide more competitive transport services.

Under market conditions, rail transport operates under conditions of increasing site-specific competition, primarily with road transport. Therefore, increasing the competitiveness of rail transportation is necessary even to maintain a stable position in the market (especially to strengthen them), for example, in the field of transportation of container-suitable goods – as a rule, high-value and highly profitable.

The most important tool for increasing the competitiveness of freight transportation is containerization, since it has a direct effect on the competitiveness indicators in the direction of their improvement. It should be noted that an increase in the level of containerization of goods transported by rail in itself has an effect on increasing the economic security of cargo owners