## Game Metadata

Game Name: Mini Metro

Developer: Dinosaur Polo Club

Platform: PC, Mac, iOS, Android

High-level Instructional Goal: Mini Metro aims to teach players about resource management and efficient design through the simulation of building subway systems in rapidly growing cities.

Link: Mini Metro on Steam

## Educational Goals

The learning objectives include strategic planning, spatial reasoning, and systems thinking. The player must design and manage an efficient public transportation network under increasing demand conditions. The game assumes that players have basic problem-solving skills and the ability to adapt strategies based on evolving scenarios. This challenges players to think critically about route efficiency and capacity management in a constrained environment. There is an opportunity for knowledge transfer in areas such as urban planning and logistical coordination, particularly in understanding how system components interact and how changes in one area can affect the whole system.

## Game Elements

The game simulates the metro system in different cities. The gameplay loop involves creating metro lines between metro stations. As the game develops, the number of passengers increases. The player needs to manage limited assets such as bridges, interchanges, and carriages, and rerouting or extending lines to adapt to new stations and passengers. The game is over when a station gets overcrowded. The game is easy to learn with very clear design and instructions. The experience is strategic and can be quite tense as players try to accommodate an increasing number of passengers in limited time and resources.

Here are some important nouns and verbs used in this game:

Locomotive: the players can add a locomotive to operate an additional train.

Line: the players can add metro lines to connect different stations.

Bridge: the players can extend metro lines across rivers using bridges.

Interchange: is a station that connects two or more lines, allowing passengers to transfer from one route to another.

Carriage: the players can carriage to a train to carry more passengers

## Learning Mechanisms

The game enhances the player's ability to manage complex systems efficiently and adapt strategies dynamically in response to changing conditions. The game also encourages players to experiment with different layouts and to learn from successes and failures.

Some learning principles used in this game include:

Feedback: The game provides instant feedback on the efficiency of the player's metro system. For example, if a station becomes too crowded, there appears a warning  attention to that area of the network, teaching players through direct consequences of their actions.

Pretraining and Scaffolding**:** The game introduces complexity gradually. Early levels start with fewer stations and simpler layouts, allowing players to manage the basic mechanics. As players progress, more stations appear, and the demand increases, pushing them to place lines and trains effectively.

Spacing: The progressive introduction of new elements and increasingly complex maps in the game encourages spaced learning, where players develop and refine their skills over time through repeated practice.

The learning mechanisms support the educational goals of enhancing strategic thinking and adaptive decision-making. The players are encouraged to explore different ways to manage the complex transport systems, thereby building their strategic thinking and planning skills.

## Overall Critique

Mini Metro is a simple and fun game that introduces player to manage transport systems. The design and music are clean without overt educational prompts, making the learning feel integral to the gameplay.  The game simplifies many aspects of what would be involved in actual metro system management or urban planning, which may make it less useful in the real world learning contexts. While the game might not directly prepare players for managing a real-world metro system or handling specific professional tasks, it does develop a set of cognitive and strategic skills that can be useful.