

The Ambient from the Young Passengers' Perception in the Carriage of Taiwan High Speed Rail

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To explore the Taiwan High Speed Rail passenger experience of environmental attitudes, the concept car as a potential environmental factors (Table 1) to Hershberg & Cass environmental significance of the semantic scale (Table 2) (Xu Leiqing, 2004) as Measurement tools of environmental factors in the compartment of the bipolar adjective semantic differential method is usually the number must be used about 10 to 30 is more suitable, it will be adjusted to 2to 3 group to obtain more stable reference. Online questionnaire with Taiwan High Speed Rail train running video will be a reference tool to assist measurement. The video contents directly play to compare the experience feedback of fifty passengers.

Table 1. Potential environmental of high-speed rail travel

Potential environmental factors	
Passenger vehicles	乘客
Changes in acceleration and deceleration	
Stationary traffic	
Speed	
Air Quality	
Temperature and humidity	
Path	
Noise	
Light	
Seating range	
Color	

Table 2. Scale selection

Concept	Main scale	Alternative scale
Overall rating	good — the bad	pleasant — unpleasant
Evaluate the effectiveness	of useful — useless	friendly — hostile
Evaluation of the unique aesthetic	unique — plain	interesting — boring
Activities	positive — negative	complex — simple
Space	small — spacious	private — public
Effect	ugly — fine	rough — smooth
Neat and clean	clean — dirty	well organized — messy
Organization	casual — mess	formal — free
Temperatures	warm — cold	hot — cool
Bright	light — dark	cheerful — boring

The Carriage and Use of Environmental Objects

According to the Taiwan High Speed Rail High Speed Rail website Inside information on the object for investigation of high-speed rail passengers traveling within the scope of physical activity when environmental objects, finishing as the standard range of cars and commercial cars (Table 2.3), does not contain a barrier-free space, toilets, vending machines, public telephones. Environment provides an object inside a passenger seat on the journey to provide the needs of Taiwan High Speed Rail interior finishing environmental objects such as table 3.

Research show that although many high-speed rail seat space to facilitate the design and intimate personal use universal design considerations, there are still inadequacies in the actual use of passengers when the environment was due to restrictions that could result in the occurrence of passenger interference between the activities , are summarized as follows:

1. Table design in the seat behind the current seat back angle adjustment, back seat passengers to use the table immediately affected, and the appropriate table can not be smoothly adjusted.
2. For standard car seats configured as 3 +2, crowded, passengers will feel sitting in the middle than the narrow space available.
3. Standard Cabin narrow the distance between each seat, so passengers to use the table, almost the desktop can be temporary seat at a glance.
4. Seat can be rotated 180 degrees relative to facilitate understanding of the passengers sit, also happens to be equal to all the people are no table can be used.

Table 3. Environmental Investigation

Picture	Function	Picture	Function
	LED electronic display boards to provide passengers the train station and meteorological information.		Hidden hangers for objects, maximum weight 2kg
	Standard car seats configured as 2 +3 seating, seat back angle can adjust, and the seat can be rotated 180 degrees, seat length of 54cm, seat width 43cm, 55cm.		Seat reading light at the top, providing visitors to read as the auxiliary light
	Business Class seats for the 2 +2 seating configuration, seat back angle adjustment to fit passenger demand, the seat can be rotated 180 degrees, seat length 54cm, seat width 47cm, seat 57cm.		Pedal line with ergonomic design to provide passenger leg room for stretching and support
	Seats are provided for each seat dining table, maximum weight 10kg		Personal music listening system allows travelers to choose five music stations
			Power outlet facilities enable travelers to use all kinds of electronic products such as notebook computers, PDA, etc.

Note: From the Taiwan High Speed Rail, <http://www.thsrc.com.tw>