Are parents and learner drivers seeing the same road?

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Paper #16-16247 Transportation Research Board 95th Annual Meeting January 10-14, 2016, Washington DC

TEEN ROAD SAFETY

Risks

Worldwide teens are overrepresented in car crashes
• Australia and New Zealand, 2001-2010, 18 year olds sustained most injuries and fatalities
• Australia, 2014, 17-25 year olds 20.6% of the fatally injured drivers but 12% of the population
• Queensland, 2014, 11.2% of fatal crashes involved a driver/ r i d e r with a Provisional (restricted) licence

Managing risks

Graduated driver licensing
• Learners accrue 100 hours in logbook
  • What is an experienced driver?
  • Situation awareness
    (Perception; Comprehension; Projection)
• Parents provide most of the Learner supervision

Research aim

Are parents and learners seeing the same road?

Simulator-based study

• 3 Go-Pro cameras mounted on vehicle captured forward view (windscreen) and both side views (driver and passenger windows)
• Projected in Immerser studio (3-wall projection with total area of 19.4m long and 2.25m high, 10,548 X 1,200 pixels)
• Verbal commentary protocol (‘think aloud about what you are paying attention to as the driver’)
• Leximancer and NVivo analyses
• 12 learner-parent dyads
• 15-minute daytime driving clip

RESULTS

Average word count
Learners: 1,200 words
Parents: 1,700 words

Are parents and learners seeing the same road?
Yes: Must be some shared words/concepts
No: Can all the words/concepts be shared?

What are their situation awareness concepts?

Situation awareness concepts

<table>
<thead>
<tr>
<th>Learners</th>
<th>Shared</th>
<th>Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving manoeuvres</td>
<td>Left Speed</td>
<td>Overtaking Ahead</td>
</tr>
<tr>
<td>Green</td>
<td>Lane(s)</td>
<td>Sign</td>
</tr>
<tr>
<td>Kids</td>
<td>Front Turning</td>
<td>Moving Light(s)</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>Coming Down</td>
<td>Dining environment</td>
</tr>
<tr>
<td>Schools</td>
<td>Driving environment</td>
<td>Truck Road</td>
</tr>
<tr>
<td>Total = 6</td>
<td>Total = 24</td>
<td>Total = 6</td>
</tr>
</tbody>
</table>

Are parents and learners seeing the same road?
Yes: 24 shared concepts
No: 12 unique concepts

What does their situation awareness concept map look like?

Are parents and learners seeing the same road?
Yes: Shared concepts and connections
No: Some unique concepts, and many different connections amongst the same concepts

What does this mean? Practice and safety implications...
1. Parents and learners need to be aware that they are not always seeing the same environment (and risks) through the same windscreen
2. Learners need to build situation awareness skills
3. Situation awareness is about PCP (perception, comprehension, projection)
4. Support for parents as instructors and supervisors?