

Safe School Zone Project Asia Data Reporting

Road Safety Pioneers – Ali Zayerzadeh



PART 1: General Information

Country	Iran
Organization	Road Safety Pioneers (RSP) NGO
Advocate Name	Ali Zayerzadeh
Email Contact	alizayerzadeh@yahoo.com
Data collection period	Jan-Feb 2019
*Name of the school	1.Shohada 2.Imam Ali 3.Azmoodeh 4.Keshvari 5.Chamran

*Since we selected some schools in rural areas and there was only one data point available for each school, to fulfill our grant agreement, we went through assessing 7 different schools and did data collection for them using SR4S. The school names I'm mentioning here are those that got 1 or 2 stars only and had priority to be treated.

Assessment team

Name	Task(s)
Ali Zayerzadeh	<i>Training, Report Writing</i>
Nassir Baradaran	<i>Team Management, Coordination</i>
Ali Samiei	<i>Data Collection</i>
Naser Ardakanian	<i>Data Collection</i>
Ehsan Mostofi	<i>Assessment</i>

The team was selected from RSP active members and after 2 sessions of theory and at-the-field training, everybody got the goal and method should be used.



Figure 1- One of the team members during the training

Since we're working in rural areas, during the pilot school assessment, we noticed that in areas where internet is weak or not available, the SR4S application is not usable. So to prevent any upcoming problems, we decided to train both paper-based and app-based versions of data collection.

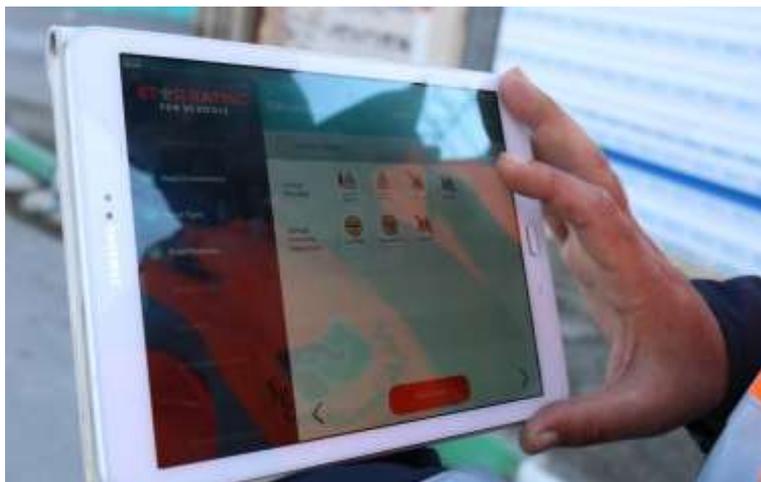


Figure 2- Data collection using iRAP SR4S app



Figure 3- Data collection for Azmoodeh School

PART 2: Key Informant Interview Report

Parameter	Shohada	Imam Ali	Azmoodeh	Keshvari	Chamran
Total school population	450	350	200	220	900
Student age range	12-15	6-12	6-12	6-12	6-12
Sex ratio (boys/girls)	60/40	45/55	55/45	50/50	40/60
Percent of students with disabilities	1	-	2	2	-
Average income levels of families (\$/month)	250	280	250	220	230
Number of teachers and support staff	17	10	9	11	10
Key stakeholders	Road/Education	Road/Education	Road/Education	Road/Education	Road/Education
Is the school gated	Yes	Yes	Yes	Yes	Yes
Perimeter fence?	Yes	Yes	Yes	Yes	Yes
Distance from school gate to the road (m)	10	3	2	4	5
Reporting time to school (Average in min.)	15	7	10	8	8
Departure time	7:00	7:00	7:00	7:00	7:00
School signage	No	No	Yes	Yes	No
Posted speed limit	80	50	60	80	50
Operational speed	75	65	75	95	45
Number of vehicles during peak hour	1000	1300	1200	1100	1200
Number of 2-3 wheelers during peak hour	250	350	380	560	490
Percentage Mode share	Percentage				
Walk to school	30	65	60	85	80
Cycle to school	20	20	10	10	15
Private motor vehicle	30	15	30	5	5
Public transport (Bus or minibuses)	20	0	0	0	0
Public transport (Motorcycle, Moped, Tuktuk)	0	0	0	0	0
Public transport - Train	0	0	0	0	0
Public transport – boat, canoe, ferry)	0	0	0	0	0
Any other mode, specify	0	0	0	0	0

Part 3: Focus Group Discussion Report

	Thematic areas	Finding
1	Walking children are they accompanied to school. If yes, by who	Except for Shohada school that their students are 12-15 years old and mainly walk with their friends, in other schools on average 60-70 percent of walking children are accompanied by one of the family members
2	Furthest and closest distance travelled by student	Shohada: Min:1 km Max: 8 Km Other 4 Schools: Min: 300 meters Max: 2700 meters
3	From which directions do the children approach the school	Shohada: It's located between 2 villages Azmoodeh: Only school side Other 3 Schools: Different directions
4	Locations around the school zone presenting the most risky spot for children safety on the road.	Only cross point
5	Main source of income for most families where the children come from	Shohada and Azmoodeh: Farming Keshvari and Chamran: Truck Driver Imam Ali: Stone mine worker
6	Average size of the families a)1-2 children b) 3-4 children c) above 4 children	3-4 children
7	Is road safety an important issue at this school compared to other issues at the school? Why?	For the school authority Yes, but for parents they don't feel that there are risks for their children when travelling to/from school. Maybe the main reason is the level of accepted risk perception because also the parents are taking risky behaviors
8	How safe is the road environment and the people who use the road near the school: Reason?	Reason

	a. Very safe	
	b. Fairly safe	
	c. Not sure	
	d. Fairly unsafe	
	e. Very unsafe	Lack of safe walking facilities both for crossing and walking along the road as well as unsafe cycling
9	last 1 year fatality/injury information a. How many deaths: Boy/Girl b. How many injuries: Boy/Girl c. Dates of incidence	We are not sure about what SA's told us but they reported only 1 injured girl at Keshvari School (May 2018) and nothing from other schools.
10	Problems affecting road users (drivers, cyclists and pedestrians) in the drop off/pick up area, in the road next to the school? Briefly comment on the following issues:	Brief description of the problem
	a. Congestion	Lots of heavy vehicles
	b. Double parking	No Problem
	c. Parking in no standing or no parking zones	No Problem
	d. Parking on the verge/edge	No Problem
	e. Parking in the bus stop	No Problem
	f. Parking or driving through the teachers car park	No Problem
	g. U-turns in front of the school	No Problem
	h. Lack of parking	No Problem
	i. Children crossing the road to cars parked on the opposite side of the road to the school	No Problem
	j. Pulling into and reversing out of private driveways	No Problem
	k. Any other issue?	Footpaths are not usable especially after raining

Part 4: Star rating results for those who used SR4S app

Name of School Data Point	Star rating
1) Shohada	1 Star
2) Imam Ali	1 Star
3) Azmoodeh	1 Star
4) Keshvari	2 Star
5) Chamran	2 Star

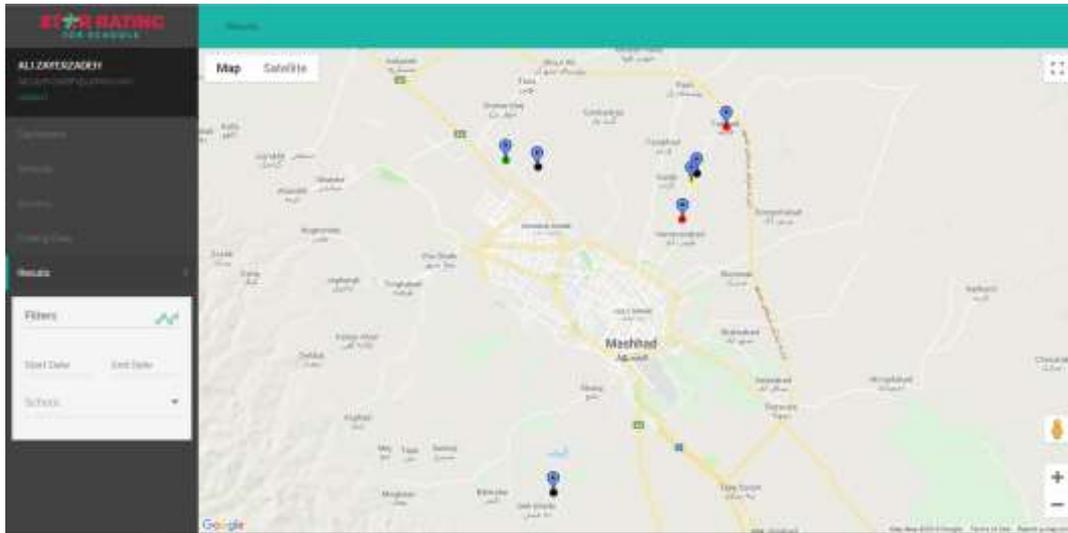


Figure 4- Map of assessed schools using SR4S Application

Since we were asked to collect data for 5 data points of a school and to ensure that the schools we select for safety improvement are the right ones, we decided to gather data from more schools and after the assessment select the schools with the minimum stars.

The local road authority last year had a plan for schools’ safety prioritization using their own method (done by a consultant) and the interesting point was that after comparing the results from SR4S and their method, they found SR4S more accurate and reliable. As instance based on their method, Okhovvat School has the highest priority among the other schools, but as our team visited the location, we noticed that it seems something is wrong with their method and after the SR4S assessment the school got 5 stars! We also reviewed their method details and found that the main problem was with their items weighting and also incorrect scores given by non-expert data collectors.

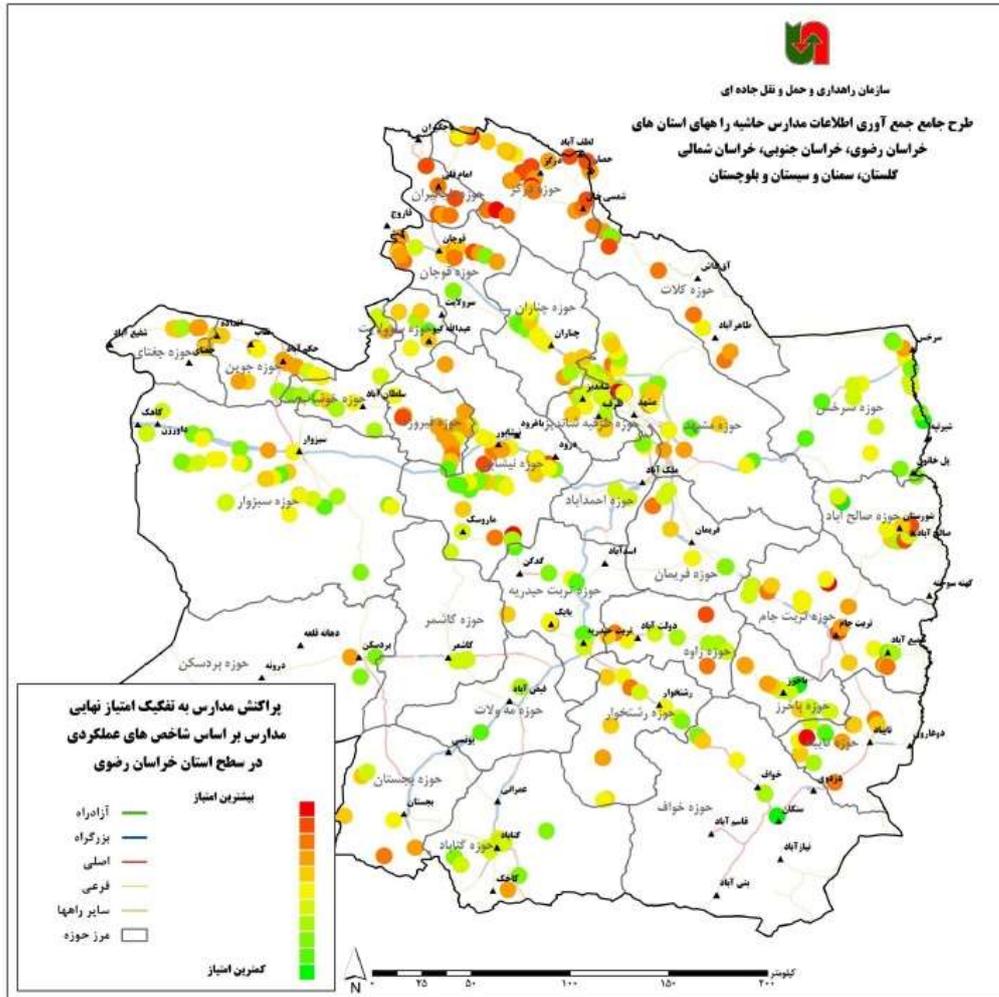


Figure 5- Local road authority map of school safety rating

We had fruitful meetings with local office of Ministry of Education that apart from our routine road safety education for school children, led to a training session for school teachers (not only selected schools but also others in the region).

Since there are not enough road safety lessons in the curriculum and also teachers are not fully aware of how to convey road safety points to children at different age, we found a training session would be the most useful intervention until the process completes in the curriculum that mainly takes 2-3 years.

Interview with school authorities and some of parents helped us know the most important concerns on road safety and recognize some of the root causes that safety problems stem from them.



Figure 6- Training session for school teachers



Figure 7- Road Safety education for children

Furthermore, we approached local road authority managers and in fact, we were so lucky that this year their safe schools program was delayed and we had a chance to negotiate about the schools' priority. However, it must be mentioned that we have good friends there that trust me and it's another reason why our meetings surprised us.



Figure 8-Meeting with local road authority managers

They have a plan each year and a list of nearly 300 schools around the province on rural roads. But they say they don't have time to assess all of these schools one by one, so based on the budget each year 30-40 or more schools are being selected from the list and the contractor start the safety improvement based on a typical plan, whenever contractor thinks that the selected school is not suitable, takes some pictures, sends to them and ask for substitution of this school with a new one. Also they have a general rule of retreating of schools every 5-6 years.

Fortunately, we got the local road authority acceptance to implement safety improvement interventions (mainly signs, markings, traffic calming measure) for those schools which got less than 3 stars.

Here you can find school by school report including before-after assessment for three 1-Star schools (Shohada, Imam Ali, Azmoodeh) and the sensitivity analysis 2 other schools (Keshvari & Chamran).

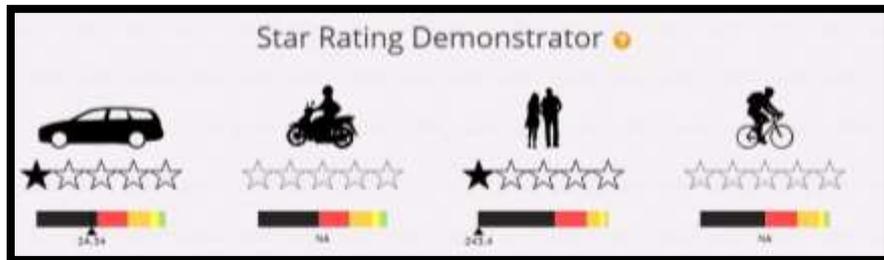
School Name	Score Before Safety Improvement	Star Before Safety Improvement	Score After Implemented Safety Improvement	Star After Implemented Safety Improvement
Shohada	243	1	37	3
Imam Ali	192	1	11	4
Azmoodeh	65	1	10	2

School Name	Score Before Safety Improvement	Star Before Safety Improvement	Score After Proposed Safety Improvement	Star After Proposed Safety Improvement
Keshvari	57	2	16	3
Chamran	44	2	25	3

1. Shohada School

Star Rating (Before Treatment)	1 Star (Score: 243)
Star Rating (After Treatment)	3 Star (Score: 37)
Safety Improvements implemented	School Sign, Delineation, Speed Bump, Road Studs, On-road thermoplastic school sign

Star Rating Before Treatment



Star Rating After Treatment



Figure 9- Shohada School Star rating

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
		Land Use Left				Industrial			
		Land Use Right				Farming			
		Area Type				Rural			
		Vehicle Parking				None			
		Sight Distance				Good			

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
		Which of these looks most like the road?				1 Lane Undivided			
		Centerline label				N/A			
		Number of Lanes				2			
		Lane width				Narrow			
		Shoulder Number				Not present			
		Road Condition				Good			
		Soil Resistance				Good			
		Grade				0 to 7%			

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
		Median				Center Line			
		Delimitation				Good			
		Street Lighting				Not present			

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
		School Zone Warning				Not present			
		School Crossing Supervisor				Not present			

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
		Sidewalk Left				Informal curb			
		Sidewalk Right				Informal curb			
		Paved Shoulder Left				None			
		Paved Shoulder Right				None			
		Pedestrian Fencing				Not present			

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
		Does the road have a pedestrian crossing?				Present			
		Pedestrian crossing quality				Good			
		Does a side road have a pedestrian crossing?				Not present			

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
		Vehicle Flow				Good			
		Pedestrians crossing in the peak hour				200 to 400			
		Pedestrians walking on the right side in the peak hour				100 to 200			
		Pedestrians walking on the left side in the peak hour				20 to 100			

Station Location	Road Environment	Road Type	Road Features	School Zone	Setbacks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds	
			Intersection Type & Extra Features					No intersection	▼	
			Property Access Point					No intersection	▼	
			Intersection Side Flow					No approach	▼	
			Intersection Quality					No intersection	▼	
			Channelization					No present	▼	
			Curvature					Straight	▼	
			Curve Quality					Poor	▼	
Station Location	Road Environment	Road Type	Road Features	School Zone	Setbacks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds	
			Speed Limit						20mi/h	▼
			Operating Speed						20mi/h	▼
			Speed Management						Present	▼

2. Imam Ali School

Star Rating (Before Treatment)	1 Star (Score: 192)
Star Rating (After Treatment)	4 Star (Score: 11)
Safety Improvements implemented	Transverse thermoplastic rumble strips and zigzag line, School Sign, Delineation, Speed Bump, Road Studs, On-road thermoplastic school sign

Star Rating Before Treatment



Star Rating After Treatment



Figure 10- Imam Ali School Star rating

ALI ZAFERZADEH
Account Information

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Profile

Del-Dells





Select from file

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
Road Name		Del-Dells							
Section Name		447							
Latitude		35.42295							
Longitude		82.57747							
City/State		Del. / Surry							

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
Land Use Left								Commercial	
Land Use Right								Residential	
Arterial Type								Rural	
Vehicle Parking								Two sides	
Sign Distance								Four	

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
Which of these looks most like the road?								3 Lanes L/R divided	
Carriageway Label								No	
Number of Lanes								3	
Lane width								Medium	
Shoulder Rubble								Not present	
Road Condition								Medium	
Skid Resistance								Medium	
Grade								3 to 7%	

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
Median								Center Line	
Delimitation								Four	
Street Lighting								Present	

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
School Zone Warning								No school	
School Crossing Supervisor								No school	

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
Sidewalk Left								3 to 20' wide	
Sidewalk Right								3 to 20' wide	
Paved Shoulder Left								None	
Paved Shoulder Right								None	
Pedestrian Fencing								Not present	

Station Location	Road Environment	Road Type	Road Features	School Zone	Shoulders	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
						Does the road have a pedestrian crossing?	Not present		▼
						Pedestrian crossing quality	Not applicable		▼
						Does a side road have a pedestrian crossing?	Not present		▼

Station Location	Road Environment	Road Type	Road Features	School Zone	Shoulders	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
							Vehicle Flow	8000	
							Pedestrians crossing in the peak hour	00 to 000	▼
							Pedestrians walking on the right side in the peak hour	00 to 000	▼
							Pedestrians walking on the left side in the peak hour	00 to 000	▼

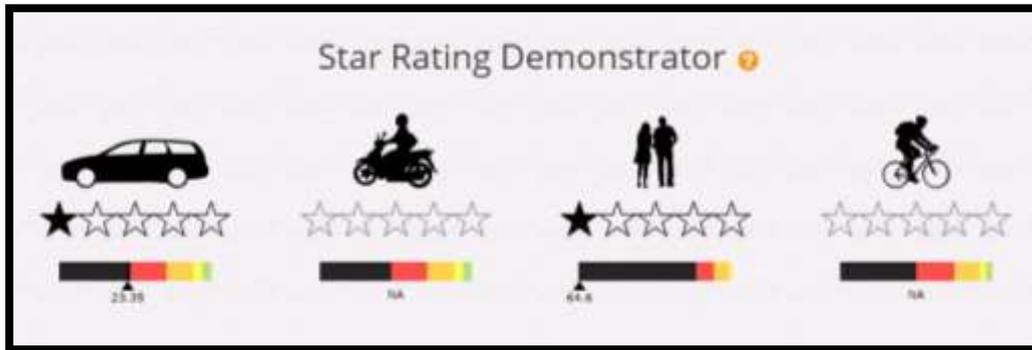
Station Location	Road Environment	Road Type	Road Features	School Zone	Shoulders	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
							Intersection Type & Extra Features	No intersection	▼
							Property Access Point	No intersection	▼
							Intersection Side Flow	Not applicable	▼
							Intersection Quality	Not intersection	▼
							Channelization	Not present	▼
							Curvature	Intermediate	▼
							Curve Quality	Good	▼

Station Location	Road Environment	Road Type	Road Features	School Zone	Shoulders	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
							Speed Limit	60km/h	▼
							Operating Speed	60km/h	▼
							Speed Management	Not present	▼

3. Azmoodeh School

Star Rating (Before Treatment)	1 Star (Score: 65)
Star Rating (After Treatment)	2 Star (Score: 10)
Safety Improvements implemented	Crosswalk, Yellow zigzag line, School Sign, Delineation, Speed Bump, Road Studs, On-road thermoplastic school sign
Comment	Due to existence of a sharp curve and high traffic volume, higher star (3 Stars) didn't achieve

Star Rating Before Treatment



Star Rating After Treatment

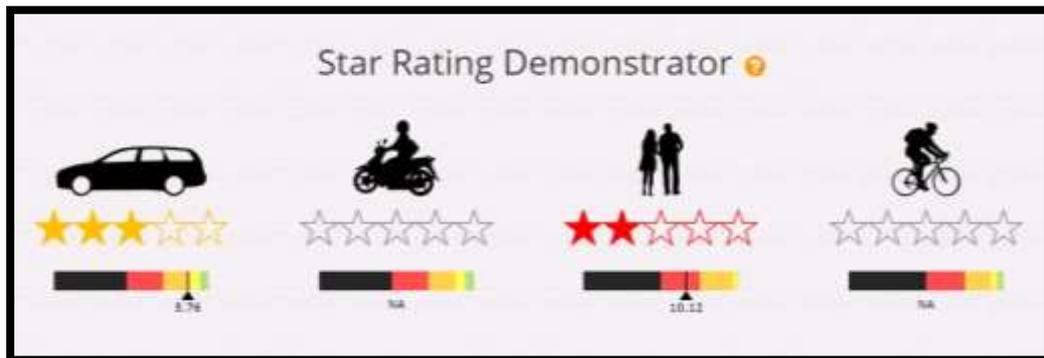


Figure 11- Azmoodeh School Star rating

Pictures Before



Pictures After





STAR RATING FOR SCHOOLS

ALJ ZAYERZADEH
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Dashboard
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Summary
Coding Data
Results

Coding - Edit

Alzahr

Select Photo(s)

Station Location	Road Environment	Road Type	Road features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
Road Name		Alzahr							
Section Name		Al Zahra							
LATITUDE		25.449258							
Longitude		69.520702							
Comment		OK							

Station Location	Road Environment	Road Type	Road features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
Land Use Left		Parking							
Land Use Right		Commercial							
Area Type		Road							
Vehicle Parking		One side							
Sight Distance		Good							

Station Location	Road Environment	Road Type	Road features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
Which of these looks most like the road?		Local Unimodal							
Cartography label		Yield							
Number of Lanes		1							
Lane width		Wide							
Shoulder Runoff		Not present							
Road Condition		Good							
Soil Resistance		Medium							
Grade		< 1% (2%)							

Station Location	Road Environment	Road Type	Road features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
Median		Continuous							
Delimitation		None							
Street Lighting		Present							

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
				School Zone Warning		No school zone			
				School Crossing Supervision		No supervision			

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
					Sidewalk Left		Informal left		
					Sidewalk Right		Informal & no sign		
					Paved Shoulder Left		None		
					Paved Shoulder Right		None		
					Pedestrian Fencing		Not present		

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
						Does the road have a pedestrian crossing?		Not present	
						Pedestrian crossing quality		Not applicable	
						Does a side road have a pedestrian crossing?		Not present	

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
							Vehicle Flow		4000
							Pedestrians crossing in the peak hour		0
							Pedestrians walking on the right side in the peak hour		0 to 20
							Pedestrians walking on the left side in the peak hour		000 to 200

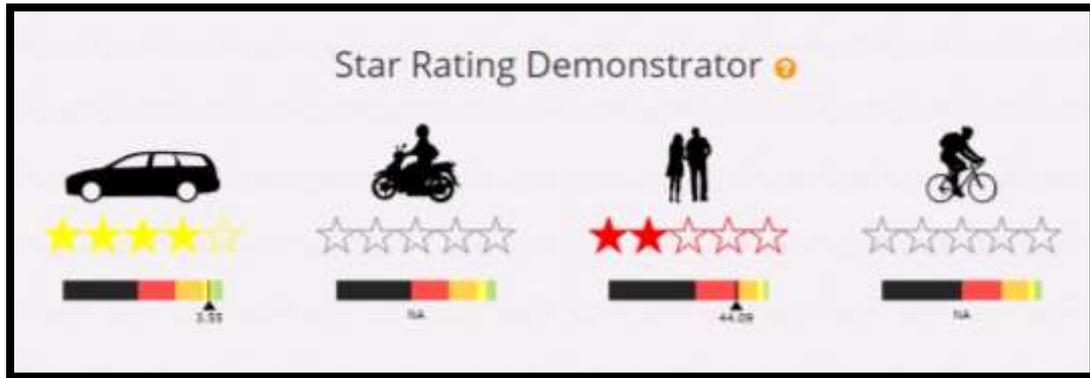
Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
								Intersection Type & Extra Features	No intersection
								Property Access Point	No intersection
								Intersection Side Flow	Not applicable
								Intersection Quality	Not intersection
								Channelization	Not present
								Curvature	Sharp
								Curve Quality	None

Establish Location	Road Environment	Road Type	Road Features	School Zone	Sidewalks	Pedestrian Crossing	Flow	Intersections & Curves	Speeds
									Speed Limit
									Operating Speed
									Speed Management

4. Chamran School

Star Rating (Current Situation)	2 Star (Score: 44)
Star Rating (Proposed Treatment)	3 Star (Score: 25)
Suggested Safety Improvements	Safe Crosswalk, School Sign, Enhanced Delineation, Speed Bump, Road Studs, On-road thermoplastic school signs
Comment	There is a plan to be treated before 2020

Star Rating Before Treatment

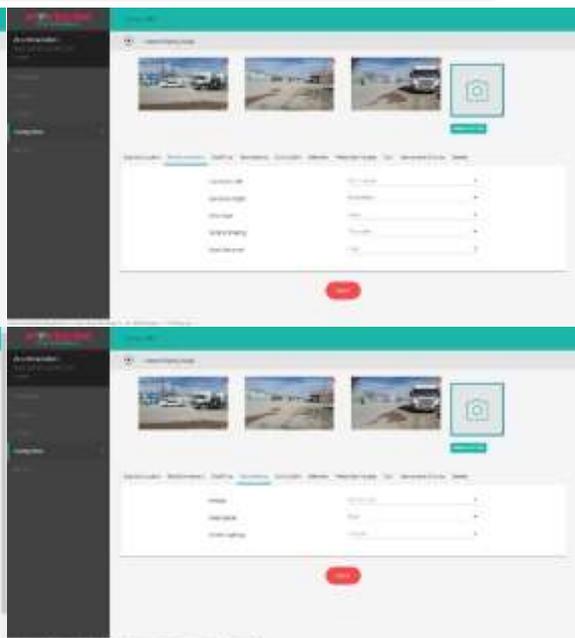
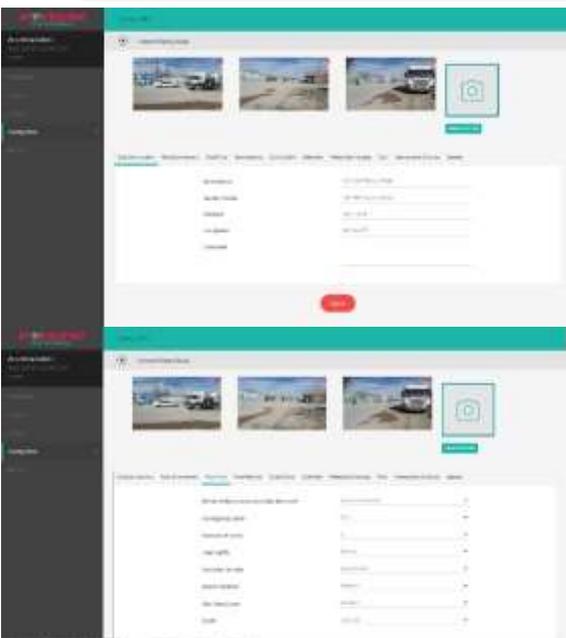
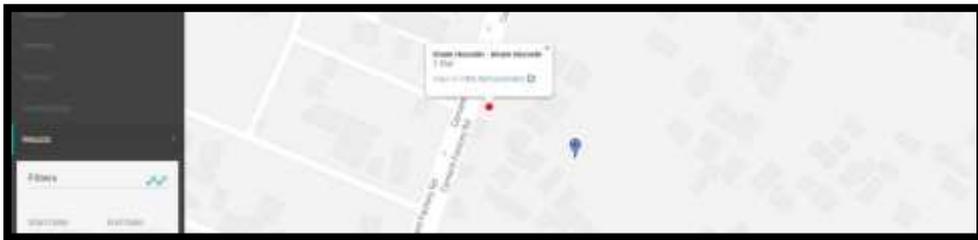


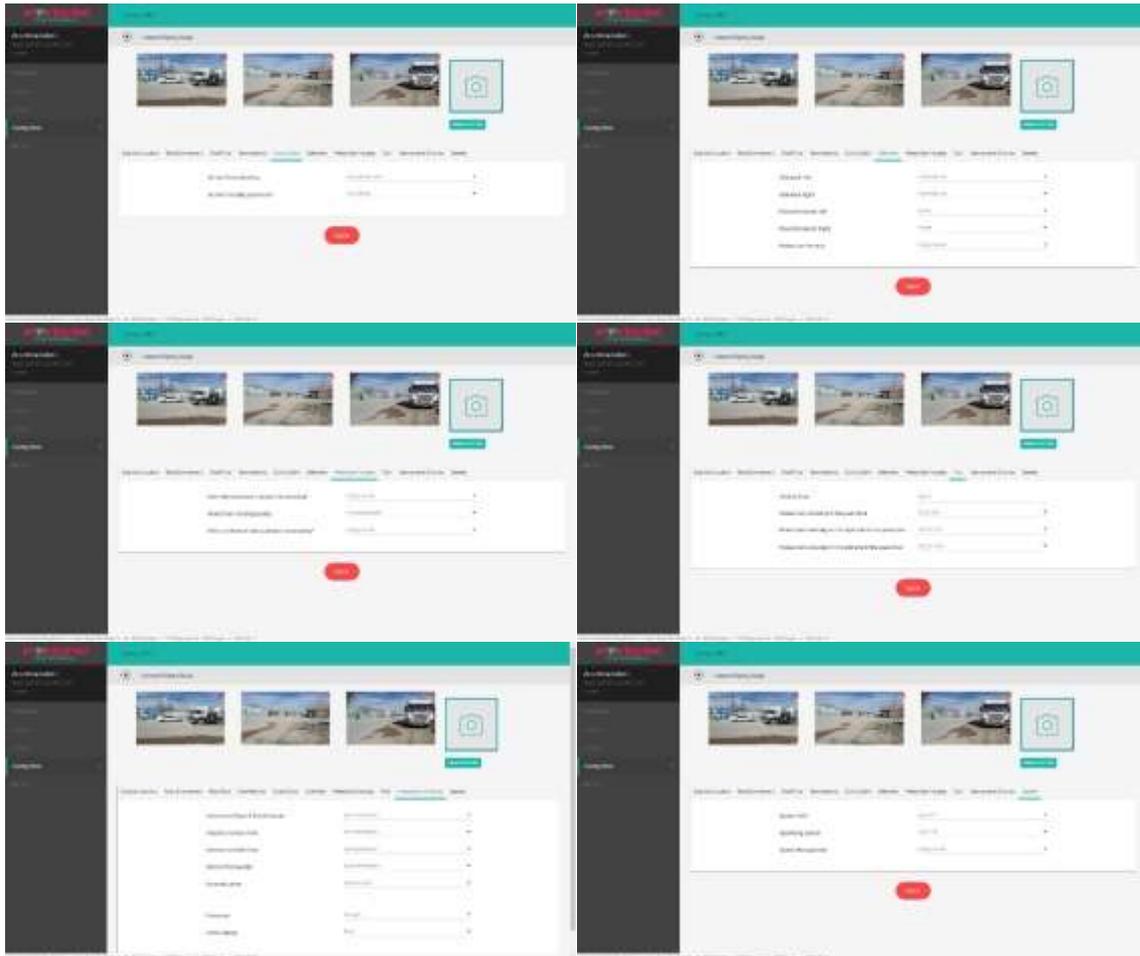
Star Rating After Proposed Treatment



Figure 12- Chamran School Star rating

School Pictures





5. Keshvari School

Star Rating (Current Situation)	2 Star (Score: 57)
Star Rating (Proposed Treatment)	3 Star (Score: 16)
Suggested Safety Improvements	Traffic Calming, Safe Crosswalk, School Sign, Enhanced Delineation, Speed Bump, Road Studs, On-road thermoplastic school signs
Comment	There is a plan to be treated before 2020

Star Rating Before Treatment



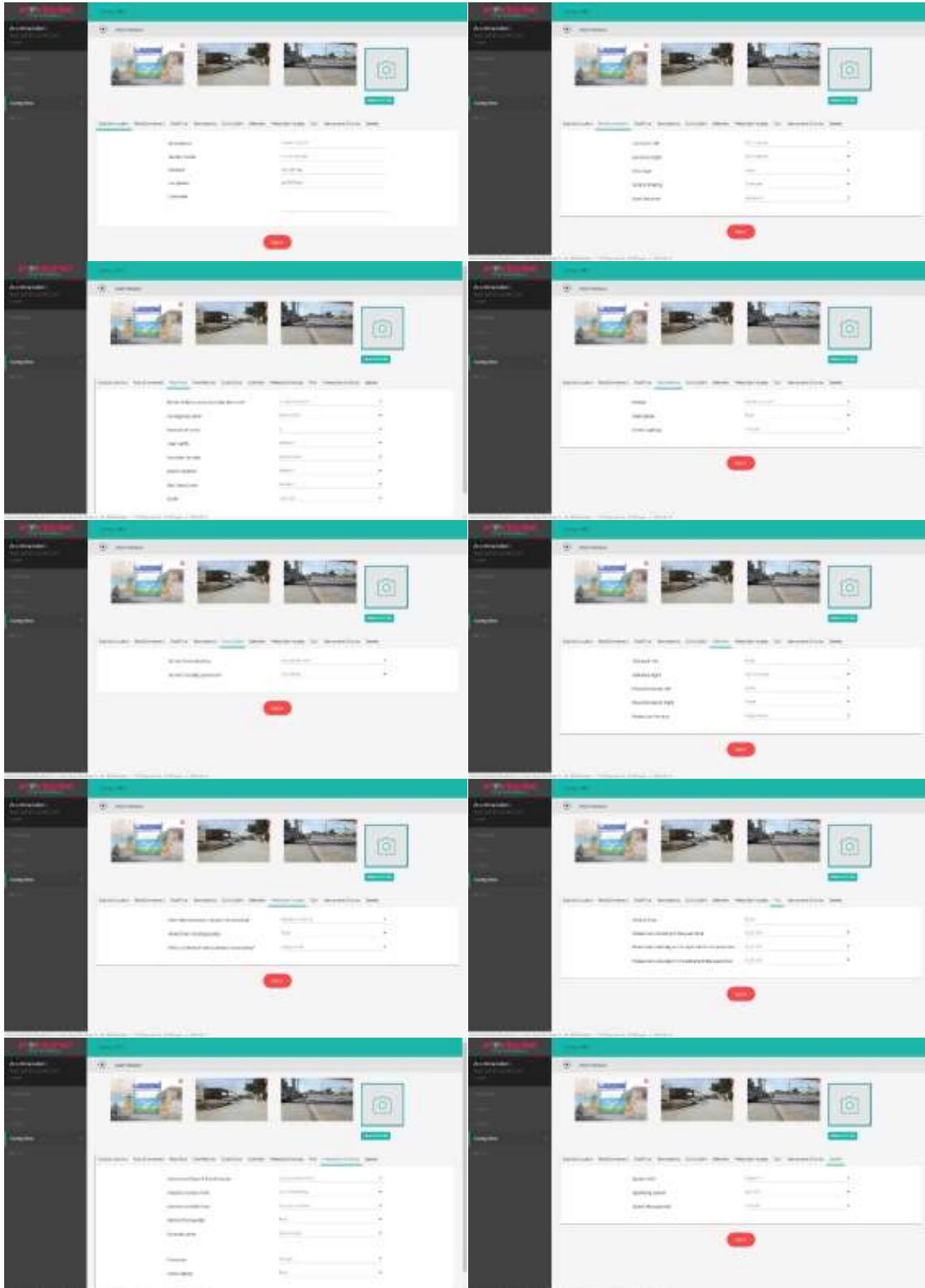
Star Rating After Proposed Treatment



Figure 13- Keshvari School Star rating

School Pictures





Part 6: App usability and functionality experience (FILL IN if you used the SR4S app)

Aspect	Your experience
Installing the app	Some problems at start but solved
Using the app	It's not working without internet or GPS, but overall if you are trained it's easy to use
Process of using the app	It's easy
Accomplishing the intended task	For submitting sometimes we had error messages but Patrick and Jigesh and Albin helped us to solve it
Time taken to successfully collect information from one data point	If you observe well it's really quick
Errors or mistakes made while using the app	Some selections were tricky like lane width but by using the coding guide we correct it later
Images and other graphics	Perfect
What aspect of using the app worked best in your school setting in your country	Avoid errors of reading the data from paper forms and enter it again into the website
What did not work	Nothing
Does the app contain the features you need	Yes
Are you likely to use this app in your future work	Yes
How will the app support your future work	Very useful method to present
Who is the app useful for and who is it not useful for	Useful for Engineers who do audit, and campaigners to clearly tell decision maker what they need to be improved
Should the app be available for the general public? Why/why not	Yes , but only for trained experts
What are the opportunities of the app as a tool for star rating schools	Prioritize schools and suggest short term remedies and mid long term treatments
What are the limitations of the app as a tool for star rating schools	-
Other Comments?	It was great opportunity and new valuable experience!

Part 7: ADDITIONAL COMMENTS if any

It was a great experience for all of us and especially for me as a transport engineer. We had some discussion a year before the training with iRAP directors to let us use this promising tool and I'm so happy that it finally happened with the help of Global Alliance of NGOs.

Still we need to monitor the outcomes of improved areas, however, there is no systematic process for registering number of students suffering from an accident when travelling to/from school and it makes the evaluation difficult. But maybe the surrogate measure to observe changes would be collect data on percent of safe behaviours for crossing the street for example by students.