2022 OSU ITE STEM Outreach Program

POST-EVENT SUMMARY REPORT | APRIL 23, 2022

Prepared for ITE Western District

Prepared by ITE Student Chapter at Oregon State University

Oregon State ITE Student Chapter

Oregon State University

CORVALLIS | OR-97331

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1. Purpose

The purpose of this project is to introduce and promote the field of Transportation Engineering to the younger generation studying in high school. This project also intends to provide the high school students an insight into the field of transportation and educate them how transportation system affects our daily lives. The event has several activities that bring awareness to real-world traffic data. The activities include collecting transportation data using drones, simulators, and JAMAR boards. These activities are intended to also stimulate their interest in Civil and Transportation Engineering.

2. Project Team

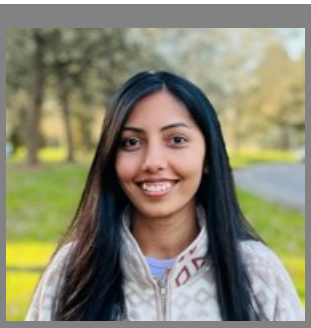
The student coordinator of the event who was responsible for the overall project management is Namu Timilsina, Community Service Chair (2022-23) who handled planning, outreach, and logistics of the event. The project was handed over to her by the previous Community Service Chair (2021-22) in March 2022.

2.1. Student Team:

There student team consisted of 6 student volunteers from OSU ITE who contributed to the project. Their names, roles and headshots are as given below:

Kezia Suwandhaputra
Civil Engineering

Graduate School



Namu Timilsina
Civil Engineering

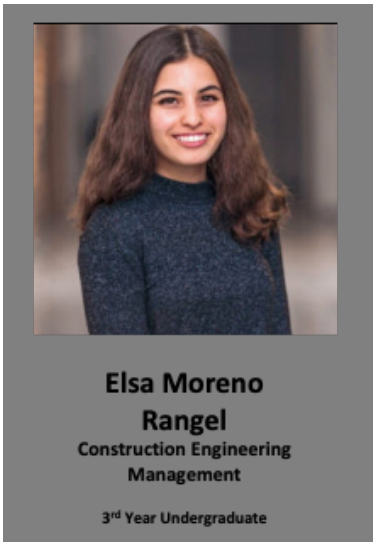
Graduate School

Chenqiang Liu
Civil Engineering

Graduate School

Namu served as Student Project Manager for this event and is the current Community Service Chair (2022-23) of OSU ITE student chapter. Kezia is current Vice-President (2022-23) and Chenqiang is the current Treasurer (2022-23) of OSU ITE student chapter. A presentation on

introducing the transportation field and the research that are currently being done by the students at Oregon State university was given by these three volunteers.



Eileen is the outgoing President (2021-22), Yujun is the outgoing Community Service Chair (2021-22), and Elsa is the current Media Relations Chair (2022-23) of OSU ITE student chapter. During the event Yujun gave a short training to the high school students to operate the traffic data collection equipment. Eileen gave a tour to the bicycle and driving simulator lab and demonstrated how simulators support data collection in Transportation research to the students. Elsa took the photographs and videos of the event and gave a tour to the students around Kearney Hall where the event was hosted.

2.2. Other Personnel:

Yi-Min Ha (PE), Alison Tanaka (PE) and Dr. David Hurwitz (Ph.D.) were the other personnel who supported this project.

Yi-Min Ha is a Transportation/ Planning Engineer at Kittelson and Associates, Inc. He served as the ITE Western District Project Manager. He provided guidance during the planning of the project and also provided an QA/QC during the preparation of the final report.

Alison Tanaka is a Senior Engineering Associate of Portland Bureau of Transportation and an ITE member. She served as the team's Professional mentor and provided expertise and guidance. She also ensured that the project was a success. Further, she helped by providing an QA/QC during the preparation of the final report.

Dr. David Hurwitz is OSU ITE's Faculty Advisor and an ITE member. He provided QA/QC while preparing the final report. He also supported for student recruitment and Driving and Bicycling Laboratory tour.

3. Event Summary

On April 23rd, 2022, Oregon State University ITE Student Chapter hosted the STEM outreach for high school students to help deepen their understanding of the Transportation Engineering and to encourage more students to join the field. The location of the event was Room 312, Kearney Hall, Oregon State University.

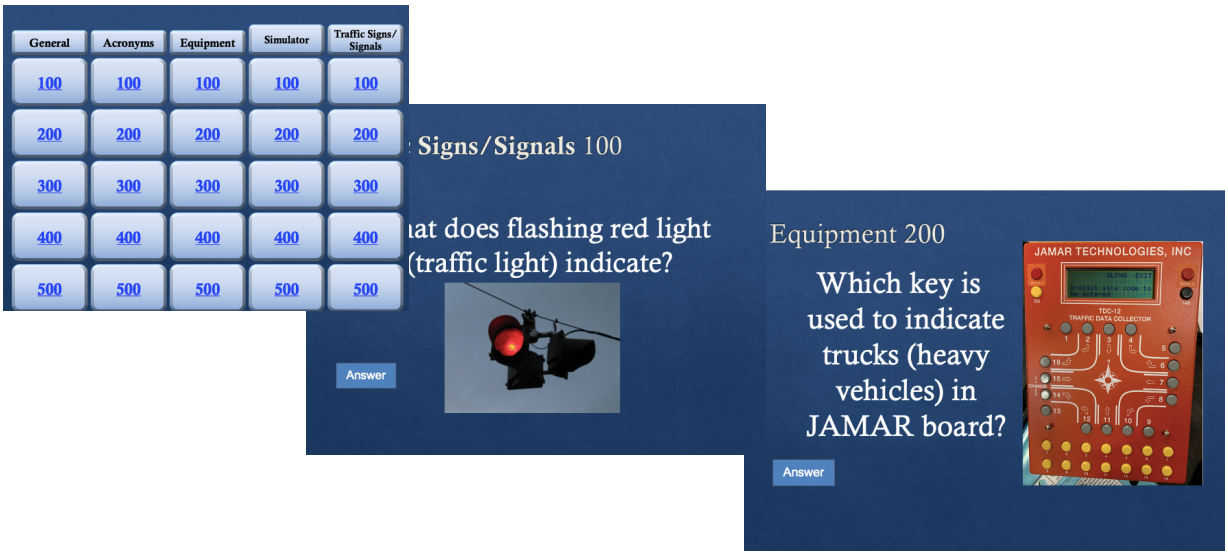
The itinerary of the event included three parts: training and operation of transportation equipment, touring the Driving and Bicycling Laboratory, and a special Traffic Bowl contest. Officers of OSU ITE connected with local high schools, and we got a total 9 registrations out of which two students attended the event.

Our team gave a presentation introducing how transportation research improved real-life issues. We demonstrated how equipment that we use for collecting transportation data, such as drones, simulators, and JAMAR boards during the presentation. We then provided a short training to the high-school students and taught them the basic operation methods. We also provided then a hands-on opportunity. The training section took 2 hours (8 am to 10 am). We provided the training in the park outside OSU Kearney Hall.

We took the students to the OSU Driving and Bicycling Laboratory, where we demonstrated how simulators support data collection in Transportation research. We provided the high-school students with an opportunity to operate the driving and bike simulators. They were also informed about how researchers interpret data from the simulator study and how the findings benefit people in real-life. This excursion took 2 hours (10 am to 12 pm).

We had a lunch break from 12 pm to 1 pm. During the break, ITE officers and volunteers interacted with the high-school students and shared their school experience, research projects and goals.

After the lunch, we organized a Traffic Bowl contest for the high-school students. The contest provided a review and recap session for students as the contest included questions related to the prior activities that students did before the lunch. The students also received a full set of PPEs (personal protective equipment) with OSU logo, bike lights and the OSU ITE mug as the prizes for participating in the contest. We were able to finish the contest within 1.5 hours (1 pm to 2:30 pm).



We also showed them around the Kearney Hall, home to the school of Civil and Construction Engineering. This activity took around 30 minutes. The entire event went as per our planning for the event and was completed within time.

4. Project Timeline

Duration ◊ Deadline

Task	Mid Jan.	Feb.	Apr. 1	Apr. 23	Apr.24 -May 1	May 2	May 3-7	May 8-10	May 11	Jun. 3	Jun. 3-9	Jun. 10
Advertised to ITE students												
Connect with schools												
Students sign up			◊									
STEM Outreach												
Summary report												
Submit Draft to Mentors						◊						
Draft Report Mentor QA/QC												
Address QA/QC Comments												
Submit Draft Report									◊			
Receive Review Comments										◊		
Address Review Comments												
Submit Final Report												◊

5. Accomplishments

Since there were two students, each student got to experience each activity with ample time. They enjoyed the hands-on experience with drone and driving simulators. The students were very satisfied with the event and recommended that we continue this event annually. The students got to interact with volunteers and learn how they chose a career in Civil Engineering**.**

Additionally, OSU ITE was able to prepare presentation and videos that can be used in future events and recruitments. From this event, OSU ITE gained experience in hosting the K12 outreach event and identified key areas for increasing future participations.

6. Lessons Learned

Since this was the first time OSU ITE organized this K-12 outreach event, our reach to the number of high schools were limited. Despite having nine registrations, only two students showed up to the event. We did not collect contact information in our response forms, except email address and thus were unable to connect with the prospective students prior to the event. In the future, we plan to continue expanding our connections and utilize the contacts we have made for this outreach event. Additionally, we plan to collect more contact information, such as phone number and their guardian's phone numbers, in our response form.