

**Contextual Factors Analysis**

Daegu International School  
Mathematics Grades 8, 9, 10, 11



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## Community, District, School, and Classroom Factors

South Korea became a democratic nation, after World War II ended, in 1945. The current President is Park Geun-hye and she is their first elected female president. There has been a lot of political tension, especially in the northern part of the country where the capital is and the larger cities like Busan and Ulsan, in regards to her political corruption and numerous scandals. In Daegu, however, there haven't been any large protests.<sup>1</sup>

South Korea is roughly twice the size of Maine in terms of landmass, with 60,223.3 square miles to Maine's 30,862 square miles, and nearly 40 times the population, with a population of over 50 million people to Maine's 1.3 million.<sup>2</sup> The average GDP per capita in South Korea is \$27,221.5 USD.<sup>3</sup>

Daegu is the fourth largest city in South Korea, following Seoul, Busan, and Incheon. There are 2.5 million people living within the 341 square mile city.<sup>4</sup> The city of Daegu is broken up into smaller sections similar to the burrows in New York. The part of the city that DIS is located is called Dong-gu, but everyone refers to it as Easiapolis. Up the road from DIS is a large park called Bongmu-dong Park, it has a lake with duck boats and well maintained walking, biking, and hiking



<sup>1</sup> World Factbook and Washington Post

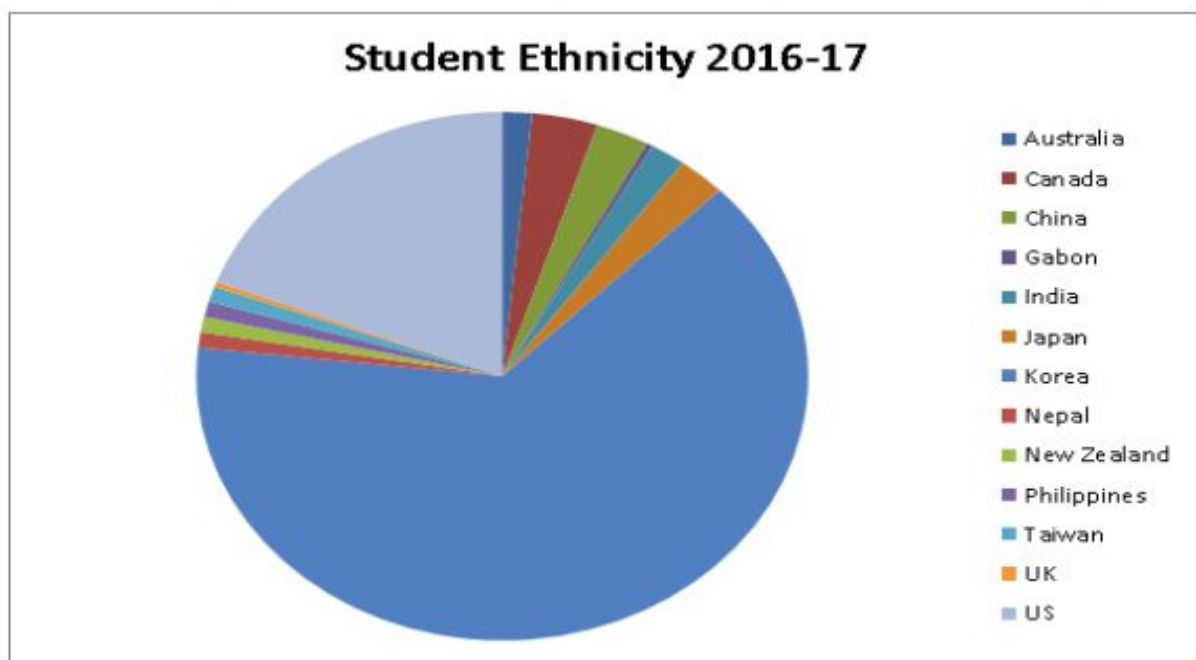
<sup>2</sup> ([Maine Size](#) and world factbook).

<sup>3</sup> ([World Bank](#))

<sup>4</sup> ([Cities of South Korea](#))

trails. The country has in the last decade updated a lot of their trail system along the rivers, called Greenways. A person can actually travel up and down the entire country via this trail system.<sup>5</sup>

DIS is the sister school to the Lee Academy in Lee, Maine. It is a fairly young school, having just opened in 2010, with the hopes to eventually draw more international students than it currently has. They teach American curriculum serving students from k-12. There were 320 students enrolled at the beginning of the 2016-2017 school year, but that number is continuing to grow as evidenced by 4 new students in my classrooms alone this semester. There is a wide variety of students on the DIS campus, although the majority of students here are Korean, there are many students from all over the world. (Self Study)



The school mission statement is “to help students become successful contributing members of a global society by providing a safe nurturing environment in which students can reach their maximum potential, socially, emotionally, and intellectually.” This is supported in the way the

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<sup>5</sup> Amanda Stark

school is structured. Students who are living in the dorms are given “parents” that fill the role of parents while they’re living on campus by checking in on them and ensuring they have all the support they need to be successful at DIS. The school wide learner outcomes also reflective of their mission statement. These are students who will be Determined: responsible, collaborative, confident; Intellectual: creative, analytical, literate; and Successful: globally-minded, respectful, well-rounded.<sup>6</sup>

Because this school is simulating a typical American education, the students here will graduate with the same diploma they would if they had attended Lee Academy. Korean students have the opportunity to also graduate with a Korean diploma if they take the additional Korean language and history courses.<sup>7</sup> The goal of many of the students is to attend a highly ranked University after graduation, many of which are English speaking. Because of this goal, the language of all of the core curriculum classes is English so that students become proficient in the language before moving on to a college course load. Because many students have lofty post-secondary goals, students here are highly motivated, but also very grade oriented.<sup>8</sup>

Students have the opportunity to live in the dorms, which are separated by floors. Teachers live on the fifth and second floors, girls are on the third floor, and boys are on the fourth floor. Each floor has its own laundry room and every room has its own bathroom. The first floor of the resident halls has a lounge area with ping pong tables, a TV that is connected to an XBox, couches, a fitness center, and the main office which is also the resident director’s office.

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<sup>6</sup> ([Student Handbook](#))

<sup>7</sup> Self Study

<sup>8</sup> (Greg Cross)

The campus is completely gated. The only way in or out is past the security station where everyone is checked in and out. There is a gymnasium, which is also the theater, turf soccer fields, a basketball court, an early childhood center with an outdoor playground, and the school is with a connected library and cafeteria. The school is separated by floors similar to the dorms, the elementary school is on the first floor, the middle school is on the second floor, the secondary classes are on the third floor, and the arts are on the fourth floor.



Each classroom has a smartboard as well as a white board. The classroom that I am in has a white boards on two of the walls. Each classroom also has spare laptops for students to borrow during class time. There is also a technology classroom available to students and computers that students may use in the library. However, most students have their own laptops and graphing calculators are a requirement for upper level maths.

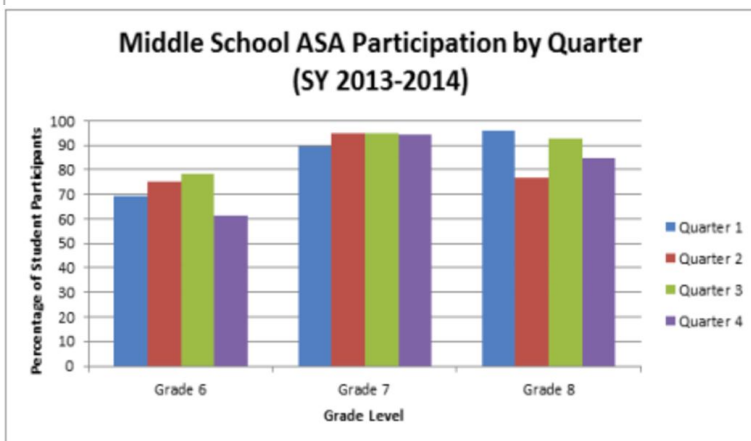
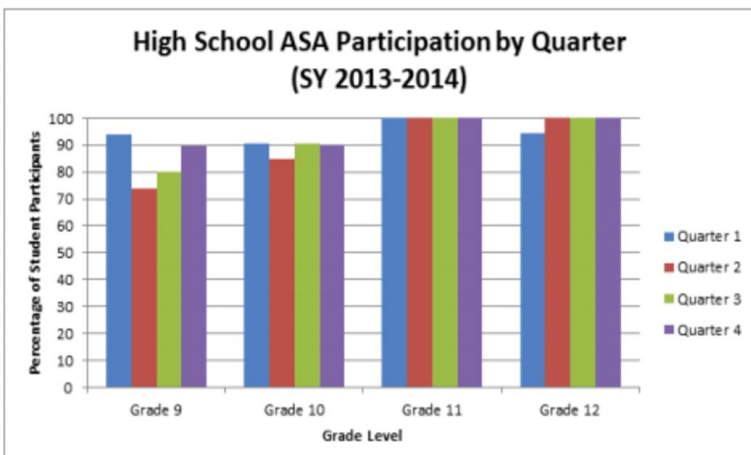
The classes are 90 minute blocks, four blocks a day, and everyday is rotating blue or green. Blue days are always the same and green days are always the same but students have

different classes on blue and green days. The school day goes from 8 am until 2:30 pm everyday, and after that students have the opportunity to participate in after school activities, or ASAs.

These will go from 2:45 pm until 4:15 pm and dinner for students who live on campus begins at 5 pm.

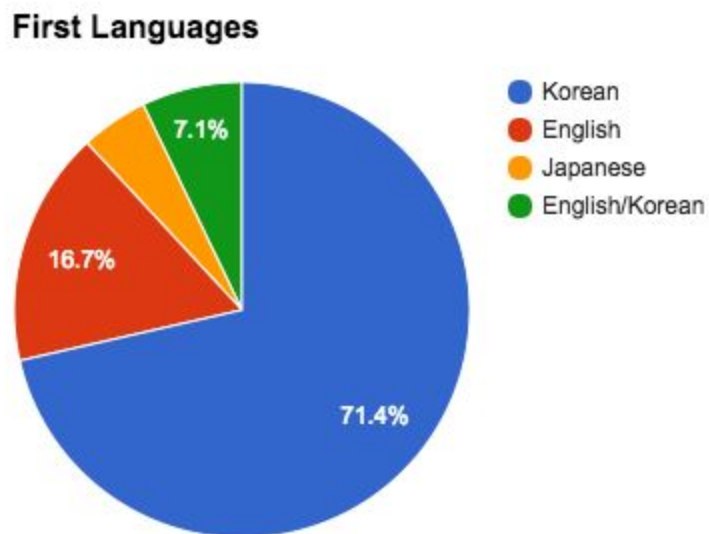
ASAs are a big part of campus life here, because students and parents are so involved with what ASAs are available and can help create new ASAs that have interest on campus, there is a good selection of activities that students can choose from and want to participate in. There are non-competitive athletic activities like cheerleading, Zumba, golf, and ping pong, as well as academic and civic activities like the model UN and math competition club. There are also artistic themed clubs, such as yearbook, journalism club which produces a monthly paper with

advice columns and updates about what’s going on in the school, theater, dance, and 3D printing. Because students can choose new activities each quarter and the activities available depend on student interest, there is an extraordinary rate of student involvement.<sup>9</sup>



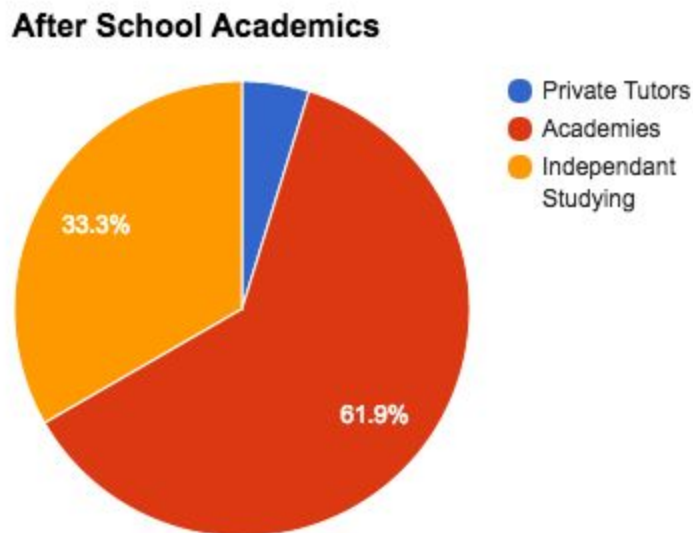
<sup>9</sup> Self Study

## Strengths and Needs Analysis and Student Characteristics



The classes that I will be taking over this semester are two Geometry classes and one Algebra 2 class. The Geometry classes consist of mostly eighth graders with a handful of upperclassmen that transferred from other international schools. Geometry (G2) has 16 students in it. Two of those students are ELL whose biggest struggle in the classroom is understanding and then conveying their knowledge in English. They seem to work best with a more individual approach because it gives them more time to find the words they're looking for and understand and think about the content in their primary language. Both of the Geometry classes have a very wide range of student ability. Because of the nature of the school and the academic culture in South Korea, a lot of the students are highly motivated and very gifted. This seems to exacerbate the differences between the rate of comprehension for our ELL, typical, and gifted students.

That being said, working individually with each of the students gives me the opportunity to pose really challenging and thought provoking questions to the gifted students who get easily bored with going at a slower pace, and provide additional support and clarity for students who need more time to process and understand. During classes, I like to present the material for the class, and then give students the opportunity to work with the new content. This gives me the class time that is needed to address specific concerns and spend time with the students who need the additional support.



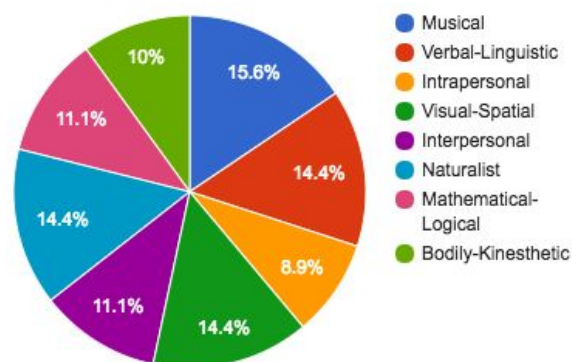
I prefer using class time this way because the majority of the students I have attend academies, in some cases multiple academies, as well as participate in multiple ASAs. I have available time after school in the library on Wednesdays, but I want to be sure that all of my students have the opportunity to ask clarifying questions.



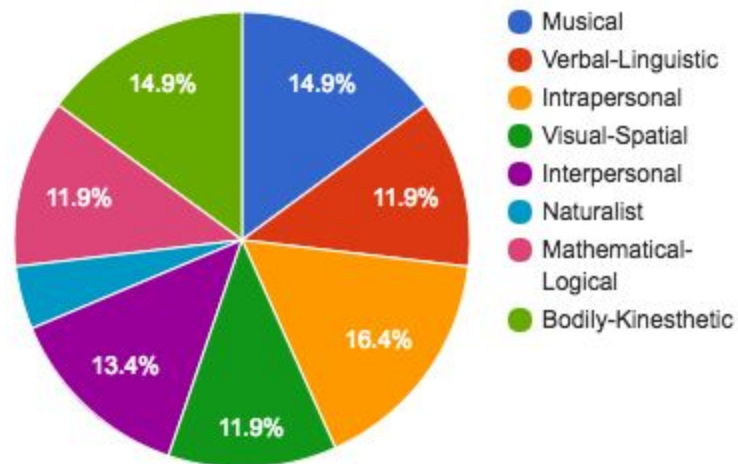
There is a huge variety of learners in all three of these classes. In order to provide the best resources I could, I made a class website that has links to materials we went over in class, class handouts, the class slideshow that reviews the important concepts of the day, and additional resources they can use if they are still not understanding the material. For the students that are ELL, or just need a different way to look at the concepts than how I went over it, each section for every class will have links to videos with subtitles, or webpages with pictures, diagrams, and descriptions.

As far as reaching students who prefer learning in different ways, I plan to use multiple forms of student assessment including projects with every chapter. I already have used exit tickets, vocabulary quizzes, student made charts and diagrams, and homework to monitor student understanding and to check for common misconceptions or misunderstandings. As you can see from the charts below, the learning preferences in both Geometry classes is spread pretty evenly across the learning styles. This tells me that in order to reach the most amount of students, I need to keep my instruction varied. This is part of why I put so many additional resources on the website.

**Multiple Intelligences for Geometry (G2)**



### Multiple Intelligences for Geometry (B4)



I plan to continue using these methods of checking for understanding to make sure that students are understanding what's going on in class as we progress through a chapter, especially regarding the vocabulary quizzes. Because math vocabulary isn't something we use in our everyday lives, I want to be sure that the words we are using in class to describe ideas are words that all of the students know and understand. I give them vocabulary homework assignments so they can be aware of the important words and can look them up before class time so they can understand to the best of their abilities without being as hindered by language barriers.