



# Seeing Math Through the Lens of Different Cultures

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# Quick Overview

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- ▶ Visited schools in Vietnam and interviewed a local teacher in the Ho Chi Minh City Area
- ▶ Made comparisons mainly amongst secondary schools (middle to high school)



# Research Question

- ▶ How does the Mathematics curriculum in Vietnam differ from that of the United States?



# Limitation

- ▶ The timeframe for gathering information was limited; as a result, not as much information about the Vietnamese mathematics curriculum was retrieved as desired
- ▶ However, some interesting findings about the Vietnamese school system were obtained through an interview with a local teacher, Ms. Thanh Thuan

# Comparative Analysis Between Schools in Vietnam and the U.S.

# Vietnam

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# Vietnamese Major Types of Schools

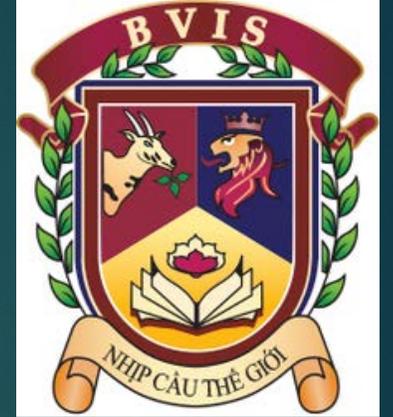
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- ▶ International Schools
- ▶ Private Schools
- ▶ Government Schools (public)



# International and Private Schools in Vietnam

- ▶ Timing with classes is more flexible and allows teachers more time to spend with students(international schools do not require classes all day)
- ▶ Students move to different rooms for each class
- ▶ Classroom size between 15-20 students
- ▶ Blended Vietnamese and English education
- ▶ International schools prepare students to enter universities in other countries (Britain, Australia)



# Government Schools in Vietnam

- ▶ Depend heavily on Vietnamese government examinations and guidelines
- ▶ 7am start of day, must come earlier every Monday for the country's pledge, full day of classes
- ▶ Classroom size 30 students
- ▶ Pressure from program so teachers have little time to spend with students
- ▶ Students stay in same classroom all day for every class



# U.S Major Types of Schools

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- ▶ Public School

  - ▶ Traditional (city, county, state, etc..)

  - ▶ Charter

- ▶ Private School

- ▶ Home Schooling



# Public Schools in the U.S.

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- ▶ Depend on state testing
- ▶ Students move to different rooms for each class
- ▶ Teachers and programs available after school
- ▶ Full day of classes
- ▶ Country's Pledge of Allegiance said daily
- ▶ No cost to parents, paid by taxes



# Private Schools in the U.S.

- ▶ Most schools depend on state testing, but not all
- ▶ Students move to different rooms for each class
- ▶ Teachers and programs available after school
- ▶ Full day of classes
- ▶ Country's Pledge of Allegiance said daily
- ▶ Usually more support and programs for students after school
- ▶ Parents pay tuition



# U.S. vs. Vietnamese Ranking in Math and Science (based on PISA results)

- ▶ 2012 PISA scores:
  - ▶ United States: 481 in Mathematics, 497 in Science
  - ▶ Vietnam: 511 in Mathematics, 528 in Science
- ▶ 2015 PISA scores:
  - ▶ United States: 470 in Mathematics, 496 in Science
  - ▶ Vietnam: 495 in Vietnam, 525 in Science
- ▶ 2018 results will be collected in the near future

# Vietnam's Educational Highlights

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- ▶ Students in Vietnam begin taking their 1<sup>st</sup> math classes and learning basic arithmetic in Kindergarten, which is unlike the majority of U.S. schools where more value is placed on social interaction
- ▶ Students in Vietnam start learning multiplication in 1<sup>st</sup> grade, whereas in most U.S. schools, multiplication is not learned until 3<sup>rd</sup> grade
- ▶ In Vietnam, all secondary schools have school fees (tuition, books, supplies) that the students' families have to pay out of pocket. Note: the costs of schools (Vietnam: Public < Private < International )

# Best Practices

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- ▶ U.S. 
  - ▶ Daily movement throughout the day
  - ▶ After school support programs
  - ▶ Routine testing to see student progress
  - ▶ Early school years (K/1) focus on social /emotional development and not academic content

- ▶ Vietnam 
  - ▶ Uniformity in classroom location
  - ▶ All schooling requires some form of parental financial contribution
  - ▶ Competitive for educational advancement
  - ▶ Early school years (K/1) focus on academic content

# Conclusions

- ▶ Both countries struggle with motivating their students to learn, especially in STEM courses
- ▶ Funding is a huge barrier for both countries' educational systems
- ▶ There may be a possible connection between having competition at an early school age and STEM performance
- ▶ It is important that parents are involved in the education of their children in terms of both moral and financial support
- ▶ Smaller classroom size and more one-on-one attention for students can lead to better academic performance

# Acknowledgments

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- ▶ Most importantly, today's audience

# References

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