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Summary

I am a high school graduate with a passion for exploring the intersection of Computer Science and Mathematics. Completing A-levels in Chemistry, Computer Science, Mathematics, Physics, and Further Mathematics has made me a problem solver and analytical thinker. I have developed research and statistical analysis skills by independently researching current affairs problems and technical topics. Creating IYMC Community-Nepal, I informed Math enthusiasts in Nepal about international Mathematics competitions and provided a preparation platform. I love coding and have worked on many self-tailored projects.

- IYMC Ambassador from Nepal
- Programming skills: Fundamental knowledge of Python, Java, Kotlin, Visual Basic.NET, and C#
- Awarded 2nd prize and creative solution award by Society of Mechanical Engineering Students-Pulchowk Campus (Institute of Engineering) at the 4th National Physics-Math Olympiad

Experience

Ambassador, International Youth Math Challenge - Official

Jun 2020 - Present (7 months +)

- Created a Facebook page: IYMC Community-Nepal
- Built an executive team of page administrator, content manager, page operator, and public relations officer
- Created and shared Mathematical contents like pdf of reference books, e-learning websites, Mathematical blogs, and Math quizzes and questions
- Conducted webinars and meetings from previous Olympiad participants and IYMC finalists
- Guided 37 students to participate in IYMC-2020, with 4 participants reaching the final

Independent Researcher, Self-employed

Jun 2020 - Oct 2020 (5 months)

- Identified that Nepalese people have a biased opinion on the impact of COVID-19 at the level of Mathematics in Nepal
- Conducted a virtual sample survey for data collection
- Analyzed collected data using graphical and hypothesis testing methods
- Identified positives of online classes on the level of Mathematics in Nepal
- Challenged the biased view of Nepalese people: online classes are ineffective

Mathematics Teacher, Occidental Public School

May 2018 – Jun 2018 (2 months)

- Taught elementary Mathematics topics like Algebra, Analysis, Arithmetic, Calculus, and Geometry to Grade 9 students
- Gave homework and quizzes, and checked them on weekly basis

Education

St. Xavier's College, Maitighar, A-Level, Pure Science

Jun 2018 - Aug 2020

- Full Advanced Level degree in Physics (A*), Mathematics (A*), Chemistry (A), Further Mathematics (A), and Computer Science (A*)

Occidental Public School, Anamnagar, Secondary Education Examination (SEE), Secondary schooling certificate

Apr 2008 - Apr 2018

Skills

Python, Java, Kotlin, C#, Visual Basic .NET (VB.NET), Object-Oriented Programming (OOP), Research, Mathematics, Statistical Data Analysis, Leadership

Honors & Awards

- **4th National Physics-Math Olympiad – Creative Solution and 2nd prize** - Society of Mechanical Engineering Students (SOMES), IOE Pulchowk Campus, Feb 2020
A national level competition as part of MechTrix 2020: 11th National Mechanical Engineering Expo; for students in junior and senior level of high school; 500 students participated
- **International Youth Math Challenge - 2019 (National Gold Honor)** - International Youth Math Challenge (IYMC), Dec 2019
The honor was for all finalists who obtained 90 percentile or more in the final relative to their nation's finalists
- **1st Rato Bangala Math League - 1st runner up** - Rato Bangala School, Aug 2019
A national level Math competition for high schoolers; 53 participating teams
- **6th SXC Mini-Marathon-1st runner up** - St. Xavier's College, Maitighar, Dec 2019
A regional level 11.1 km running where approximately 1800 runners took part (open for any age- group); ran a personal best time of 43 minutes and 22 seconds
- **Horlicks Wizkids Nepal, Essay Writing Competition - 17th rank nationwide** – Krayon, Dec 2015
A national level competition held as part of South Asia's largest interschool art, literary and cultural fiesta, Horlick Wizkids; approximately 1800 students participated

Additional

Language competencies: Nepali (native), English (proficient), Hindi (fluent)

Community service

Nature club-OPS, Secretary

- Collected plastic wrappers of salt, oil, and milk from OPS students' household and the locals of Anamnagar
- Recycled the plastic wrappers and raised funds
- Conducted plantations campaigns, school-cleanliness campaigns, and art competitions
- Volunteered in the Bagmati Clean-up campaign to clean Rudramati (a very polluted river)

Anamnagar Tole Sudhar Committee, Volunteer

- Swept local roads and raised awareness in Anamnagar locals about sanitation via street dramas and speeches
- Volunteered in the Bagmati Clean-up campaign to clean Rudramati (a very polluted river)

Clean Energy Nepal, City Environment Volunteer

- Worked for BaBa program of CEN, where nature clubs are established at schools in Kathmandu valley and wide range of environmental activities are conducted
- Designed and implemented Environmental Mass Education and Awareness campaigns of CEN
- Participated in air conservation workshops and seminars of CEN's executive team

Naya Nepal Samaj Kendra-Orphanage home, Volunteer

- Danced and sang for dejected students
- Hosted a recreational tour to Kathmandu Fun Park by raising funds from my peer group
- Taught any primary school level subjects

Hobbies and interests: Long distance running (21st out of 2400 runners in national level Kathmandu Half-Marathon, 2018), Cricket, Free Writing, Programming

A case study about the impact of COVID-19 at the level of Mathematics of high school students in Nepal

Aditya Karki and Amit Chaudhary
St. Xavier's College, Maitighar, Nepal

Abstract

The shift of teaching-learning practice from in-person to online in Nepal has created a biased opinion in people that the online classes are not effective, and such classes have degraded the level of Mathematics. The purpose of this study is to investigate the impact of COVID-19 on the level of Mathematics at high schools in Nepal. Using a virtual sample survey, we collected information about the availability of technical goods and the Mathematics teaching-learning methods in 18 high schools of Nepal. We interpreted the collected quantitative and qualitative data using quantitative analysis methods. We found that the Nepalese teaching-learning system could not cope with the immediate demand for practicality in learning Mathematics. Lacking a feasible internet facility or appropriate technical equipment, or having a traditional teaching-learning approach were the reasons. However, the demand for practicality in learning Mathematics has also improved exam-performance and brought a positive change in giving homework to students after COVID-19. Therefore, this study asserts that there is a significant negative impact by COVID-19 on the level of Mathematics in Nepal. Although this study also contends that there are many positive outcomes of online classes. Hence, the study does not fully support the impact of COVID-19 to be negative. And it suggests giving continuity to online courses eradicating the factors that negatively impacted the level of Mathematics.

Keywords: biased opinion, level of Mathematics, technical goods, Mathematics teaching-learning methods, practicality