

Writing Assignment 1 (High Stakes)

Time, culture, and technology

GENERAL DESCRIPTION

Your first writing assignment is to read and write a critique of an article about numerical system. The article is named *Five Great 2014 Articles of Numerical System* and it is published in www.glossographia.wordpress.com (Glossgraphia, 2018). The argument of the critique must be linked to the discussion of the subject as requested by the instructor. With respect to the technical part, the format of the writing assignment has to follow the technical requirement established by the instructor of the class.

THE ARTICLE

Bender, Andrea, and Sieghard Beller. 2014. "Mangarevan invention of binary steps for easier calculation." *Proceedings of the National Academy of Sciences* 111 (4):1322-1327.

When Leibniz demonstrated the advantages of the binary system for computations as early as 1703, he laid the foundation for computing machines. However, is a binary system also suitable for human cognition? One of two number systems traditionally used on Mangareva, a small island in French Polynesia, had three binary steps superposed onto a decimal structure. Here, we show how this system functions, how it facilitated arithmetic, and why it is unique. The Mangarevan invention of binary steps, centuries before their formal description by Leibniz, attests to the advancements possible in numeracy even in the absence of notation and thereby highlights the role of culture for the evolution of and diversity in numerical cognition. (Glossgraphia, 2018)

DISCUSSION OF THE SUBJECT

Technology and culture are key contributors to the way in which change occurs over time.

According to the article, and your lived experience, do you believe there are benefits to using a binary number system over a base of ten? What role does culture play in our number systems and how has technological advancements modified our numeracy system over time.

TECHNICAL REQUIREMENT

- Format: The writing assignment MUST be typed, Word document, font size: 12 pts, double line spacing, 1" by 1" margin.
- Length: 2 pages, at least 200 words not including cover page.
- The cover page should have the following information:
 - College name (Queensborough Community College)
 - Department: Engineering Technology
 - Course name: ET540 Digital Computing Theory
 - Title of your writing assignment
 - Student's name
 - Submitted date
 - Instructor: Huixin Wu
- Organization: The cover goes on page 1, and the student's discussion and critique goes on page 2 and 3

GRADING

- Technical Requirement: 20 points
- 2 pages (at least 600 words) of discussion and critique: 80 points