Examining the Correlation Between Professionalism and Quality of Life in Computer Science Careers

Aditi Shrestha  
Southwestern Oklahoma State University

Jeremy Evert  
Southwestern Oklahoma State University, jeremy.evert@swosu.edu

Abstract

Advances in technology are changing life. Exciting careers in STEM related fields, especially Computer Science, are key enablers of these advancements. However; there is a concern that a low quality of life in Computer Science careers may be leading to too few programmers pursuing these careers, with especially low representation amongst females. One indication of this is the gender gap in University degrees granted to females, where half of... Read More

Follow this and additional works at: http://dc.swosu.edu/cpgs_edsb_t_bcs_student

Recommended Citation

Shrestha, Aditi and Evert, Jeremy, "Examining the Correlation Between Professionalism and Quality of Life in Computer Science Careers" (2017). Student Research. 3.  
http://dc.swosu.edu/cpgs_edsb_t_bcs_student/3

This Poster is brought to you for free and open access by the Business & Computer Science at SWOSU Digital Commons. It has been accepted for inclusion in Student Research by an authorized administrator of SWOSU Digital Commons. An ADA compliant document is available upon request. For more information, please contact phillip.fitzsimmons@swosu.edu.
Examining the correlation between professionalism and quality of life in Computer Science Careers

Southwestern Oklahoma State University

Adit Shrestha | Dr. Jeremy Evert | Department of Computer Science

Abstract

Advances in technology are changing life. Exciting careers in STEM related fields, especially Computer Science, are key enablers of these advancements. However, there is a concern that a low quality of life in Computer Science careers may be leading to too few programmers pursuing these careers, with especially low representation amongst females. One indication of this is the gender gap in University degrees granted to females, where half of college grads are women but only 25% of Computer Science degrees are granted to women. This research reviews literature related to measures of professionalism and quality of life across careers, including average wages, age, length of career, work-life balance, upward mobility, support for professional accreditation, and gender equality, and looks for correlation between measures of quality of life. This research examines the hypothesis that increased professionalism in the Computer Science career could lead to a higher quality of life, as measured by average age, career length, salary, and gender gap size. One of the best examples of professionalism would be "ACM Code of Ethics and Professional Conduct" adopted by ACM Council in 1992. Although many people and organizations have talked about professionalism in Computer Science field, few official standards of conduct are officially implemented. The research goal is increased awareness of the value of professionalism and discipline, especially for career Computer Scientists.

What and Why of Professionalism

- What: "Professionalism refers to the mindset with which individuals view their occupation. Occupation professionalism is associated with membership in specific group defined by shared knowledge and experience, such as the legal, medical, or IT fields. Professionalism is in fact a sense of higher standards and beliefs towards work in the occupation and how it should be conducted and conducted.

- "Professionalism is

  - Knowledge: Gaining the initial competence to do your job through professional qualifications
  - Skills: Continuing Professional Development and ongoing learning which enables you to maintain competence through professional body membership.
  - Behavior: Upholding the highest standards of integrity by signing up to a professional body's code of conduct (CISI).

- Why: "Professionalism positively impacts job satisfaction and job performance"

  - Dinger et al., 2015; Bartol, 1997; Kalbers & Fogarty, 1983

National Professionalism Study

- Each year the Leadership Development Center at York College of Pennsylvania conducts a survey of recent college graduates. They have posted their 2015 data. Their sample size suggests their data has a 95% confidence level with a margin of error +/- 4.3%.

- According to their survey, "the five qualities most associated with professional employees are: Focused, Punctual/attentive, Humble, Diligent, and possession of communication skills. While the five qualities most associated with being unprofessional are: Disrespectful, Irresponsible, Not ambitions, Late/absent, and Lack of communication skills."

- The American Association of University Women (AAUW) Report (Corbett & Hill 2015) from L.M. Frehli analyzes data from National Science Foundation, Division of Science Resources Statistics (2013), and National Science Foundation, National Center for Science and Engineering Statistics (2014a)

Bachelor's Degrees Earned by Women, Selected Fields, 1970-2013

Note: "All science and engineering" includes biological and agricultural sciences; earth, atmospheric, and ocean sciences; mathematics and computer sciences; physical sciences; psychology; social sciences; and engineering.

Source: AAUW Report (Corbett & Hill 2015) from L.M. Frehli analyses of data from National Science Foundation, Division of Science Resources Statistics (2013), and National Science Foundation, National Center for Science and Engineering Statistics (2014a)

Computing Workforce, By Gender and Race/Ethnicity, 2006-2010


Recommendations for Future Study

- Broader literature review:

  - Examine publications on advantages of professionalism in other fields.
  - Find documented examples of how to increase professionalism in careers
  - Greater documentation of the advantages of professionalism in other careers.
  - Explore accreditation and standards bodies that help maintain professionalism for the computer science field.

- Survey of Employers:

  - How professional are SWO SU students?
  - What do SWO SU students do well?
  - What can SWO SU students do better?
  - How would you like SWO SU to change its professional development?

- Survey of Students:

  - What are student perceptions of professionalism?
  - What are students doing to improve professionalism?

Works Cited


