Lessons learned by comparing “using SAS” as an epidemiological researcher and “using SAS” as a statistical programmer

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Introduction

- Biomedical Sciences, epidemiology major
- Epidemiological researcher
  - Saskia
    - PhD at CCCS (2006 – 2010)
    - Post-doc researcher at CCCE (2010 – 2013)
  - Joris
    - Internship at CCCS (7 months in 2013)
- Statistical programmer
  - Saskia
    - OCS Consulting (September 2013 - )
  - Joris
    - OCS Consulting (January 2014 - )
Company profiles

- CCC:
  - Provide medical advice to medical doctors, hospital board, and nurses
  - Support creation of health care guidelines
  - Cancer Registry

- OCS Consulting:
  - Providing its clients with professional and quality Information Technology services
  - Provide clients with experienced and skilled professionals

- Clients:
  - Develop new products and prove their superiority
Commonalities

- SAS!
  - Data manipulation
  - Statistical analyses

- Soft skills:
  - Programming puzzles
  - Curiosity
Differences - Subject of investigation

- CCC:
  - Cancer care

- OCS Consulting:
  - Depends on client or assignment, varies

- Client observations:
  - Assignments should fit the consultant
  - Involve employees / consultants with subject of investigation
Differences - Organisation within company

- Planning and organisation
- Data collection
- Data manipulation
- Statistical analysis
- Receiving funds
- Creation and publication of results / Inform relevant clients

CCC

Research idea
Differences - Organisation within company

OCS Consulting / client

Planning and organisation → Receiving funds

Data collection → Data manipulation

Research idea → Creation and publication of results / Inform relevant clients

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Differences - Organisation within company

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Planning and organisation

Research idea

Data collection

Receiving funds

Data manipulation

Creation and publication of results and inform relevant clients / physicians

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Differences - Organisation within company

- CCC:
  - Resistance to stress and time management
  - Dedication to the project

- OCS Consulting:
  - Programming skills
  - Team support / expertise
Differences - Way of working

- CCC:
  - Freedom
  - Data digging
  - Creativity

- OCS Consulting:
  - Preparation
  - Standardisation
Differences – Validation

- CCC:
  - No code review
  - Methods

- OCS Consulting:
  - Code review
  - Test script
  - Quality Assurance
Differences - Datasets

- CCC:
  - One (wide) dataset
  - Own standard
  - No complex data handling required

- OCS Consulting:
  - Multiple
  - CDISC standard
  - Advanced data handling techniques
Differences - Use of SAS

- CCC:
  - Use basic SAS knowledge
  - Copy-paste of results
  - Little use of macros

- OCS Consulting:
  - Certification
  - Output is primary goal
  - Extensive use of macros
Conclusion

Lessons learned by comparing “using SAS” as an epidemiological researcher and “using SAS” as a statistical programmer

- Epidemiological researchers can learn:
  - SAS programming skills
  - Validation (standardization)
  - Preparation

- Statistical programmers can learn:
  - Overview project
  - Time management
  - Stress resistance