Why two good SAS programmers are better than one great SAS programmer.

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Abstract

The experiences of the programmer role in a large SAS® shop are shared. Shortages in SAS programming talent tend to result in one SAS programmer doing all of the production programming within a unit in a shop. In a real-world example, management realized the problem and brought in new programmers to help do the work. The new programmers actually improved the existing programmers’ programs. It became easier for the experienced programmers to complete other programming assignments within the unit. And, the different programs in the shop had a standard structure. As a result, all of the programmers had a clearer picture of the work involved and knowledge hoarding was eliminated. Experienced programmers were now available when great SAS code needed to be written. Yet, they were not the only programmers who could do the work! With multiple programmers able to do the same tasks, vacations were possible and didn’t threaten deadlines. It was even possible for these programmers to be assigned other tasks outside of the unit and broaden their own skills in statistical production work.

Objectives

• Solve the problem of only one production programmer in a shop and issues of knowledge hoarding.
• Make the shop more productive and reduce risk by adding more resources.
• Avoid the risk of programming talent bottlenecks.

Methods

• Before the former programmer retires, bring in new two SAS programmers and train these programmers on shop tools.
• Have the in-house SAS Support team bring in a new system for production work and standardize SAS program style, structure and methods.
• Have more delegation to junior programmers.
• Have more frequent group code reviews.

Results

• We are no longer dependent on one person to complete all programming tasks.
• With standardized programs used over and over again, programmers at all levels of skills can become familiar with the SAS code and it can be improved constantly with each new project.
• Standardized programs improved efficiencies enough that we were able to broaden the types of statistics we were able to program and have time for this.

Conclusions

• Using standard program templates greatly aids programmers at all skills levels.
• When one SAS programmer is on leave other SAS programmers still have the skills to complete work.
• With more programming standardized and more delegation possible more time is available for other custom SAS programming and assignment to other tasks in the survey process.

References

- Discussions with the management team involved.
- Discussions with other programmers involved.
- Personal observations throughout the mandated change process.
Gains in Code Review Efficiencies

- This flow chart shows how it is now possible to have more code reviews in our unit.