Oi, Analyst—You’re Barred!

Neil Maiden

Okay, so it’s a little melodramatic, but can we actually bar people from being requirements analysts? Can we tell them that they don’t have the necessary knowledge, skills, or even prerequisites to be good analysts?

You might wonder what I’m going on about, what’s vexing me: it’s the certification of requirements analysts. In a previous column, I invited Barbara Paech to write about this topic because I was interested in her case for it.¹ We weren’t inundated with letters from Software readers opposed to the idea, but some of her arguments didn’t convince me. And in talking to colleagues, I found others were equally unconvinced. In this column, I put forward some cases against the certification of requirements analysts.

The Case for Certification

To avoid making you rummage through back copies of Software, let me summarize Barbara’s argument in favor of certification. Barbara is a member of a team of experts that seeks to define requirements analysts—their responsibilities, the tasks they should undertake, common techniques to undertake these tasks, and the skills needed to undertake them. To enable standardization in what a requirements analyst is and does, the team has established a common vocabulary for talking about tasks, techniques, skills, and roles. It has also created a syllabus and examinations for certifying such analysts, with the goal being that a certified requirements analyst should know important terms and techniques and be able to apply them to examples.

Barbara and her team are part of the International Requirements Engineering Board (IREB; http://certified-re.de) which owns and licenses requirements certification exams that organizations can offer.

Possible Cases Against

So what’s my objection? Perhaps I’m overreacting; maybe all of this certification is innocuous.

Or maybe it’s not—once I started to delve into what requirements analyst certification means, I began to spot potential problems and risks that provide possible cases against certification, including the perception of dumbing down, the importance of domain knowledge, and the finer details of determining certification.

Are We Dumbing Down?

As Barbara’s column reported, attempts to standardize definitions, tasks, and roles led to some disagreements among team members. This isn’t surprising, given the breadth and complexity of many requirements activities. But I wonder if the only way to achieve widespread agreement is by focusing on a relatively small set of tasks and roles. If so, the community could perceive this as dumbing down because it focuses on what the community, collectively, already knows. It therefore offers less to the community and appears to avoid the bigger challenges that the community faces. Surely requirements work is more diverse than this.

What About the Domain?

In my experience, one size doesn’t fit all. Don’t different requirements projects require different skills? If you were a project manager delivering a requirements specification for an embedded, safety-critical system, would you want to use analysts with experience in acquiring requirements for marketing Web sites?

The assumptions underlying this certification process contradict existing research into requirements activities. For example, a classic study revealed that domain knowledge was more critical to good analyst performance than skills or tasks performed.² Individual performance was a combination of motivation, aptitude, and experience, the latter of which was acquired on the job. Specification mistakes often occurred when people didn’t have sufficient application knowledge to interpret customers’ intentions. Exceptional individuals in projects stood out due to superior application domain knowledge, which they used to inform their requirements and design activities.
So if, as this classic study suggests, domain knowledge is so important, why not certify domain expertise for use in different applications instead of analyst skills?

**How to Certify?**

Barbara and her colleagues proposed to certify analysts via examinations, but can we really investigate an analyst’s knowledge and skills this way? Are we prepared to say that requirements analysts are certified because they’re good at passing exams?

Academics have been grappling with how to evaluate requirements knowledge and skills for some time, and the answers aren’t simple. Writing answers in an examination limits the types of knowledge you can evaluate:

- You can investigate declarative knowledge by asking what analysts know: “Give one published definition of a use case.”
- You can investigate some procedural knowledge by asking analysts to undertake simple tasks: “Write a short use case.”
- You can investigate some synthesis of this knowledge by asking analysts to combine and apply what they know to new but still limited problems.

However, exam conditions don’t let you test requirements skills such as acquiring, communicating, and negotiating requirements that necessitate collaboration with other people. And you can’t investigate how an analyst deals with the scale of most requirements problems in a two-hour exam. Some universities have recognized this problem and moved to more sophisticated but time-consuming approaches to examining requirements skills. One approach involves months of team project work to produce specifications; such work lets students practice and demonstrate important communication, analysis, negotiation, and presentation skills.

In her column, Barbara suggested that certification could help managers select analysts most suitable for the work. This might be very useful, but is this the thin end of the wedge? In the future, will we exclude analysts from projects simply because they didn’t pass an unrepresentative exam on a certain day, in spite of their wealth of experience and knowledge? What should these decertified analysts do? Find another career?

Finally, exactly who should appoint and certify the certifiers? If you dig a little deeper, you find that certifiers are often self-appointed (this was the case with Barbara and her team). What’s the real agenda behind certification? Might it be to entice analysts to a certifier’s training courses and consulting services or to sell books? It sounds cynical, but certification merits a healthy dose of skepticism.

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**References**


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