

te testing experience

The Magazine for Professional Testers



Improving the Test Process

ISTQB Expert Level “Improving the Testing Process”

by Erik van Veenendaal

As the theme of this issue of Testing Experience is “Improving the Testing Process”, while being one of the authors of the new ISTQB Expert Level syllabus with exactly the same name, what else can I write about in this column? A full update and overview of this latest ISTQB syllabus, by some already referred to as the ISTQB’s crown jewel, is provided in this article.

ISTQB Expert Level status

Let me first make clear to all where we are today. There seems to be a lot of confusion in the market. Yes, the ISTQB Expert Level (EL) syllabus “Improving the Testing Process” is available and released without any restrictions (to be downloaded from www.istqb.org) since October 2010. Other EL syllabi are in progress, such as Test Manager (expected autumn 2011), Test Automation (expected spring 2012) and Security Testing. To support the syllabus, various guidelines are available, such as the EL exam guideline. I personally know a number of course providers who are developing courseware in line with this new EL “Improving the Testing Process syllabus”, and exam providers that are preparing for EL exams. I expect the first courses to be accredited later this year. To support the implementation of the syllabus and participants, Graham Bath and myself are writing a book aligned with the new EL syllabus. Get ready, the ISTQB Expert Level is out there!

What is an expert?

I know that many who are looking at this third level have problems with the word expert, and on-going discussions focus more on the question “what is an expert?”, and not so much on the actual content being provided. First of all, this new syllabus is not targeted toward the real world-wide experts such as Martin Pol, Rex Black, Lee Copeland etc. No, it is aimed at those testing professionals that are the so-called local heroes. The person in your company that you always turn to when you have a question on test process improvement; the person that leads the organization’s improvement process; the consultant who is subcontracted for challenging test improvement assessments. That is more like the target audience. ISTQB defines an expert as a person with special skills and knowledge representing mastery of a particular testing subject. [1] Being an expert means possessing and displaying special skills and knowledge derived from training and experience. A testing expert is one that has a broad understanding of testing in general, and an in-depth understanding in a specific test area, e.g., test process improvement. An in-depth understanding means sufficient knowledge of testing theory and practice to be able to influence the direction that an organization and/or project takes when creating, implementing and executing testing activities related to the specific area. It is important to emphasize that, according to the ISTQB, an expert must embody both knowledge and the necessary skills to apply that knowledge in real-life situations.

People that perpetuate the discussion on whether “expert” is the right term are, for me, those that like theory. As a practitioner, I personally prefer to focus on the content and the added value the syllabus provides. So you can decide to which group you belong? For me it is important that a third level in the certification scheme has been developed and implemented. Many (testing) certification schemes have promised three levels in the past, but never got round to it, e.g., whatever happened to the ISEB Diploma? ISTQB did!

I will leave the question whether expert is the correct term open. However, I do want to emphasize that someone who meets all exit criteria for expert level will indeed have in-depth understanding and practical skills on test process improvement. The exit criteria not only include passing the largely essay type based exam, but also having at least five years of practical testing experience in practice, and at least two years of experience in test process improvement. There is even a continuous education process defined, implying that being an expert today does not mean one is an expert for life. [2]

Syllabus content

Let’s briefly look at what is being covered by the syllabus. It is not just about models such as TPI Next and TMMi, despite of what some think. Yes, these models are of importance, but there is much more to cover, learn and discuss. In fact, some say I’m an expert in test process improvement, and I believe everything (or almost everything) we need to cover on this topic is in fact covered! Together with Graham Bath, Isabel Evans and many reviewers, a top-class syllabus has been developed.

- Context of improvement; an introduction part where one learns to link test process improvement to business objectives and some fundamental concepts such as Garvin’s views on quality, the Deming cycle, the EFQM framework.
- Model based improvement; a large part is spent on available models (e.g., CMMI, ISO 15504, TPI Next, TMMi). Not just by providing a theoretical overview, but learning how to apply the most important ones (see hereafter “workplace exercises”). Also the weak and strong points of the various models are discussed.
- Analytical based improvement; often forgotten but in addition to using a reference model (often resulting a top-down approach), bottom-approaches can be used and are most often highly effective and efficient. Causal analysis, inspection, defect prevention programs, defect classifications and GQM based measurement programs are all discussed in detail in this context.
- Selecting improvement approaches; it is important for the participant to be able to compare the various approaches and select those that are most beneficial for his/her organization.
- Process for improvement; much attention is provided to the improvement process. I often think this is even more important than choosing the “right” model. The process presented is based upon SEI’s IDEAL process and much attention is given on how to diagnose the current situation and perform test assessments.
- Organization, roles and skills; a Test Process Group is discussed, and also how to do test improvement with remote, off-shore and outsourced teams. A large part of this section is devoted to the soft skills required for those running a test improvement program and performing test assessments.
- Managing change; test process improvement is all about changing people’s behavior and therefore about change management. Although this could be perceived as a topic in its own right, it is also addressed and discussed in this syllabus.

- Critical Success Factors; not making the mistakes many made before, a list of critical success factors is provided based on practical experiences by the authors and reviewers. In addition the test process improvement manifesto [2] is presented as a way to understand some of the critical success factors.
- Adapting to different life cycle models; test improvement approaches in agile and iterative environments are discussed and presented together with examples of where test process improvement models need to be adapted to be suitable for agile and/or iterative lifecycles

Workplace exercises

As is to be expected in a course at this level, much focus is on practical exercises. In an EL course, which for this syllabus will typically have a duration of six days, over 60% of the time will be spent on doing exercises and having some discussion sessions. A very interesting concept which will be applied to ensure participants acquire real-life practical skills and have not just experienced the non-real-life course exercises, is workplace exercises. Participants are expected to carry out exercises in their organization and report back on these in the course. There will be communication between the training provider and the participant for answering questions and checking on progress. This of course also means that the course will typically be run over a longer period of time. Examples of workplace exercises include:

- assess a test organization using either the TPI Next or TMMi model
- plan and perform assessment interviews
- create and present a summary of the conclusions (based on an analysis of the findings) and findings from an assessment
- recommend test process improvement actions on the basis of assessment results and the analysis performed
- create a test improvement plan considering change management issues, with appropriate steps and actions
- assess the critical success factors for a test improvement project.

I personally believe the ISTQB Expert level will provide added value to the testing community. Local heroes that are interested in test process improvement will in many ways benefit from this newly defined syllabus. It is about practice, demonstrating practical skills and not just theory. I hope, this short paper / column pro-

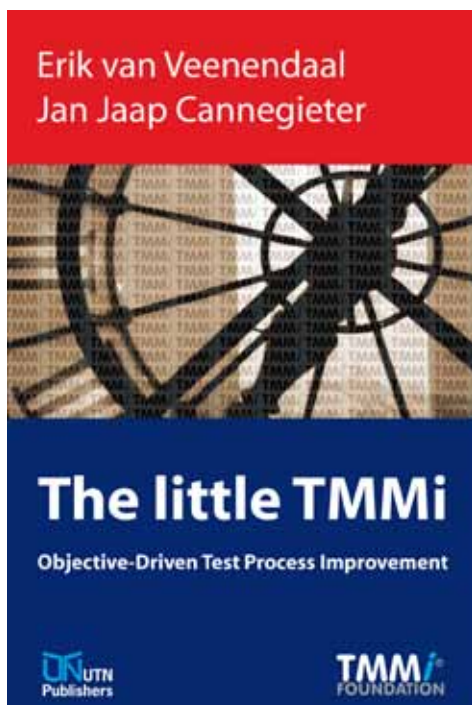
vided information to support my personal opinion. The first EL syllabus is available, this is not the end, this is just the beginning. The testing community is taking another step towards maturity.

- [1] Expert Level Modules Overview, V1.0 (2011), International Software Testing Qualifications Board
- [2] ISTQB Certified Tester Expert Level – Certification Extension Policy, V1.0 (2008), International Software Testing Qualifications Board
- [3] E. van Veenendaal, Test Improvement Manifesto, in: Testing Experience, Issue 04/08, December 2008

> biography



Erik van Veenendaal (www.erikvanveenendaal.nl) is a leading international consultant and trainer, and a widely recognized expert in the area of software testing and quality management with over 20 years of practical testing experiences. He is the founder of Improve Quality Services BV (www.improveqs.nl). At Euro-Star 1999, 2002 and 2005, he was awarded the best tutorial presentation. In 2007 he received the European Testing Excellence Award for his contribution to the testing profession over the years. He has been working as a test manager and consultant in various domains for more than 20 years. He has written numerous papers and a number of books, including "The Testing Practitioner", "ISTQB Foundations of Software Testing" and "Testing according to TMap". Erik is also a former part-time senior lecturer at the Eindhoven University of Technology, vice-president of the International Software Testing Qualifications Board (2005–2009) and currently vice chair of the TMMi Foundation.



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