Cut
software development
costs

Improve defect removal efficiency
while simultaneously lowering costs
and shortening schedules.

ASTQB
American Software Testing Qualifications Board, Inc.
ISTQB Certification in the U.S.

Introduction

In his paper entitled "Software Defect Origins and Removal Methods," Capers Jones, Vice President and Chief Technology Officer Namcook Analytics LLC, states the following:

A synergistic combination of defect prevention, pre-test defect removal, and formal testing by certified personnel can top 99% in defect removal efficiency while simultaneously lowering costs and shortening schedules.

This paper discusses those certified personnel through the lens of the world's most-used software testing certification, ISTQB Certification.

In the U.S., this certification is administered by the American Software Testing Qualification Board, ASTQB, www.astqb.org.

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ISTQB software tester certification can save your organization time and money.

ISTQB software tester certification offers a compelling return on investment.

Research from Rice Consulting shows it is not unusual for a production defect to cost over $4,000 to find, fix, re-test and re-implement. Twenty defects at this cost would be around $80,000 per release.

If ISTQB software testing certification can help your software tester eliminate even one extra post-production defect in his or her career, the return on investment for an ISTQB exam could exceed 1500%.

That's why Fortune 500 companies, governmental agencies, and small organizations alike utilize ISTQB software tester certification – it promotes software quality that makes financial sense.

Here are the top reasons ISTQB Software Tester Certification can help your bottom line.

It can help to reduce defects.

As noted previously, research shows that a synergistic combination of defect prevention, pre-test defect removal, and formal testing by certified personnel can top 99% in defect removal efficiency while simultaneously lowering costs and shortening schedules.

It could reduce your costs.

Your company may be able to qualify for lower insurance costs when you hire ISTQB Certified Software Testers. For example, Hiscox Insurance Company qualifies technology insurance applicants based on whether their software testers are ISTQB Certified.

It can result in faster delivery.

In addition to the analysis noted above, test managers report that broad use of the ISTQB Certification body of knowledge and glossary of software testing terms leads to better communication and greater efficiency among and across teams.

It makes your company global-ready.

With more than 300,000 certified testers in nearly 70 countries, ISTQB software tester certification is the de facto global standard. It is available in multiple languages and available globally at test centers around the world.

It is ready for every day use.

ISTQB software tester certification focuses on practical applications of software testing that your testers need every day. Advanced techniques such as risk based testing make ISTQB software tester certification a smart choice for every organization.

It is certification you can trust.

ISTQB software tester certification is offered by a non-profit, volunteer-led organization based on modern standards developed by more than 100 global software testing experts.

It fits your budget.

ISTQB Certified Tester Foundation Level certification doesn't require recertification or expensive courses. Your employees can self study, use in-house trainers, or utilize cost-effective ASTQB-accredited education – it's up to you.

The more you think about software testing certification, the more you understand why ISTQB software testing certification is the most popular, fastest growing software tester certification in the world.

Which ISTQB Software Tester Certification is Right for You?

Note: Judy McKay, CTAL Full, CTEL-TM Full has helped hundreds of testers find their professional pathway over the years. Below, she offers great advice that will help you not only choose an ISTQB Certification, but just as importantly, the career path that goes with it.

Are you wondering which ISTQB certification is right for you?

The following is a short explanation of the various certifications and the way you might want to proceed based on your career goals. The tricky thing in our industry is the constant change. The skills of today may or may not be marketable tomorrow, so while you're thinking about what you want to do, you should also consider what you need to do to be able to get or retain the job you want.

Foundation Level

This is where you need to start. This is the gateway certification for all the other ISTQB certifications. This level is designed for beginners all the way up to those who have been in the industry for awhile (or maybe a long while) and need to brush up their skills and update their terminology. One of the fastest ways to fail in an interview is to use the wrong terms for testing processes, documents and techniques. Organizations tend to adopt their own terminology and it helps to have a base of "standard" terminology, particularly before you venture out for an interview.

The Foundation Level is in the process of being expanded to include several extension modules. Right now, the agile extension is due to be available in early 2014 and work is starting on the model-based testing extension. These are separate certifications you can get that are "added on" to your Foundation Level certification.

Advanced Level

This is where you need to start making decisions. What do you like to do? What do you want to do? Where are the most opportunities?

Advanced Level – Test Analyst

If you are not very technically minded, and would rather work with the user, know the business application and apply your skills more for analysis than programming, you want to pursue the Advanced Test Analyst certification. This certification is designed for the strong tester who has a deep understanding of the business domain and the needs of the user. You'll learn about designing good test documentation, conducting effective reviews, and participating in risk analysis sessions (particularly to help determine the impact of a realized risk to the business user). You'll learn about how you can contribute the test information (input data, action, expected results) to the test automation effort and you'll learn about usability testing. You'll also build upon the test techniques you learned at the Foundation Level and will learn new techniques such as domain analysis and cause-effect graphing, as well as how to test using use cases and user stories. You'll learn more about defect-based and experience-based techniques so you'll know how to pick an appropriate defect taxonomy and how to implement traceable and reproducible exploratory and checklist-based testing. Let's not forget process improvement as well. You'll learn what to track in your defect management to be sure you have the information to figure out what could be improved in your process and how you can do it. This certification is designed for the person who wants to spend their time testing, not programming or delving into the code or troubleshooting technical issues.

The path for the Advanced Test Analyst at the Expert Level will include a further specialization in usability testing and further development of testing techniques. At this point, these new syllabi are being discussed but will not be available until at least 2015.

Advanced Level – Technical Test Analyst

OK, admit it, you really like to play in the code. You like to review it, program tests to test it and create test automation and tools. If this is describing you, you definitely need to be looking at the Advanced Technical Test Analyst certification. This certification is designed for the technically minded individual who wants to and is capable of programming, both in scripting languages (e.g., python) as well as standard programming languages (e.g., java). You'll learn how to approach white-box testing to find the difficult problems that are often missed by the black-box testing that is usually done by the Test Analyst. You will learn strong testing techniques that will allow you to systematically test decision logic, APIs and code paths. You will also learn about static and dynamic analysis techniques and tools (stamp out those memory leaks!). You will learn about testing for the technical quality characteristics such as efficiency (performance), security, reliability, maintainability, and portability. You'll learn how to do effective code and architectural reviews. And, you'll learn about tools – using tools, making tools, and a little about selecting the right tools. After all, you wouldn't want to accidentally get a tool that creates code mutants (really, that's a legitimate tool usage) when you really wanted a simulator. And did I mention automation? You will learn the basis for automation that will be built on at the Expert Level.

The Advanced Technical Test Analyst certification is the gateway to the Expert Level for Test Automation (Engineering) and Security. The Test Automation (Engineering) syllabus and the Security syllabus and their associated certifications are likely to be available in 2014 or early 2015.

Advanced Test Manager

Those who can, do, and those who can't, manage? Well, that's not usually a successful formula for a test manager. If you are a test manager or want to be one, and you are willing to learn all the necessary techniques and practices to be successful, then this certification is the one for you. You will learn all about test planning, monitoring and controlling for projects but you will also learn about establishing test strategies and policies that can change the course of testing for the organization. You will learn about how to effectively manage, both people and projects, and will learn the importance and application of metrics and estimation techniques. You will learn your role in reviews. You will learn how to effectively manage defects and how to focus on improving the test process.

You will also learn the importance and proper usage of tools and be able to set realistic expectations regarding tool usage. So, if you like telling people what to do, and they tend to listen to you, this is probably the right certification for you. However, that said, remember that technical people respect technical people, so rather than just getting the Advanced Test Manager certification, you should think about also getting at least the Advanced Test Analyst certification as well.

The Advanced Test Manager certification is the gateway to the Expert Levels for Improving the Test Process and Test Management. The Expert Level Improving the Test Process certification focuses on various techniques and models that are used for test process improvement. This provides a good coverage of the most popular models and provides information regarding how to approach an improvement effort to net an effective result. The Expert Level Test Management certification focuses on honing those strategic, operational and personnel skills to make you the best test manager you can be. There is significant discussion in the syllabus about how to be sure your department is performing well and is receiving the accolades it deserves. There is also realistic information regarding managing people effectively and dealing with difficult situations.

The Advanced Test Manager certification is also a pre-requisite for the management part of the Expert Level Test Automation certification. This focuses on how to effectively manage an automation project, including getting the right tools, resources, budget and timeframe. This syllabus should be available in late 2014 or early 2015.

Which Way to Go?

It's entirely up to you. As you can see, there are several ways you can go with the certification path. And remember, for example, you might not want to get the Advanced Technical Test Analyst certification if you are a test manager, but you can always read the free syllabus and learn something even without a big time investment. All the ISTQB syllabi are available for download. They make for interesting reading, even if you are not planning the particular career path that is indicated. Our industry is constantly changing and new syllabi are always in the works. If you plan to head for the Expert Level, it's a good idea to start planning your path now as that may determine which Advanced certification(s) you will need. Keep an eye on the ISTQB web site for new additions to the syllabus family. And remember to train, not just for your current job, but for the next job you want to get. Right now, the job market is hot for those with the skills of the Advanced Technical Test Analyst. There is always a need for good test managers. Note the emphasis on the word "good". And, many companies want Advanced Test Analyst's as well because of the need for black-box testing and strong domain knowledge. Right now, the biggest growth in in the Advanced Technical Test Analyst area, but that can change quickly. Get your training now, so you'll be ready.

It's unlikely that we will run out of work anytime in the future because, as long as there are developers, there will be a need for testers. It's built in job security! Plan and train for your future. It's looking bright!

Now what do I do?

That's easy. Start by reviewing the "ISTQB Certification Steps / Frequently Asked Questions". It will get you started on your way to software testing career success.

Certification Road Map

ISTQB CERTIFICATION LEVELS

ISTQB software tester certification grows with you and your career.

FOUNDATION CERTIFICATION
Entry-level certification: 0+ years of experience

ISTQB CERTIFIED TESTER, FOUNDATION LEVEL (CTFL)

- Understanding concepts for general types of applications
- Experience Requirement: None
- Certification Prerequisite: None

GOALS

- Ensure a broad understanding of the fundamental and key concepts in software testing
- Provide a foundation for professional growth

SYLLABUS/BODY OF KNOWLEDGE COVERS

- Fundamentals of testing, test management, testing tools, test planning approaches, and basic test case design skills
- Optional syllabus-based training courses are typically 3-5 days

ADVANCED CERTIFICATION
Advanced Level Technical Test Analyst
Advanced Level Test Analyst
Advanced Level Test Manager
Mid-level certification: 3+ years of experience

ISTQB CERTIFIED TESTER, ADVANCED LEVEL (CTAL)

- Understanding and tailoring of concepts for specific applications
- Experience Requirement: 3 years of verifiable full-time experience in software or systems testing, development, quality assurance, engineering or a related field
- Ethics Requirement: Must subscribe to the Code of Ethics as stated in the ISTQB Advanced Level Syllabus
- Certification Prerequisite: ISTQB Certified Tester, Foundation Level (CTFL)

GOALS

- Ensure consistent understanding and execution of proven practical techniques by seasoned test professionals
- Support on-going professional growth
- Lead the software testing profession

SYLLABUS/BODY OF KNOWLEDGE COVERS

- Advanced behavioral and structural test techniques for testers and programmers, sophisticated test management concepts, test process improvement, test automation, and non-functional tests including performance and usability
- Optional syllabus-based training courses are approximately 5 days for each of the 3 advanced certification exams

EXPERT CERTIFICATION
Expert Level qualifications are planned in the following subjects:
Improving the Test Process
Test Management
Test Automation
Security Testing
Expert-level certification: 7+ years of experience

ISTQB CERTIFIED TESTER, EXPERT LEVEL (CTEL)

- In development
- In-depth, practically-oriented certification courses in a range of different testing subjects. Courses provided at Expert Level build on the knowledge and experience obtained at the Advanced Level.

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ISTQB Software Testing Certification Exam Registration

Examination Fees

The cost of the Foundation Level exam is US $250.

Each of the Advanced Level exams is US $200.

Most options are eligible for discounts through ASTQB's Volume Purchase Program.

GI Bill: ASTQB's Foundation and Advanced Level ISTQB exams have been approved for student reimbursement for veterans. See the GI Bill page for more information.

Register now for a certification exam using one of the options below:

Via a Kryterion Exam Center

Kryterion provides proctored ISTQB and IBAQB certification electronic exams globally.

A Latin American Spanish ISTQB Foundation Level Exam is also available via the Kryterion exam centers.

See the list of exam center locations.

When you are ready to register, create an account on Kryterion's WebAssessor site.

Via an Accredited Training Provider Course

ASTQB Accredited Training Providers offer courses that will help prepare you for the ISTQB Certification exam.

See the list of ASTQB Accredited Training Providers.

This option is eligible for discounts through ASTQB's Volume Purchase Program.

Onsite at Your Company

If you have three or more examinees for the Foundation, Advanced or Expert Level exams, or any combination to be administered at the same time, you may have ASTQB come to your site to administer the exam.

To learn more, contact ASTQB headquarters at info@astqb.org.

This option is eligible for discounts through ASTQB's Volume Purchase Program.

At a College or University

ASTQB offers a 50% discount on the exam fee to institutions of higher education that teach the ISTQB software tester certification syllabus and glossary and wish to certify their students as CTFLs. By participating, the instructor agrees to secure an unpaid Proctor and administer the certification exam.

For further information, instructors should contact ASTQB Headquarters at info@astqb.org.

Start cutting your software development costs today.

Contact ASTQB at info@astqb.org or visit us at www.astqb.org.