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Abstract

This research paper is an exploratory study based on literature review, on certification program directly related to software development. The information gathered and discerned in this paper will explore the training needs of the employees in software industry and will give an insight on effectiveness of training and development in software industry. In practice, employees need training and development no matter what industry they are in. Training is the activities that are designed to provide learners with the knowledge and skills needed for their present jobs and make effort to development of their career. Certification is the activities that includes training but with exams to ensure quality of the people who complete the program. Although training and development usually go hand in hand, they differ in that training can be done by all staff, whereas development is usually undertaken by the trainee's supervisors or managers. Training also tends to be more specific while development looks more at the long-term professional goals. The trainer will teach specific skills and knowledge to the trainee in order to obtain specific goals for their present position. During the development process, staff will meet with their supervisor and or manager to discuss their strengths and weaknesses, and how to improve work performances to help expand and broaden their current career

path. This paper critically examines the importance of certification program including training and development and their importance to an organization's success.

Hypothesis

Does certification really improved the quality of software system? If so, how did it help?

1.0 Introduction

In just a few short decades, information technology (IT) moved from the back office to the front office and now has embedded itself into nearly every aspect of our business and personal lives, for example, the efficient way of using our smart phone. Fueled by new technologies including mobile, social business, cloud, and big data and analytics (BDA), the technologies and processes that businesses deploy are so tightly linked to their customers and markets. The boundary between the internal operations of the enterprise and its external ecosystem is rapidly disappearing. As the business environment is transforming from slow mode to fast mode, enterprises require new hires and recent graduates to contribute to the success of the organizations as fast as possible. IT organizations are increasingly required to accelerate the time to value in delivering higher system resiliency as well as greater innovation. At same time, optimizing spending on IT staff and equipment. What to Looking to get ahead in today's competitive tech world? Now, more than ever, trainings and certifications are vital to fuel a successful career. Microsoft certifications make technology professionals more likely to get hired, demonstrate clear business impact, and advance their careers. [3]

2.0 literature review

2.1 Training

training, certification, and experience are three of the top four most important characteristics when selecting a candidate for a more advanced positions. Microsoft Certified Solutions Associate (MCSA), Microsoft Certified Solutions Expert (MCSE), and Microsoft Certified Solutions Developer (MCSD) each attest to increasingly more complex levels of capability with specific Microsoft technologies, such as Windows Server Management and SQL Server management. As well as build innovative solutions across technologies such as private cloud, communications, or business intelligence. training, and experience are three of the top four most important characteristics when selecting a candidate for a more advanced positions. For example, Microsoft Certified Solutions Associate (MCSA), Microsoft Certified Solutions Expert (MCSE), and Microsoft Certified Solutions Developer (MCSD) each attest to increasingly more complex levels of capability with specific Microsoft technologies. Such as Windows Server and SQL Server, or build innovative solutions across technologies such as private cloud, communications, or business intelligence.

The employers benefit from:

- » **Improved productivity and reduced cost.** Reduce costs associated with hiring new employees and minimize the disruption to operations caused by employee turnover.
- » **Improved IT staff efficiencies.** Certified IT staffs are more efficient in their work and perform better job than staffs without be certified. The time saved from this efficiency can be reinvested in IT innovation or otherwise supporting the business. In addition, cer-

tified staff are more often relied on in industries to handle more challenging issues such as to approve milestone and to supervise the work of non-certified IT staff members.

» **Improved availability and risk mitigation.** IT staff with the appropriate knowledge and skill are better able to identify problems and take the necessary steps to minimize recovery time and increase system resiliency.

» **Increased business agility.** IT organizations are more agile. Organizations with more certified staffs deliver better performing applications and services in less time.

» **Simplified candidate selection.** Certifications simplified the candidate screening process, making it easier to hire certified candidates.

» **Career advancement.** Certified employees gain more responsibilities and are promoted more quickly compare to employees without certification. Certified employees are often given supervisory responsibility over non certified employees. And because certifications reflect their interest in a career in IT, new hires with certification are often considered for new opportunities and are better positioned for more rapid career advancement. [3]

» **Higher salary.** Certified employees tend to have a 15% higher salary, reflecting greater skills and knowledge. [2]

In conclusion, training help candidate to gain more knowledge related to their Job, thus improve the productive in industry, make industry to gain more profit with training.

2.2 Exam

The main requirement for obtaining Certifications is to take and pass one or more certification exams and sign the Certifications and Confidentiality Agreement. Passing exams give professionals the chance to prove their networking knowledge and expertise. In other words, acceptable means measurable. How to know that a professional is eligible to be certificated? The answer is to pass exam. This is a measurable way to examine the capacity of a certification taker. Without exam it is very hard to find out the real knowledge of an individual as well as students will lose their motivation with their studies. With examination, candidates will get fear about their exams and study their lessons properly to increase their knowledge as well as getting highest marks in their training.

2.3 Certification

The most challenging goal of software engineering is to find better techniques and methods for developing quality and error - resistant software at reasonable cost. In today's world of information, computers have been applied in to a number of large and critical areas of the industry. [1] Quality characteristics of the software can be measured with a set of attributes defined for each characteristic. These characteristics help evaluating the quality of software, but they do not define a guidance of constructing high quality software products. Quality characteristics are defined in the standard ISO/IEC 9126. [2] The main goal of these requirements is to satisfy the customer needs, which is the measure of quality software product. Certifications fuel new and valuable careers. Mi-

Microsoft Certified Professionals spend less time interviewing and more time driving value. Adding a Microsoft certification to your resume helps you stand out and get hired—faster. In some cases, certification has allowed hiring managers to fill positions 25% more quickly. What's more, certified new hires are fully productive an entire month sooner than their uncertified peers. This level of productivity makes your impact and skills clearly stand out. It also help to take peer's career to the next level. Microsoft Certified Professionals make immediate impact, helping takers to get noticed and move forward quickly in their career. Compared to their peers, Microsoft certified developers are 90% more productive and nearly 60% more efficient. This means that they make nearly twice as many applications per year and in half the time per application. [3] As conclusion, when peer complete training program and get certification, it is not only help to build more competitive resume but also increase the ability and experience to industry work. More productive means more profit. On average, Microsoft certified technologists earn 15% more than their uncertified peers. Also, certified employees are often trusted by their supervisors, this is a way to put technician on the fast track for a promotion. Certified technologists advance their careers quickly, becoming qualified leaders on their teams and in their businesses.

3.0 Problem investigation

3.1 Software Industry and certification

Some of organizations reported that a number of reasons to support their employees in earning IT-related certification and for preferring IT staff with certification. However, basically speaking, the value is that certified employees are better able to support efforts

to meet challenges associated with digital transformation. An IT director at a software company explained: *“We encourage and reward employees to obtain certification. It is strategic to our organization. The speed of technology innovation demands ongoing training. We have found that those with IT certification perform better and are more confident employees.”*

IT organizations realize that there is substantial value by having IT staff members with certification. Some of organizations also reported that certified staff members are more productive, can handle more complex issues efficiently, and are able to support and supervise the work of uncertified staff. In other words, IT organizations require staff use less time to complete day-to-day operations such as datacenter infrastructure, database operations, and application development efforts. There is a IDC reports indicating that teams with certifications responsible for core IT activities are almost 20% more productive.[3]

Certified staff generate efficiencies:

» **Better understanding of evolving technologies and priorities.** Certified staff have the knowledge and training to support complex and evolving technologies. An IT manager at a retailer said: *“It’s about the knowledge and the confidence. Certified staff understand the concepts. Also, security technology is now in the forefront. In years past, it was in the background. From their certification experience, studying and testing, they are more aware of security issues and technology.”*

» **Ability to handle more complex issues.** Certified IT staff members are often given responsibility for more challenging work which is critical to IT operations. An IT manager

at a technology company explained: *“When it comes to server management, we have a tiered approach. The most important tasks are with the certified team members. They in fact spend less time on them than non-certified team members but provide a higher level of support.”*

» **Support work of non-certified staff members.** IT staff members with certification are able to support non-certified or junior employees, improving the quality of their work and providing them with valuable guidance. An IT manager at a company said: *“Less complex applications are developed by staff without IT certification. Those applications are tested and approved by someone with IT certification before being released.”*

3.2 Microsoft Technician Assistant Certification

MTA is for people new to information technology, who need to validate their knowledge of fundamental concepts before moving on to more advanced certifications, such as MCSA and MCSD, in other words, this program is aiming for students, and make them to get to higher certification. Who get this certification can gain basic knowledge of programming and database design, thus help student to get used to real world experience:

- Get hired.** Employers know that certified staffers can be more valuable. Tech companies actively look to hire candidates with certifications.

- Make more money.** Certified employees earn 15 percent more, on average, than employees without a certification.

- Get promoted sooner.** A Microsoft Certification is like a prescreen that lets your boss know immediately how professional and competent you are. Certification can help

you pull ahead of the pack when applying for your next promotion, project, or opportunity. [3]

Conclusion

The purpose of this paper was to identify the importance of certification program that the industry could use to improve software quality. We had observed that through training, employee morale and satisfaction, company productivity and service quality improved. Human resources departments should emphasize the importance of training programs to its company's success. Although training programs may be reduced or eliminated, essential must remain intact to avoid future problems. Training programs can become more innovative in times of economic instability through the use of technology and self catering programs that employees monitor themselves. Companies can also involve employees with the development of training programs to avoid unnecessary spending of training budgets. Particular, we researched MTA - Microsoft Technician Assistant certification program due to MTA certification aims at high school and college students, or anyone who is new to programming and development. The MTA Developer takes many tracks, including Windows development, software development, mobile, gaming and more. Also, Microsoft certifications are some of the most highly recognizable in the IT industry and carry a considerable cachet.[3]

Reference

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