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THE ROLE OF TRAINING NEEDS ANALYSIS IN DEVELOPING A DEVOPS TRAINING PROGRAM: A CASE STUDY OF A FINTECH COMPANY IN TASHKENT

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Abstract

Talent development program is essential part of performance management because it helps to reduce skill gaps and increase performance level in organization. This research examines training need analysis (TNA) to develop DevOps training at an international Fintech company in Tashkent. To obtain information semi-structured interview was provided with members of HR, lead architect, backend developer and system administrator.

To study proposes on-the-job trainings as well as mentorship program for training and Kirpatrick model to evaluate training program.

Keywords: Talent Development, Training Programs, Need Analysis and Kirkpatrick model.

Introduction

To achieve business goals, organizations need leaders who are doing the right thing and a workforce that has the abilities and knowledge to perform business functions effectively. According to CIPD (2009), it is important for entities to develop the capabilities and knowledge of employees because it will help organizations not lose stability in different circumstances, and they should consider the development of employees who will play pivotal roles when organizations meet future challenges. Work efficiency culture can be created by development programs and change employee's behaviour trainings (Ibrahim, Boerhannoeddin and Bakare, 2017).With a proper Talent development program Fintech company may have several beneficial opportunities, such as:

(a)Future-proofing the organization; (b)Improved employee engagement; (c)Generating new ideas and business opportunities and (d)Increased employee retention rates;

To develop effective trainings, it should be done to clarify the needs of employees and organization so training needs analysis is foundation of all training activities (Boydell, Leary, 1996).

Literature Review

Need Analysis is a process of identifying and evaluating training which needs to be implemented according to specific needs of employees, suppliers or people. Needs are referred as "gaps", or it can be explained as a difference between what is currently done and what should be performed (Krugman, et.al,1999). TNA is a foundation to all training activities. According to Betti (2021) A training needs analysis a discovery process in project's life cycle that can change an organization's concept about learning because without TNA organization can miss initiation as well as development stages of project planning.

A well-developed a training need analysis helps identify and avoid costly mistakes, such as:

(a)Providing insights to make training more effective; (b)Ensuring right trainings on the right areas;(c) Providing solution development; (d)Prioritizing training needs;

Methods

This study used qualitative methods, with focuses on semi-structured interview with key personal from Fintech company. Semi-structured interviews (30-40 minutes each) were conducted with IT recruiters, backend developer, system administrator and lead architect to identify skill gaps for DevOps. To identify training needs related to learning theories and employee development interview were

recorded, transcribed and analysed by thematic analysis. Participants were informed that responses would be anonymized for publication.

Results

IT recruiter and lead architect of fintech company

The first interview was with an IT recruiter and the lead architect, the author investigated that Fintech company has problems with a particular group of engineers because of a lack of a labour market. For example, the IT recruiter said now they have problems filling vacancies, such as those for DevOps engineers. The main reason why it is difficult to close vacancies is that the IT industry started to develop in 2016, which means that there are fewer senior or middle DevOps engineers in Uzbekistan. Also, the lead architect mentioned that the DevOps engineer position plays a crucial role because they are working with the infrastructure of an IT company, and he mentioned that for more than half a year, company has been searching for a DevOps engineer, but all attempts have been unsuccessful. Currently company is using outsource company from abroad to support infrastructure.

Senior Backend developer of fintech company

The second interview was with backend developer of fintech company. He had more than five years of experience with server and back-end solutions. He noted that he leads a team and works with 3 projects. In addition, he has a good result from performance appraisal results, and all his colleagues are satisfied to work with him. He claims that he wants to move forward and work with infrastructure as DevOps engineer. However, he also mentioned that to be able to work efficiently as a DevOps of fintech company he needs additional technical skills, such as: AWS, Linux, Ansible, Docker, CI/CD, Prometheus, Grafana, ELK, and Docker.

System administrator of fintech company

The third interview was with system administrator of fintech company. He had more than four years' experience with system administration and servers. He claimed that he is responsible for servers and he works directly with outsource company to support servers. Moreover, tech lead and other developers give positive feedback about his work.

The question "How do you see yourself after five years?" his answer was that he eagers to be DevOps engineer, so he does self-studies. Nevertheless, he highlighted that he needs to have extra technical skills, such as: AWS, Linux, Ansible, Docker, CI/CD, Prometheus, Grafana, ELK, and Docker too.

Discussion and Recommendations

Training of backend engineers and System Administrator for DevOps position:

The main purpose of this training for Fintech company is to create and develop activities and a plan to deliver necessary skills to participants. The appropriate method for this training is on-the-job training. On-the-job training is guideline for employees; it involves observation and hands-on experience under the supervision of training manager or professional trainer. There are two types of on-the-job training: structured and unstructured.

Structured on the job training require more time and effort but it is effective. Unstructured on the job training developing shadowing experienced employee on the job for days or weeks. There are several benefits from on-the-job training, for example: It helps to speed up learning process, cost saving better than attending expensive courses, reduce employee turnover because employee started to be sure and more confident for their skills.

In case of company from these methods most appropriate is the on-the-job training and unstructured on the job training may be used for training program because it helps to backend developers and system administrator see how DevOps engineer works with technology such as Docker, Kubernetes and Linux. How to relies ready code to production and how to work with service during realising code.

A mentorship program for current backend developers may be reason to develop a strong foundation for the DevOps team. From the mentorship program, developers can squeeze the knowledge of their mentors and develop their knowledge.

On-the-job training and mentoring programs should be implemented and developed for one year.

Evaluation of training:

In the case of Fintech company, to measure the effectiveness of training, one may use Kirkpatrick model of evaluation, which consists of four levels:

Level1: Reaction(2-3days);

It shows satisfaction level, and the reactions of participants play an important role because participants may share about their feelings and it may motivate them to learn deeply;

Level 2: Learning (every week);

How new skills may develop knowledge and skills;

Level 3: Behaviour (half year);

If there are no results, it will show that training is ineffective;

Level 4: Results (half year);

To check the skills of participants in DevOps training and how they are handling tasks related to infrastructure and servers.

After each week, the mentor will provide a question and answer (QA) session, and according to participants reactions and learning behaviours, the HR training and development manager may get results. Moreover, every month HR specialist asks for their feedback through a survey and improve the learning context based on the feedback.

Conclusion

This study used semi-structured interviews with four employees to examine training needs for DevOps engineer from Fintech company based in Tashkent. According to findings that current backend developer as well as system administrator are highly motivated to move forward and transform to DevOps position. In addition, recommendation was to implement one-year on-the-job training as well as mentorship program as a training program and Kirkpatrick model was recommended to evaluate effectiveness of training assessment. These initiatives influence not only individual career progression however also it may help to improve organization's prosperity and effectiveness.

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