

Minimizing skills and training gaps through professional development course

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ABSTRACT

Many companies that are striving to expand their development and production are finding it difficult to do so successfully. This is due to the shortage of qualified employees to help sustain their competitive edge in the global market. This dilemma is due to skills gaps; more importantly a mismatch between available jobs and skills. It is imperative to prepare the workforce for technical jobs and as well to find a lasting solution to eradicate the effect of skills and training gaps on college graduates. This paper addresses the causes of skills and training gaps and the need to minimize the impact of skills and training gaps through professional development.

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1. INTRODUCTION

Many companies and other related organizations that are embracing a revolutionary technological transformation to expand their development and production are experiencing difficulty in employing qualified employees to help sustain their competitive edge in the global market. This workforce shortage is attributed to skills gap and jobs-skills mismatch [1, 2]. As job opening increases so also is “the widening of skills gap and an ever-dwindling sense of job security for today’s workers” [3]. There is a need to develop and increase the pool of technicians, engineering technologists, and engineers who are prepared to apply advanced technologies in the research, design, development, tooling, manufacturing, and service areas. Therefore, it is imperative to prepare the workforce for technical jobs and as well find a lasting solution to eradicate the effect of skills and training gaps on college graduate to be gainfully employed upon graduation. This paper will address the causes of skills and training gaps, the benefits of professional development course to employers and employees, and the need to minimize the impact of skills and training gaps in the work place.

2. SKILLS AND TRAINING GAPS - CAUSES

Many employers continue to report that their jobs are not filled because of the lack of “qualified people” [4, 5]. While most of these jobs offer to pay salaries far above average, there is still lack of the needed skilled workers to fill these positions, due to “skills gap” [6]. Obviously, the skills gap is wide. Therefore, it is necessary to prepare job seekers with necessary skills and training needed to be gainfully employed. More importantly, to continue the current level of economic growth in the U.S., the support of vocational and career-focused development programs will suffice [7, 8].

In the face of skills gap, the obvious challenge or dilemma is that new job seekers, college graduates in particular will be entering a market unlike any before. Therefore, like other different companies in competition, concerned companies suffering the effect of skills gap and training gap should provide training and development program to improve the skills and abilities of their employees [9]. More importantly, the provision of resources for training and development to develop efficient and innovative solutions for the challenges facing the workforce is imminent. Further, organization's partnership with schools they intend to hire from will help make a big difference [6].

Most working people don't know how to brand themselves or how to set a career direction [10]. It is important that the future employees should be well versed in both hard and soft skills that are transferable from one position to another one. It will help them to set their career direction [9]. As such, on a continuous basis, future employees with potentials to be hired need to seek and learn how to upgrade required skills for ongoing success on the job and a proof of workplace readiness credentials. Therefore, it is imperative that educators are prepared to educate students with workplace readiness skills through courses that will inherently provide contexts for applied or experiential learning, if well harnessed.

Further, for the industry and other organization to be successful, they must operate efficiently and effectively by identifying and minimize the skill and training gaps that exist with employees, and have them minimized with the right solutions. Therefore, some of the solutions to address the causes of skill and training gaps and mismatch between available jobs and potential employees are:

- Increase STEM education and diversity in STEM industry
- Employers should be involved in curriculum development
- College graduates should improve their communication skills through extra mural courses
- Effective training for new employees upon employment
- Learning how to learn skills by students through professional development
- Effective marketing of available jobs
- Companies to invest in training and development of new and old employees
- Effective and efficient estimation of STEM worker demand
- Clarity on the skills employers need
- Participation in externship and on the job training by educators.

3. PROFESSIONAL DEVELOPMENT AND TRAINING

There should be investment in effective professional development that includes training and development and participation in professional conferences. This is another way of ensuring lifelong commitment to learning by both the employers and new employees. Professional development course (PDC) will be aimed to eliminate the identified gaps [10] and the mismatch that exists between open jobs, education and skills, and training so that college graduates will be ready for employment opportunity upon graduation.

However, professional development cannot succeed without strong content. As such, for the professional development to be effective and to be contextual teaching, it must be based on curricular and instructional strategies that will enhance students' ability to learn [11]. It is important to note that contextual teaching presents information in familiar contexts and in contexts in which the information is useful. As such, a PDC should be developed and presented in a way to cater for diverse learners, thus a cooperative learning environment.

According to the report on a research study conducted by [12], one of the main findings asserts "most professional development today is ineffective. It neither changes teacher practice nor improves student learning." Therefore, it is imperative to ensure that the approaches implemented will make the teacher learn with an improved effect on student achievement. Teachers should be able to grow in instructional development and delivery to enhance their ability to help students grow, develop their knowledge and ability to think critically. As recommended by [12] to deal with these barriers and to ensure effective professional development, the following principles should be abided with:

- It must be ensured that the duration of professional development is significant with enough time for teachers to learn a new strategy *and* grapple with the implementation problem.
- Teachers must be supported during the implementation stage to address the challenge of changing classroom practice.
- Teachers' initial exposure to a concept should not be passive, but engaging through varied approaches so teachers can participate actively in making sense of a new practice.
- New concepts should be introduced to teachers through modeling to help teachers understand a new practice [13].

Given the aforementioned, it is imperative to provide an effective professional development, not just about providing professional development for the sake of doing so. According to the study [14], researchers found that nearly 90 percent of participating teachers reported that the professional development was totally useless. Thus, contrary to providing professional developments that are ineffective, more effort should be placed on offering professional developments that would change teachers' practice and increase student learning.

The benefits of professional development course or program should be taken seriously by both the employers and the employees. Through professional development, employers can groom potential employees to become more capable, competent, and confident in themselves and their work. More importantly, this is a win-win situation as this in turn means performance improvement for the employee and increased productivity for the company. Discussed below are the benefits of professional development and training plan for both the employers and employees respectively.

3.1. Benefits of professional development and training to employers

Professional development training should be seen as an employee retention and recruitment tool by employers. This suggests that employers should invest more in the growth and development of their employees. More importantly, if well harnessed, professional development training is crucial to keeping employees' skills relevant in a rapidly changing world [12]. According to [12], the following six rewards will be realized by the employer that invest in or provide professional development training initiatives for their employees:

3.1.1. The collective knowledge of your team

It is important to encourage your employees to train in relevant subjects and applications for an immediate effect on productivity. Employees should be encouraged to share information gained with other colleagues.

3.1.2. Boost in employees' job satisfaction

When employees can do their jobs more effectively, they become more confident. Further, for greater job satisfaction and improved employee retention, employers can subscribe to a range of professional development training options such as mentorships, job shadowing and cross training to sharpen both their soft skills and technical abilities in the organization they work for.

3.1.3. Your company will be more appealing

An employer can build a positive reputation when training and development opportunities are offered. This shows care for the employees. In addition, employees can be encouraged to attend conferences and seminars to encourage knowledge sharing after events, to boost employees' knowledge base and the establishment of a greater sense of camaraderie.

3.1.4. Attraction of the right kind of in-demand candidates

It is imperative for employers to strive to attract career-focused candidates by offering them a competitive salary and benefits; paint an enticing picture of how they can grow professionally or expand the career avenues available to them if they come to work for you. It is important to use this medium to inform them during interviews your intent to help the potential employees develop and refine their skills while on the job.

3.1.5. You aid your retention strategy

Workers that make a difference in your organization should be appreciated. To feel challenged, employees should be encouraged to subscribe to lifelong learning so as to be exposed to new experiences that will keep them engaged and to be kept engaged in their work. More importantly, participation in professional development training will help to build and maintain enthusiasm, and as well inspires loyalty.

3.1.6. Succession planning is made easier

Employers should endeavor to identify employees with leadership potentials, those that fall into the management material category. These individuals should be groomed to become future leaders of the organization through leadership development programs. Finally, it behooves organization leaders to lead by example by their commitment to professional development, training, and by seeking educational opportunities for themselves.

3.2. Benefits of professional development and training to employees

According to [12] in his article, five benefits of professional development to employees were identified. The author struck a note of warning that training development is not a one time thing, it must be continuous. Regular training is well worth the investment to help build up the skills within the business to effectively improve the company's bottom line [15]. According to [12] the following five benefits of professional development should be considered by any potential member of the future workforce:

3.2.1. Keep up with changing trends in your job.

Employees should endeavor to take courses or seminars to help keep up with changes in their field to remain competitive in their current job. Otherwise, failure to keep up to date is tantamount to the risk of being left behind by your peers.

3.2.2. Learn new skills to align yourself with new job opportunities.

As an employee, it is important to be prepared for the next step in your career by getting trained before you seek out new opportunities.

3.3.1. Perfect current skills to set you apart from your co-workers.

To be a standout employee that continues to prove they are motivated, showing better results and setting the bar higher for their team or workgroup, then you need to further your education by adding credentials and training to your resume that will bring immediate value to your current job. Specialized certification programs will give you an edge while teaching you skills to lead in your job.

3.4.1. Interact with others in your field to keep the door open for future opportunities.

Employees should be affiliated and as well participate in trade associations and professional associations related to their field to make networking connections. In addition, participation in valuable training programs will help you to have access to job opportunities and keep you up to date on industry & professional trends.

3.5.1. Open your mind to new perspectives, enhance your job performance and earn potential.

Last but not the least, it is advisable for employees to focus on seminars, workshops, certificates and self-study books/magazines/DVD's outside their normal business discipline. These are not focused in your current job area, nor are they focused on a new job you are pursuing down the road. Simply put, these are the areas that would open your mind to working and to communicate better with the people around you. Learning to learn on the job is the key.

4. PROFESSIONAL DEVELOPMENT COURSE OFFERED BY JSU

In a continued effort to strengthen the STEM programs at Jackson State University (JSU), an engagement in partnership to expand success through Professional Development Course (PDC) has been identified as one of the effective tools necessary to minimize skills and training gaps. A professional development course or workshop is a place through which the participants acquire the insight on the subject in a short duration of time. More importantly, employers should provide a systematic training and development program for the employees for their companies to remain competitive in the job market. If organizations can support their employees in meeting their requirements then both, employees and organizations will get the long term benefits [16]. Therefore, investment in employee development is akin to attracting and retaining top talent [17]. Every employee should be made to benefit from a solid employee development program, whether they are salaried or hourly [18]. More importantly, given the present situation where companies and other organizations are embracing a revolutionary technological transformation to expand their development and production, businesses wishing to be competitive can't afford to cut employee development from their budget.

While the purpose of the professional development course was to minimize or eradicate skills and training gaps, the connectivity and information sharing among the stakeholders during the professional development session provided necessary clue on the way forward in the preparation of students in STEM programs to be at the fore front of employment opportunity upon graduation [19]. There should be investment in effective professional development that includes training and development and participation in professional conferences [20, 21].

4.1. Assessment and results of the PDC at JSU

The PDC offered by JSU explored the state-of-the-art advanced technology in electric-drive vehicles. Participants from different fields and categories grouped and shared their knowledge gained over the years in their walk of life and work environment. The participants in this course included University/College professors, Community college instructors, High school Science and STEM Teachers, Automotive employees, Engineering students and others.

Diverse group in this workshop such as, Students, School and University faculty, Automobile industry professionals shared their considered view on the subject and through this interaction, the entire group gained very useful information in furthering their scope of involvement toward tackling environment pollution, more particularly with the fossil fuel driven technologies and also working to maintain the resources on the Mother Earth, and thus proceeding towards the goal of sustainable environment for the future generation. This is the essence of a cooperative learning among community of learners. This could explain why the “mismatch and skills lacking” among college graduates today [21, 22].

More than 35 people attended the PDC including university faculty, community college instructors, high school teachers and administrators, technical professionals and students. According to a survey conducted at the conclusion of the course approximately 76% rated the course overall excellent and 25% rated the course good. Further, more than 80% of survey respondents indicated the course exceeded their expectations, approximately 70% thought they would be able to utilize what they learned in the course in their work/teaching, and approximately 93% said the course materials were just right (not too easy, not too difficult). “I personally felt the course content was very useful in transforming the knowledge gained by the professors over the years in a very simplistic manner for the attendees like me to grasp.” This is a testimonial from one of the participants. More importantly, information provided by the participating stakeholders helped to revise courses that were already developed and the development of new courses that will keep the STEM programs competitive.

5. CONCLUSION

The effect of skills and training gaps on successful employment of the future workforce should be minimized or eradicated completely through professional development course or program. More importantly, college graduates should be prepared with the skills and training required to be gainfully employed.

The minimization of skills and training gaps will be more effective if all stakeholders see this issue as the joint responsibility among the employers, academic, employees and the students. Employers should invest more in employee development to remain competitive in the global market. Similarly, it behooves educators to partner with industries to put theory into practice and for joint curriculum development. Industries as well should avail to educators and their students industrial internships opportunity in their industries, to make a meaningful difference. Finally, students should aspire to learn while on the job and as well be willing to go the extra mile to set a career direction or brand themselves.

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