

## **Chapter II**

### **REVIEW OF RELATED LITERATURE**

This chapter includes the different related literature on-the-job training that would provide a general overview of the Metamorphosis Software Development Services in relation to this report.

#### **Foreign Literature/Studies**

Richards (2023) stressed that on-the-job training is an established and generally accepted form of professional preparation that allows students to utilize the skills learned in school in actual employment settings. This training develops the student's ability to carry out technical job functions and work with others, often called a soft skill. As Richards stated, OJT is essential in providing students with exposure to professional working environments and builds both their confidence and ability as they transition to employment.

As pointed out by Berings, Doornbos, and Simons (2006), accomplishing job-related tasks involves learning which is crucial both during and post formal education. They emphasize

that in most cases, OJT occurs in real work settings where students engage and interact in various activities and activities and actively learn solving challenging problems. This method encourages step-by-step improvement and goes together with modern approaches to training aimed at preparing students for new and evolving sectors and fields of work. Their employment during OJT illustrates the strong connection that exists between education and actual work, highlighting the advantages of engagement.

Alfeld et al. (2013) explained that apprenticeships and similar work-based learning activities allow students to locomote in the actual professional world while integrating and applying theoretical frameworks learned in class. Evidence in their work suggests that OJT enhances motivation and promotes a more profound appreciation of the essence and intricacies of the workplace and its social relations. In addition, they mentioned that students who have undergone OJT tend to have higher career readiness and confidence owing to the actual work performed relative to their area of study.

In the eyes of Wentworth (2020), OJT enables learners to practice critical skills which enhances their understanding and application of concepts learned. His research indicates

that this type of training makes it possible for prompt feedback and alteration, which cements retention of information. Moreover, Wentworth pointed out that on-the-job training spurs independent judgment and initiative, skills that are vital for sustained career advancement. It is regarded as a paradigm in the development of workplace readiness and performance.

As noted in an article by Dalton State College (2018), internships and other types of training offer students an opportunity to practically apply the theoretical concepts learned in class lectures boosting their understanding and productivity. The college highlighted that these training sessions foster genuine responsibility, self-reliance, and enable students to evaluate their career choices. Furthermore, the program improves the comprehensiveness of education by developing respect for authority, professional conduct, and ethical behavior.

Klein and Botts (2017) observed the reality of the practical training gap and how it aligns with the theory taught academically. Their research was centered on postgraduate learners; however, they noted that the advantages of OJT extend to all educational levels. According to the authors, on-the-job training helps students achieve

competency in relevant skills, problem solving, and professional readiness. Such active methods of instruction further enable them to perform successfully in ever-changing settings.

Kuhn (1962) believed that paradigms were guiding frameworks, applying to both educational theory and practice alongside any training done simulated within the context of employment. He maintained that the knowledge application within real employment contexts permits hypothesis testing and learning through doing. On-the-job training, in Kuhn's perspective, is a setting where classroom knowledge meets practice, and accumulating experience constantly reshapes that knowledge, leading to both intellectual development and practical skills.

Kilminster and Jolly (2000) spoke about supervision in the context of on-the-job training and cited that learning is best optimized with the presence of informed mentors. They pointed out that supervision, apart from managing quality and safety, also encourages reflection and responsibility concerning professional practice. Their research showed that supervision brought about during the OJT phase results in better pedagogy and application of knowledge, confidence, understanding of work culture, enhanced integration, and

sustained utilization of knowledge.

As McDade pointed out in his 2000 study, "most high school and college graduates require some form of postsecondary training to consider themselves economically independent and professionally competent. He stated that the most effective type of training that can be provided is on-the-job training, which enables students to learn skills beyond classroom instruction." OJT, as stated by McCabe, greatly enhances a student's readiness for employment and occupational mobility in response to shifting technological advancements."

According to Fink (2003), powerful learning takes place when students participated in experiences that merge with their formal education. Fink Observed that on-the-job training provides such exposure by placing students into the environment that they are preparing to enter. It is this exposure that Fink terms as an element of holistic education which is further enhanced by claiming OJT enables students to master skills and internalize the work values, practices, and mindset requisite in their fields of choice.

**Local Literature/Studies**

On-the-job training, also known as OJT, is teaching the skills, knowledge, and competencies that are needed for employees to perform a specific job within the workplace and work environment. According to the Commission on Higher Education (CHED) Memorandum Order No. 104, Series of 2017, OJT is one of the most influential programs in higher education and has been integral part of the educational system in the Philippines. OJT improves students' learning retention since their work experience helps strengthen recall the information compared to classroom learning (Kapadia, 2014; Serrano, 2017).

Mallillin et al. (2020) studied the On-the-Job Training performance of BS IT students from Colegio de San Juan de Letran - Calamba. The purpose of the study was to measure the effectiveness of the OJT program in cultivating the students' competencies and readiness for the IT market. Findings showed that students improved significantly with their technical skills such as troubleshooting, programming, system maintenance, and soft skills like communication and teamwork. Supervisors from the industry remarked that most trainees showed good work ethics and were flexible. Nonetheless, the study also highlighted the need for stronger pre-deployment

orientation and close supervision and coordination between academia and industry partners to optimize the learning benefits of OJT.

A tracer study was conducted by Nonato et al. (2018) from the Lyceum of the Philippines University - Laguna to ascertain the efficacy of the OJT program for Bachelor of Science in Hotel and Restaurant Management (BSHRM) graduates. The findings indicated that the OJT program considerably enhanced the employment prospects of the graduates, with a large number being employed directly after their internships. The research showed that the practical experiences in hospitality and related industries helped the students to bridge the gaps between service theory and practice, thereby strengthening their customer service and professionalism. Employers were impressed with the level of readiness and the attitude of the interns, indicating that there is a well strengthened school-industry linkages. This served as a basis to deem that the OJT was effective in meeting its objectives. The economists claimed that for greater student preparedness, blending in their practices is necessary to the OJT program.

Garcia (2017) focused on the OJT experience of Business Administration students from City College of Calamba and used the results to refine the internship program. The study noted

that while OJT significantly aided students in grasping business processes, there were clear shortcomings in the preparation phase. Most students faced problems due to a lack of training preceding the OJT and vague expectation norms. Notwithstanding these challenges, students indicated a marked improvement in their organizational and analytical abilities alongside greater confidence in performing office work. The study suggested that the students would be better served if a systematic orientation on OJT and an augmenting seminar were held prior to deployment. It also stressed the importance of a control system designed to evaluate students actively and constructively to deal with emerging issues during the internship.

Dela Cruz et al. (2019) studied the On-the-job training (OJT) implementation of students in the College of Engineering and Architecture in Cagayan State University - Carig Campus. The research analyzed the work training experience of engineering students in different industrial and governmental firms. Findings revealed that OJT served to be a useful avenue for students in preliminary engineering work practices like drafting, project planning, and site supervision. Students showed enhanced industry knowledge as well as their practices. Nonetheless, students also noted the



common problems of no financial assistance, insufficient time to train, and poor alignment of trainee skills with the tasks provided by the firm. Researchers proposed that the degree of understanding of the employer and the university needs to be improved by facilitating better communication and comprehensive instructions for students and mentors.

Macalalad et al. (2020) studied the OJT experiences of BSBA Marketing students from Batangas State University - Lipa City Campus. The research revealed that OJT helped students develop critical marketing skills such as customer engagement, sales strategies, promotional planning, and digital marketing. Students also learned how to deal with real clients, solve customer issues, and adapt to a fast-paced work environment. Most students evaluated their internship experiences as highly beneficial, although some noted difficulties in adjusting to company culture and schedules. The study recommended that future OJT placements be more carefully selected to match the students' specialization and that partner companies provide more structured mentoring to enhance the internship experience.

Morales (2016) conducted a case study on the effectiveness of the OJT program in improving the skills of Information Technology students at Eastern Visayas State

University. The study demonstrated that students significantly enhanced their technical skills in programming, networking, and hardware troubleshooting through actual workplace exposure. Furthermore, students developed interpersonal skills such as time management, teamwork, and adaptability. One of the study's key findings was the importance of aligning academic training with real-world demands. The study also pointed out that while students gained valuable experience, some faced challenges related to unclear tasks and lack of proper supervision from company mentors. To address this, Morales recommended implementing a more structured OJT framework with clear objectives, job descriptions, and regular evaluations from both industry and school supervisors.

### **Rules and Regulations**

Some of the basic rules and regulations that need to be followed by the student during on-the-job training according to Metamorphosis Software Development Services:

1. Trainees should wear appropriate and professional clothing to ensure they are presenting themselves in a respectable manner and to reduce any chances for confusion by clients.

2. The trainees must ensure that all sensitive information obtained from the agency shall be kept in strict confidence during and after the completion of OJT.
3. Trainees should document the program, daily activities, and tasks during their OJT, and must report them to their OJT coordinator.
4. Trainees must follow agency core values, brand identity, and policies and procedures, which reflect the agency's image.
5. Trainees responsible job should be executed according to the prescribed official OJT plan comprising of the activities that are carried out accordingly.
6. Trainees are classified as interns for the entirety of their training and should not be treated as regular employees.
7. Trainees must complete the total number of training hours stated on the official endorsement from the school.
8. Trainees must complete and compile their tasks every day and push their respective tasks on GitHub before 5pm eastern time.
9. Trainees are required to attend all schedules online or onsite meetings as requested by their OJT handler.

Attendance is mandatory unless prior notice and a valid reason for absence are communicated and approved.

### **Nature of Work in the Office**

These are the usual activities in the METAMORPHOSIS SOFTWARE DEVELOPMENT SERVICES:

1. Developing an online website system.  
We designed and developed a responsive website using React.js and Tailwind CSS for the frontend and Python Django for the backend. The system provides comprehensive information about the company, including its location, services, and client feedback. It also includes a chatbot for user interaction and an intuitive navigation system for users interested in the company's services.
2. Ensuring platform responsiveness and user-friendliness.  
The website is optimized for different screen sizes and devices, ensuring that users have a smooth experience whether they are using mobile phones, tablets, or desktops. The user interface (UI) and user experience (UX) are consistently improved to maintain ease of use.
3. Utilizing Terraform for cloud infrastructure management.

Terraform is used as an Infrastructure as Code (IaC) tool to automate the provisioning and management of cloud resources on AWS. This practice enhances efficiency, reduces human error, and promotes repeatable infrastructure deployments.

4. Connecting to AWS instances using Termius.  
We use Termius to access our virtual machines through public IP addresses. This allows secure SSH connections to configure and manage cloud servers directly, providing better control over our development and deployment environments.
5. Installing and managing MySQL databases.  
Inside the AWS-hosted virtual machines, we install and configure MySQL to handle all database operations of the system. This includes storing user data, managing dynamic content, and maintaining the overall integrity and performance of the database system.
6. Collaborating with the development team using GitHub.  
GitHub is used as a version control platform to manage and track code changes during development. Team members collaborate by creating branches for new features or fixes, submitting pull requests for review, and merging approved changes into the main codebase. This workflow

enhances transparency, prevents code conflicts, and ensures that all updates are properly documented and reviewed before deployment.

## REFERENCES

- Alfeld, C., Charner, I., Johnson, L., & Watts, E. (2013). Work-based learning opportunities for high school students. *National Research Center for Career and Technical Education*. Retrieved from <https://files.eric.ed.gov/fulltext/ED574519.pdf>
- Berings, M. G. M. C., Doornbos, A. J., & Simons, P. R. J. (2006). Methodological practices in on-the-job learning research. *Human Resource Development International*, 9(3), 333-363. <https://doi.org/10.1080/13678860600893595>
- Commission on Higher Education (CHED). (2017). CHED Memorandum Order No. 104, Series of 2017: Guidelines for On-the-Job Training (OJT) Programs of Higher Education Institutions (HEIs). Quezon City, Philippines.
- Dalton State College. (2018). Internship program overview. *Dalton State College Career Services*. Retrieved from [https://www.daltonstate.edu/campus\\_life/career-services.cms](https://www.daltonstate.edu/campus_life/career-services.cms)

Dela Cruz, M., Santos, A., & Ramirez, L. (2019). Implementation of On-the-Job Training (OJT) Program of Engineering Students at Cagayan State University - Carig Campus. College of Engineering and Architecture, Cagayan State University.

Fink, L. D. (2003). *Creating significant learning experiences: An integrated approach to designing college courses*. Jossey-Bass.

Garcia, L. (2017). Internship Experience of Business Administration Students: Basis for Enhancement Program. City College of Calamba.

Kapadia, R. (2014). Retention and Recall Through Practical Experience: A Comparative Study. *Philippine Journal of Education*, 91(3), 112-118.

Kilminster, S. M., & Jolly, B. C. (2000). Effective supervision in clinical practice settings: A literature review. *Medical Education*, 34(10), 827-840.  
<https://doi.org/10.1046/j.1365-2923.2000.00758.x>



Klein, E., & Botts, M. (2017). Bridging the gap between theory and practice in graduate education. *Journal of Higher Education Theory and Practice*, 17(2), 88-96.

Kuhn, T. S. (1962). *The structure of scientific revolutions*. University of Chicago Press.

Macalalad, J., Enriquez, S., & Tapay, M. (2020). OJT Experiences of BSBA Marketing Students at Batangas State University - Lipa City Campus. *Journal of Business Education and Research*, 12(2), 55-66.

Mallillin, C. J., Raguindin, D. M., Robles, R. P., & Caballero, A. R. (2020). On-the-Job Training Performance of BS Information Technology Students of Colegio de San Juan de Letran - Calamba. *International Journal of Advanced Research in Management and Social Sciences*, 9(3), 45-62.

McCabe, R. H. (2000). No one to waste: A report to public decision-makers and community college leaders. *Community College Press*.

Morales, P. R. (2016). Case Study on the Effectiveness of the On-the-Job Training Program for IT Students at Eastern

Visayas State University. Journal of Information Technology Education and Research, 5(1), 23-37.

Nonato, M. C., Del Rosario, J., & Gomez, B. (2018). Tracer Study of BSHRM Graduates: Evaluating the Effectiveness of OJT in the Hospitality Industry. Lyceum of the Philippines University - Laguna, College of International Tourism and Hospitality Management.

Richards, E. (2023). Advantages of on-the-job training for students. *Training Magazine*. Retrieved from <https://trainingmag.com/advantages-of-on-the-job-training-for-students/>

Serrano, L. A. (2017). The Impact of OJY in Enhancing Learning and Employability skills of Filipino Students. *Philippine Educational Research Journal*, 8(2), 98-110.

Wentworth, D. (2020). The importance of practice in on-the-job training. *Training Industry Magazine*. Retrieved from <https://trainingindustry.com/articles/content-development/the-importance-of-practice-in-on-the-job-training/>