THE INTRODUCTION OF UPSTREAM OPERATION INDUCTION PROGRAM AT INSTITUT TEKNOLOGI PETROLEUM PETRONAS

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Abstract

Traditionally, engineers in the oil and gas industry learned their trade on the job. To master all the skill for the full spectrum of Upstream Oil and Gas operation they would take ten to fifteen years. They need to undergo the job rotation at various departments or section in the companies. The current oil and Gas competition does not give the oil company the luxury of time, they need to get their technical staff ready for new challenges within short time. The Production Academy of PETRONAS Upstream Operation collaborated with INSTEP desired to cut the long learning curve by 50%. The young graduates, after undergone this UOIP training could be expected to rise to the management position with three to five years of service. The young technical graduates from upstream operation local and international are brought to INSTEP for one-year induction training where the first four months they learn the theoretical aspect of offshore operation from the reservoir to well completion, surface facilities and pipe line. The next two months, they were sent to various offshore installations in Malaysia to learn the job experientially, Completing their two months at offshore, they will back at INSTEP for the theoretical on onshore terminal operation, the contractual aspect of operation and the customers. During the training they will undergo the Soft skill training, team building and must participate in Corporates Social Responsibility that they have organised by themselves. The graduate will be fully rounded engineers that will be work-ready in any section or department of upstream operation.

Keywords: Upstream Oil and Gas operation, UOIP, Institut Teknologi Petroleum Petronas, INSTEP, engineers, technical graduates, induction training

1. INTRODUCTION

PETRONAS UPSTREAM OPERATION vision is to be World-Class operator by 2018 through operation excellence” by strengthening the production capability through a structured individual development program to meet current and future challenges. During the 80s the oil prices were high and Upstream Operation were newly formed, its hired large numbers of new employees and in the 90s when the oil prices were sinking low very few new employees get hired, and now 30 years later, those hired in the 80s are retiring, the company needs to find new staff not only to replace the retirees but also to fulfilled new positions created in the face of greater challenges in oil and gas industries. The decrease was also due to the reduction in the number of oil and gas industry-related courses being offered at higher institutions. The ineffective recruitment strategies are also the contributing factor. (Peek & Gantes 2009).

PCSB is the major exploration and production of oil and gas companies in Malaysia is leveraging resources to extract the gas and turn economic potential into
economic prosperity. Contributing to the wellbeing of Malaysia. PCSB (2010). The success or failure of these ventures is the degree to which the workforce employed by the energy industry companies has been sufficiently trained and possesses both the technical skills and the kind of work ethic that has defined the industry for the last eighty years. The existing facilities are aging and the new oil field no longer available in the shallow water. PCSB need to ventures beyond Malaysia borders. The new oil wells are deeper and located in more hostile land in term of environment as well as security. PCSB (2010).

2. INSTITUT TEKNOLOGI PETROLEUM PETRONAS (INSTEP)

INSTEP was established in 1981, to train technicians and operators to meet PETRONAS rapid expansion. It was started as Institut Latihan Perindustrian Petrolam PETRONAS (ILPP), and successfully produced more than 12,000 technical staffs in various disciplines for Oil and Gas industry in Malaysia. It is also providing training for PETRONAS technicians for the skill upgrading purposes. On top of that, INSTEP provides short courses for the engineers in ten technical skill areas namely, Geoscience, Petroleum Engineering, Civil/Structural Engineering, Mechanical Engineering, Electrical Engineering Instrumentation and Control, Inspection and Material Science Engineering, Process Technology/Operation, Health, Safety and Environment and Project Management. INSTEP as the corporate learning Institute has a clear goal and long-term strategic plans, as a corporate learning Institute, its activities are linked to the business goals.

3. THE UPSTREAM OPERATION INDUCTION PROGRAM

The global economic benefits of education have been researched and documented. Sweetland (1996) stated, “While the forms of education are diverse, so too are the benefits of education” (p. 341). In line with that believe the Upstream Operation Induction Program (UOIP), is conducted at the INSTEP as part of a collaborative effort between the Production Academy of PETRONAS UPSTREAM. Historically, Shell and Exxon Mobile have dominated the landscape in Malaysia. Many employed by the industry in these regions are third and even fourth-generation oil and gas workers. However, as the industry has moved into newer areas to the inaccessible oil and gas reserves using newly developed technologies, the industry has needed to import its basic workforce for these new areas until it can develop the necessary educational and training infrastructure to support industry activity.

The UOIP program is designed to encompass the six dimension of oil and gas production operation. The participants are exposed to each stage of the upstream oil and gas operation. To date, 260 has enrolled in the program and 225 has graduated from the program. The performance of each newer batch surpassed the previous due to the continuous improvement effort by the Program Managers, Leaders, Facilitators and Line Trainers. The feedback from the course participants were used to improve our interaction, teaching styles, training modules and other relevant expects of teaching and learning in the program. The UOIP training is delivered in five phases, the first phase the theatrical at INSTEP supported by its relevant workshops, laboratory facilities. The first phase of the training is to prepare the participants for offshore operation.

They are taught in Reservoir, well completion, Surface Equipment and Piping. On top of that they will be trained in Soft Skill and Team building sessions. The
participants are required to make presentation on the first half an hour of the class everyday, they will take to turn making the presentation individually. The participants are encouraged to organise among themselves and with neighbouring learning institutions for the sport event, community social responsibility’s activities.

In the second phase, they will be returning to their regions for offshore training. Which platform they will be assigned would depend on operational situation at the platforms. They will be accompanied by Line Trainers, who has more than 15 years’ experience in offshore operation to guide them during this stage. They will be in offshore oil or gas platform for three trips of two weeks each. A log Book is given to each of the participants to record their work during the On Job Training (OJT). Each critical equipment or operation is indicated in the Log Book so that they will not miss it. The supervisors at the platforms will endorse the Logbook. This will be used and evident for the task performed by the participants. The Line Trainer will also evaluate and assess the participants on their involvement, leadership and behaviour during OJT. Once completed the two-month offshore OJT, the participants will return to INSTEP. They will make the presentation of the offshore learning and this presentation will be assessed by the panel comprises of Program Managers and regional operational representatives.

The third phase of the program, the participants are back in the classroom and other support facilities in INSTEP. They will have the theoretical training modules, and each module will be assessed. The phase three will prepare participants for their next OJT that is the terminal Operation. Similar manner as first phase they will take a turn to present individually each morning for half an hour. The presenter is free to choose the topics of presentation. Team building, sport activities and CSR similar to phase 1 but with different groups of people. They would also have the industrial visit, that will take them to the oil and gas construction sites in Malaysia such as MMHE at Pasir Gudang, Johor or at Lumut, Perak.

The fourth phase of the program they back to their regions, this time instead of offshore they are going to the terminals both oil and gas terminal. The participants are armed with the Log Book and guide by their respective Line trainers. They will cover all the operation and maintenance activities in the terminal for two months. Again, they will be evaluated and assessed by the Line Trainer for the performances, leadership and behaviour. At the end of the two months they will make a presentation of their learning. Each participant will cover certain system or process area. They are free to choose their subject of interest within the terminal operation and maintenance. The presentation will be assessed by the panels and marks are assigned to each presenter to an agreed set of criteria.

The fifth phase is where the participants to carry out their Final Project. This phase provides opportunities to the participants to work on actual challenges, improvement initiatives or small projects at the regions. They will be exposed to various organizational structures, work processes, management systems and the work facilities at the regions. This is the best opportunity for the young engineers to apply knowledge and experience gained during the first 10 months of the UOIP program to complete the project. They will form a group of three or four to tackle a real-life problem at offshore or terminal at their region. The topic is selected by the participants but has to be endorsed by Head of Operation at the region.

They will apply the knowledge gained in the last ten months to solve the problem they saw during their OJT. It is very interesting to see how these young engineers
proposed new solution to old problems. They have to write the project paper in an academic manner. They will be guided by their seniors and Program Managers during the project, to ensure they are actually looking at the problem holistically and logically. Their project will need to show how does the project relates to all the six dimension of upstream operation. The analysis will have to be both in terms of technical and financial. They are expected to implement the project once they are graduated from this program. The final project will give the participants the chance to study and conduct the real-life problem. This is where they applied all, they have learned in the past ten months.

During UOIP, these engineers are staying under one roof and dining and learning together in one place. The work hard and play hard. In a year of living together, they form strong bondage with each other. Their networking would be last their lifetime in the company, and they know that they are in one team.

BIBLIOGRAPHY


