
The Role of Self-Study Materials in Proficiency Upgrade Programs for Offshore Gas Production Workers

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ABSTRACT

Unocal Thailand has been providing English language training for its employees for over fifteen years. For the most part, this training has been for new employees and has prepared them for their job in the petroleum industry as well as for further technical training in English. Recently, however, the company has shifted from pre-service training to upgrade training of workers already in the field. This article deals with an approach to provide proficiency upgrade programs in listening and reading to full-time workers while wrestling with problems of scheduling and motivation.

Unocal Thailand has been producing natural gas from its Gulf of Thailand fields for nearly fifteen years. All of the gas produced is sold to the Petroleum Authority of Thailand and over the years this plentiful and inexpensive source of energy has played a major role in the country's rapid growth.

Since its initial involvement in Thailand, Unocal has emphasized the development of its personnel and the transfer of technical skills and knowledge to the Thai work force. A total of

fifteen training groups (over five hundred individuals) have graduated from the basic training program at the company's training facility in Songkhla (graciously named *Settapat Center* by Her Royal Highness Princess Maha Chakri Sirindhorn during her visit there in April 1990).

The purpose of basic training is to take new employees (recent graduates of technical colleges or workers with a few years' experience elsewhere) and develop them into skilled technicians

for the offshore petroleum industry. This training includes six to eight months of English followed by technical training in specific craft areas (electrical, mechanical, instrumentation or production). There is also a cross-cultural component to help employees adjust to a multinational work environment. In addition, instruction in fire fighting, sea survival and first aid is provided to enable employees to deal with any emergency situation they might encounter offshore.

The six to eight months of language instruction is a total immersion program — thirty hours per week — aimed at developing all four skills. It begins at an elementary level in general English and progresses to a high intermediate level which includes job-specific technical English. English is the working language of communication in the international oil industry and is the language through which training occurs. Our goal, therefore, is twofold: 1) to provide trainees with the English language skills to enable them to perform effectively on the job; and 2) to provide the trainees with a sufficient foundation of English to enable them to participate in the technical training programs, all of which are taught in English by native English speakers. In terms of measurable proficiency levels, our target levels for entry level employees — those who have completed basic training — are a 1+ level on the Language Proficiency Interview (LPI) and the equivalent of 450 on the Test of English for International Communication (TOEIC).

In recent years there has been a slowdown in hiring new employees and the company's focus has shifted from training new employees to upgrading those already in the work force. This provided two major challenges for the English language instructors at Settatap: 1) identifying those workers in the field who need upgrade language training, and 2) incorporating extended language training into a full-time work schedule.

Needs assessment questionnaires for all positions were sent offshore to be filled out by both the job holder and his supervisor. In this way, an accurate accounting of the language requirements for each position could be obtained because the questionnaires included views from both perspec-

tives. A standard of language performance was derived from the descriptions of the needs assessments. The next step was to test all job holders to see if they met the required standards. Settatap Center developed its own in-house test — the Test of English for the Petroleum Industry (TOEPI) — to do this. This test has been shown to be both reliable and valid and has a high correlation with the TOEIC test.

Management decided that all upgrade training would initially focus on supervisors and seniors. It was then a simple matter for us to identify the individuals in that group who did not meet their standard and assign them to English language training. For those who met or exceeded their standard, no further English language training was necessary.

The needs assessments and further discussions with supervisors indicated that the priority areas for language training were reading and listening. Nearly all written communication offshore is in English, and this includes everything from e-mail and company announcements to safety alerts and manufacturers' technical manuals. Although it may not be necessary to comprehend every bit of information that is posted on the bulletin board, the demand for a thorough knowledge of technical English becomes obvious when a piece of equipment breaks down and technicians are forced to go to the manufacturer's manual to find out how to repair it. Since it is unlikely that manuals such as these will ever be translated into Thai, reading comprehension ability in English will always be a necessary skill.

Listening was also identified as essential because all future technical upgrade training will probably be in English. This includes other technical training besides that taught by Settatap instructors. Manufacturers often send their own instructors abroad to conduct training on their equipment and Unocal regularly sends technicians as far afield as Alaska, California or Scotland for further training.

We decided from the outset that for the areas of listening and reading, we needed to improve the overall proficiency of the individuals rather than provide skills-based training for specific tasks. In the first place, TOEPI scores for the participants

indicated that they might be too low to benefit from a course in, say, "How to Read a Technical Manual" without preparatory training at a more elementary level. Secondly, a three-day workshop on understanding the manufacturer's manual "Caterpillar Industrial Engines," for instance, would probably help very little in enabling the employee to understand Unocal's guide to traveling safely offshore by helicopter. Mechanics would need to be able to comprehend both, but the two publications vary so widely in content, vocabulary, and style that training an individual to read one doesn't necessarily mean he can read the other. Instead we needed to provide the language foundation and skills to enable the employee to read anything at that level.

The goal to raise the proficiency levels of employees would take a significant commitment of time and energy from both the instructors and the participants. One or two workshops might produce some short-term gains, but any advances made in the short run would likely be subject to erosion unless there was continued reinforcement. The reading component of the basic program consists of 160 hours of classroom work, but as mentioned above, those trainees studied English full-time over an extended period. The participants selected to be in the upgrade program, on the other hand, were full time workers and could not be released from their jobs for six months to study English. Our main concern was how to provide the hours of training it would take to raise proficiency levels.

The typical schedule for an offshore Unocal employee is fourteen days at the offshore worksite followed by fourteen days off work. At first, this might look like an ideal schedule for training, since the workers are free for fourteen days every month and could presumably use this time to attend classes. Most workers, however, do not live in Songkhla and are reluctant to spend any of their valuable "field break" time away from their homes and families. Scheduling a lot of training time in Songkhla might seriously affect the motivation of the participants. It should be remembered too, that these individuals are not students but experienced technicians, most of them having been outside the academic community for many years. In some cases, simply the idea of "going back to school"

for long periods of time can be demotivational for workers.

Another alternative was to hold the courses offshore at the field's living quarters. However, this had been tried in the past and was deemed to be less than successful because employees are simply too tired after their twelve-hour workshifts to be very productive in class. Scheduling classes during workshifts, even during so-called "slow periods," didn't work because inevitably some workers would have to be called out for duty.

Our task then, was to improve the proficiency levels of the participants, providing at least the equivalent 160 hours of our basic program, without being able to schedule them for long classroom periods. The solution we arrived at was to provide a one-year program with two intermeshing elements: classroom instruction and self-study materials.

Both the reading and listening upgrade programs have identical structures. (Students are assigned to either the reading or the listening stream, but not both.) Each participant attends four four-day classroom sessions, one every three months. Each session consists of approximately 25 hours of work (minus the time for pre- and post-tests, evaluations, etc.), providing 100 hours of classroom instruction over the 12 month period. In both streams, instructors employ a wide variety of teaching methods and also include instruction in study skills and learning strategies, something we felt would be useful for participants when working on their own between sessions.

Between classroom sessions, students are required to complete the exercises in a self-study packet of materials. These materials are in the form of a workbook which is distributed to the students at the end of the last day of each session. The first session also includes an orientation period when the student is told how and when to complete the materials, how to use the answer key provided, etc.

For the reading program, the self study workbook consists of twelve units, one unit for each of the twelve weeks between classroom sessions. Each unit consists of three parts: 1) a vocabulary exercise, 2) a problem solving exercise, usually dealing with understanding language at the sen-

tence level only, and 3) a longer passage with comprehension questions. Each unit is intended to take no more than three hours to complete and most students are able to finish the exercises in closer to two hours. The workbook contains answer keys for most of the exercises; however, every third unit has to be sent to the Settapat Center to be checked by the reading instructors. This allows the instructors to monitor the participants' progress and provide feedback when appropriate.

The purpose of the self-study materials is something more than simply reinforcing material that was covered in the classroom sessions. They are also meant to keep the momentum and interest levels high between sessions. Reading improves with reading, so perhaps the most important aspect of the self-study materials is that they be something the participant would actually want to read on his own. We've tried to make them attractive, interesting, relevant and, perhaps most importantly, easy enough so that students can complete the materials on their own without too high of a frustration level.

When the participant completes the four classroom sessions and the four self-study workbooks, he will have completed at least 200

hours of work, which compares favorably to the 160 hours of classroom study in the basic reading program. After the one-year program is completed, students will be tested again to see if their proficiency levels have improved. At the moment, we are at the halfway point in the program and cannot make any claims about its success in terms of overall proficiency improvement. However, feedback from the participants has been very positive and the instructors feel that their classroom and self-study work reveals that the participants are indeed making progress. Motivation levels remain high, and all participants are completing their self-study assignments on time.

In conclusion, although our listening and reading proficiency programs are still in progress, we feel that this approach has good potential for success. By including two interconnected components—classroom sessions and self-study—this program allows students to capitalize on acquiring skills in an instructor-led environment and applying those skills on their own in their own time. This permits the company to provide the extended time needed to raise proficiency levels without disrupting work schedules, while at the same time keeping the students' motivation and interest levels high.