Coordinating study skills in medical education: the PBMOTP experience

DANNY WYATT *

Introduction

The Pacific Basin Medical Officer's Training Program (PBMOTP) prepared students through a cohesive and coordinated program of study skills instruction. The students at the beginning of the last year of student intake in 1991, the period during which the author worked, was primarily Micronesian students, and three American Samoans (*see Table 1*).

Students had all had some post high school training, either in community/ junior colleges, at most two years of university education or specific health related training. Nonetheless, their academic skills, across the board, were still limited in respect to the demanding curriculum of Problem Based Learning (PBL) in place at the PBMOTP. Furthermore, students were all, invariably, unfamiliar with the PBL curriculum which placed a greater degree of responsibility on the student to implement and control the learning process. It was a new, alien and demanding method of learning.

Table 1. The student population at the beginning of the last year of student intake, 1991

State / Nationality	Male	Female
Marshall Islands	2	3
American Samoa	2	1
Kosrae	1	1
Pohnpei	1	2
Chuuk	1	2
Yap	3	1
Palau	2	7
Total	**12**	**17**

Learning styles

Three presuppositions were considered in study skills for Micronesian students. First and most obvious was the low level of elementary and secondary school education; the impact of low academic standards was most obvious in the College of Micronesia — FSM entrance scores of students taking the entrance test (Test of English as a Foreign Language and an English Testing Service Mathematics and Algebra Exam). While some local high schools graduate highly qualified academically capable students, the vast majority of students have English skills in the upper elementary reading level, very limited mathematics skills and a background of classroom instruction based on didactic lectures. Those graduating tended to be mediocre at best.

The second presupposition regards the general perception of education. In a report published by the University of Guam's Micronesian Language Institute concerning a survey completed involving Micronesian educators' and high school students' perceptions of the purpose of education; the purpose of education is perceived to be to "create good citizens and happy and satisfied people" [1]. The instrumental goals of education that underlie more "westernized" attitudes are not as prevalent. When students at the college of Micronesia were asked why they are at school, a very common reply was "to get a better job." The focus often prevalent in western students is not as common. From personal experience of 7 years of teaching, the family sacrifices seen in other less developed nations are not as commonly seen. Education is not neglected, yet nor is it elevated.

According to Robert Kaplan, "Logic, which is the basis of rhetoric, is evolved out of a culture; it is not universal" [2]. He goes on to analyze and expound upon the different thought patterns among a variety of cultures. He astutely notes that English logic, (as seen in speech and writing) graphically illustrated, is linear. Asian and middle Eastern languages do not fall anywhere near the same pattern. Pacific islanders, I posit, tend to reflect more an Asian pattern, In simplified terms, "yes" may mean "no", it may mean "yes" or it may mean nothing. The answer to a question often is determined by the social position of the questioner, the answer the questioner wants, or the desire to appear humble. In short, the answer to a question may be determined by the answer the questioner wants, not necessarily by correlation to "truth". It seems very poor manners to hurt someone's feelings, it is unwise to answer too many questions or one appears "higher" than others, and it is very poor logic to tell what one knows. Knowledge IS power, so the concept of westernized education, though in place for decades, whereby one gives up their knowledge to others, is somewhat counterproductive to the culture.

* *Title III Program Coordinator, College of Micronesia, FSM, P.O. Box 159, Kolonia, Pohnpei State, FSM 96941*

While these presuppositions are changing, the students entering the PBMOTP were products of those educational tendencies. Students entering the classroom were quiet, would not volunteer information, generally had minimal study skills, and often were so averse to speaking in front of a group, that in speech class, speeches could not be scheduled as students would not attend class on the day of their scheduled speech. Such was the background of students entering the PBMOTP in 1991.

Testing instrument

Students entering the PBMOTP were examined utilizing the JABSOM/LAB test prepared by Ted Plaister, University of Hawaii at Manoa, Department of English as a Second Language. This test was designed for PBMOTP and was very useful in determining a student's future success. The exam battery consisted of a Listening Comprehension test of 50 questions taking about an hour to complete, either by cassette tape or by reading aloud. There were 3 Reading Comprehension Cloze tests; the contents of all 3 tests were scientific in nature; 2 medically oriented and one a topic on natural science. These reading tests were examined for reading difficulty and all measured in the range of 12 (Grade Level) using the Fry Readability Measure. A written exam score by Test of Written English norms consisted of 3 modified topics, of which students wrote on one of their choosing. The longest section of the test was a 250 item Vocabulary test. Total testing time ranged in the area of 5 - 6 hours. The test battery was administered 3 times, during 2 sessions each, during the final class's first, second and third years. Results from this program (including only students who completed at least 3 years) are found in Table 2.

" In short, the answer to a question may be determined by the answer the questioner wants, not necessarily by correlation to 'truth'. "

The JABSOM/LAB test was administered after students had been accepted into the program. Testing by the TOEFL and JABSOM/LAB were both very successful predictors of students' abilities to handle the technical and medical language skills necessary to benefit from the program. The JABSOM/LAB was probably the more appropriate of the two tests as it concentrated more on English for Special/Medical Purposes than the TOEFL. Those students who scored "low" on the JABSOM/LAB test almost invariably failed to progress more than a year or two into the program. While results of the exam could have been used as a predictor of success in the program, all students taking the exam had already been admitted. Students' scores were utilized in addressing specific global and individual deficiencies among students in the study skills curriculum. In fact, a small number of students scoring markedly lower than the rest of the class started leaving as the program as early as two weeks following test administration the first time.

The JABSOM/LAB test consisted of the:

- The **Reading Comprehension Cloze** exams (Tests 1, 2 and 3) test students' ability to choose appropriate word forms and word usage. In several instances, more than one answer was acceptable. Cloze tests examine Global Language ability.
- The second set of **Reading Comprehension** exams (Tests 4 and 5), using academic reading passages, tested comprehension and ability to determine main ideas and supporting details.
- The **Vocabulary Test** (Test 6) consisted of 250 phrases with students required to choose the synonym.
- The **Listening Comprehension** (Test 7) section presented medical cases spoken in non-inflected American English at conversation speed. Students were required to choose important information and details under a time limit. Cases presented were very similar to those which they were required to process as PBMOTP medical students.
- The **Test on Written English** (Test 8) was holistically graded; the criteria were: organizational ability, content, vocabulary, language use and mechanics. Unlike the official TWE, this was graded by only one grader instead of two, so the results were not analyzed, nor are they included in the analysis below.

Because of the size of the program, there was a greater ability to coordinate the study skills class with other activities taking place. Students spent the first ten weeks in didactic Anatomy and Physiology lectures in the morning, with study skills activities taking place in the afternoon. It was deemed necessary for students to have a rudimentary knowledge of Anatomy and Physiology in order to feel confident to partake in the PBL that started after ten weeks and continued until the end of the students' third year.

Study skills at the PBMOTP: Year one

Initial study skills activities centered around acquainting students with textbooks, dictionaries, and other reference materials they would be required to utilize in a short amount of time. Students JABSOM/LAB scores indicated a need for organizational and discreet idea reading and listening skills development. They were required to determine the main idea in a variety of presentation methods (lecture, videos, written). Students were required to analyze information, process it and use it quickly. In addition, students were required to be able to work in groups and individually, present information orally to others in small groups and in front of other students and staff. In short, students were required, almost immediately, to perform tasks they had little to no

experience in performing, almost from day one. These included: presenting information to groups, researching topics on their own, allocating time for a variety of activities (time management skills), developing specific reading skills, and integrating information from a variety of sources and skills areas to be used in other skills areas. It was my view in teaching the same subject in the past, that students viewed study skills as an academic topic, as a discreet body of knowledge limited to the classroom in which it was taught. Skills introduced were rarely practiced apart from the classroom in which it was taught. Through integration with the other course(s), the study skills program encouraged students to integrate their study skills classroom work into preparing for their academic and professional work. Topics covered in the first ten week period included:

Time management

Students had difficulty in making the transition to a very busy schedule. They received instruction and practice on following and adapting a daily and weekly schedule. The need to be "on time" tended to be less strict in Micronesia than in westernized society; but the need for timeliness in the medical profession was self-evident. The need to prioritize tasks, complete tasks in sequence for academic or time management reasons, needed to be addressed early and emphatically. Students living in the dormitories had an easier time following schedules than those living off-campus; in either case the need to begin implementing a timely schedule was evident to students when they were responsible for presenting materials, hospital duty and especially for medical and emergency wards.

" Through integration with the other course(s), the study skills program encouraged students to integrate their study skills classroom work into preparing for their academic and professional work. "

Grammar: Because grammar was considered boring, it was handled on a limited basis. On the other hand, some grammatical problems interfere with clear communication. When specific instances of such interference arose, efforts were made to present the correct usage. Note-taking was a valuable form of practice that not only reinforced correct grammar usage, but also encouraged content knowledge development.

Wordiness and Jargon: It appeared that medical students, as well as bureaucratic employees, confused verbal quantity with communicative quality. Students received textbooks full of imbedded clauses, lengthy sentence constructions and sentences of up to 40 to 50 words in length. They then attempted to imitate that verbosity, which could have been distracting in simple writing, but devastating in exam scores. Both verbal and written verbosity were highly discouraged, though it is looked upon favorably in many oral cultures. This continued to be a problem throughout the program.

Paraphrasing and summarizing: Utilizing their content area texts, students were encouraged to paraphrase as an essential skill to processing the massive amount of reading materials they were assigned. It has been noted elsewhere that medical students typically only read a small percentage of the academic assignments given. Paraphrasing and summarizing assisted students in consolidating the important information from their content classes for use in their studying for exams and quizzes. The immediate reward for their efforts was their ability to study condensed forms of information rather than whole chapters. It also saved time.

Listening skills

Listening (and watching) for the main idea in visual presentations: Too often students were distracted by side issues when listening to lectures. A common problem is remembering unimportant details, or the amusing story told to illustrate a point in a lecture, and then failing to see the main idea that story was illustrating. Along the same lines, videos are a popular mode of information presentation; too often though, students failed to utilize it as a source of information and instead viewed it as entertainment. By practicing using videos related to classroom activities, students were able to gather additional information on the content area while practicing critical thinking skills.

Listening (and watching) for discrete points and opinions in visual presentations: Students tend to uncritically believe all opinions of higher authorities. By utilizing materials from sources that differ from the widely accepted norm, students practiced more critical analysis during lectures and videos.

Reading Skills

Rhetorical pattern identification in reading and writing: While most students needed to develop a reading ability at or near post-graduate level (the level of most medical materials), they often failed to recognize the underlying organization pattern of the materials they were reading. A great deal of effort was made towards pointing out and practicing identifying the organizational patterns of the materials they were reading. In so doing, they were often better able to recall important information from those materials in their studies.

Note-taking and outlining: Both are very westernized study aids. The vast majority of students had a very difficult time taking notes or outlining; fortunately, their textbook had pre-chapter outlines reinforcing organizing notes; unfortunately, many students were not in the habit of taking such notes. Encouraging students to develop study groups to discuss materials assisted them in developing better note-taking and outlining skills useful in preparing for their content area class.

Mapping from reading, oral and visual presentations: Oral cultures tend to be much more receptive to mapping rather than note-taking. It is much more in line with the cultural manner they organized their materials, so we sought to utilize an existing skill and demonstrate the academic value. Most students, when they presented their materials from that point on, utilized mapping in oral presentations.

Analytic Reading strategies: Students tended not to realize that difficult vocabulary terms found in reading selections were often defined through punctuation, contrast or paraphrase in the same sentence. Once students recognized these techniques, practice in identifying such patterns were encouraged using their content area texts.

Reading and Vocabulary development: The most glaring difficulty students had was in vocabulary development. Most texts identify important or particularly difficult vocabulary, but students generally did not make the extra effort to develop a better working vocabulary. This problem was tackled more systematically in the second half of the academic year through the introduction of a vocabulary text which was integrated through identifying A & P materials then assigning vocabulary text pages that related to those A & P topics.

Test taking strategies: Students tended not to view examinations as a learning experience from which they could derive information that would be useful later. They did not, as a rule, analyze the information found on a test or quiz they took one day in order to prepare for new material. By pointing out how quiz questions were often used to make up test questions, students became more cognizant of utilizing quiz structure and content in preparing for exams.

The second ten week period featured less frequent classes due to other student demands. Most work concentrated on specific students or groups of students having difficulty and providing specialized assistance. The need for medical vocabulary development became evident when assisting students. They were not able to acquire the terminology they needed fast enough. They also were involved in more activities taking spare time away; hospital clinics, ward rounds, PBL, director's rounds presentations and so forth did not encourage much enthusiasm towards an additional class. Yet they needed to develop a more extensive vocabulary.

The program sought to advance vocabulary development by supplying students with a "programmed learning" vocabulary text utilizing the vocabulary development text written by Mary Lawrence[3]. Once a week, students were assigned sections of the text based on the PBL module they were studying during the week, the theory being that it provided a meaningful context in which to study. Each evening began with a new assignment of 30 - 35 pages as homework. Students then took a 50 question fill-in-the-blank quiz over the previous week's assignment. Students were initially encouraged to pay particular attention to a new and different learning strategy employed in the text, one they were somewhat familiar with (memorization) but employed in a different manner than that with which they were most familiar. The textbook then proceeded to cover "Fields of Medicine," "Body Structure", "The Blood", "The Circulatory and Lymphatic Systems", The Respiratory System" and so on. The coordination with topics covered in the PBL modules proved very reinforcing. Virtually all students scores rose (one stayed the same), and students could more easily read and comprehend materials in a shorter amount of time. Additional proof of the success of the text and process was the disappearance of all copies of the book. Not only was that class using the text, but preceding classes requested, or otherwise obtained, copies of their own.

" Students tended not to view examinations as a learning experience from which they could derive information that would be useful later. "

The benefits of loading vocabulary were two-fold. Students could more easily handle more difficult and intensive reading than they could prior to the introduction and mastery of so much vocabulary, but they also were able to note similarities in words and were more able to correctly guess meanings of words they had not seen before. In addition, they continued to employ those same strategies in other materials they were covering and became much more positive in presenting higher level vocabulary in their PBL presentations. Students were often intimidated by the vocabulary they had to be familiar with and be able to use. By addressing this early, it made success with materials later much easier.

In all, students took 17 quizzes; all quizzes were fill-in-the-blank. The purpose for that particular method was that students had to have a better knowledge of word meanings than through easier to grade multiple choice. I constructed quizzes that forced students to use words, and more particularly, word parts, in unconventional ways. Table 2 provides an example. Because of students' success in lower level education with memorizing materials, I sought to make them

learn the parts in order to make up the whole. Students were initially very frustrated with the form of the quiz. They wanted a straight forward quiz asking them to replicate what they had studied. They wanted, in short, a quiz that followed a format they were familiar with, that they could study for in the same manner they had in the past and one that required little effort and less time. The example shows that memorizing would not work. Over time, students began to somewhat look forward to the quiz; their quiz scores rose as well.

Students also worked throughout the second semester in completing community health projects and work. Because of the prospect of having to educate the public in their hospital and community work, communication theory was covered, which included both verbal and non-verbal communication. They examined different ways of presenting information that would be more effective than what they were used to seeing in their work. Students were encouraged to use videos in their studies, and often produced intricate and extensive oral presentations for their oral exams.

Table 2. Quiz #9
(concerning the cardiovascular system)

8. Two romantically involved MO students were conversing about the problems they had with one another. She said, "I suffer (19) when I see you since my heart starts beating so fast." He replied, "Using a (20), you can hear the sound of (21) because you make my heart function improperly. I believe you have affected my (22), because the pacemaker of my heart is all fouled up." She countered with, "You have caused (23) the severe cardiac arrhythmia with your charming good looks." He blushed and said, "If this keeps up, I may suffer (24), the complete absence of heart beats." She trembled at the thought of performing (25) on him, since it is the most effective and common procedure to reestablish heart and lung action. It is obvious that both of them suffer from (26), heart disease of one sort or another.

9) My wife claimed to have suffered irregular, rapid, uncoordinated heart contractions, otherwise known as (27). That was several years ago. Now she claims even an (28), a procedure using sound waves to produce an image of internal structures, would show nothing going on in her heart. In other words, her (29), her record of her heart, would be negative.

10) My wife claims my nocturnal habits stem from my (30), or fear of light. I claim, however, that it is probably my fear of her skin, or (31), which actually does it to me. My father, on the other hand, suffers from (32), a great fear of water. Of course, (33) is also what we call rabies.

Students were encouraged to develop a more independent attitude towards their studies. It was not uncommon to see study groups form well before scheduled exams, with students organizing presentations to help in preparing for classes. Those students who chose to study by themselves were given the freedom to do so, but more often than not also joined study groups for the synergistic results. Writing instruction, practice at note-taking and mapping, reading organization and identifying rhetorical patterns also continued, but on a lesser scale compared to the first half of the school year.

Study skills: Years two and three:

Time was cut back further in response to my needing to allocate more time to the College of Micronesia. Developing and refining critical thinking skills became the most concentrated activity.

In order to demonstrate that learning included reading up to date medical journals, I pored over the *New England Journal of Medicine* issues seeking the "Case Study" articles. Such articles featured a series of findings, presented much like a PBL module, in which a medical professional responded to presentation of a patient, lab findings and so on in a very methodical manner. I copied articles, cut them in pieces separating the different findings and the doctor's responses to each section, and students "worked up the case", being given the actual responses when they had completed their work. While a great many cases were not very relevant to the region, I was not surprised when students were able to emphatically identify a Leptospirosis case much sooner than the *NEJM* guest specialist. I also employed the *SRA Think Lab* to encourage students to be open minded and not be led astray by superfluous details. The element of a prize made some activities very loud. Finally, students were encouraged to assist the Program by reviewing the extensive medical video collection. Students often remarked that they had difficulty in determining which videos could be helpful in their studies, as some titles were misleading, some videos were of poor quality and other such problems. Students were assigned to review one or two titles each week and fill out a form that required they outline the format of the presentation, discuss positive and negative points of the discussion and recommend where it would be useful. The vast majority of the video titles were reviewed and students often asked for videos in later school terms which someone had seen that covered that topic, or they recalled having seen it themselves.

Testing Results

Results of the testing program comparing Year 1 and Year 3, analyzed by the one-tail t-test using the Access 7.0 program, are found below. The results were statistically significant at the 95% level with the cutoff score of .05, for Test sections 2, 3, 6 and 7. Tests 4 and 5, although the mean scores (average number of questions answered correctly) showed improvement, because of the low number of test questions, (10 and 15 respectively) were not conducive to statistical analysis. Test 1 is a cloze (fill-in-the-blank) test at above 15th grade reading level according to the Fry Readability Measure on a topic students were never familiarized with (locusts), which may account for the lack of statistical significance in the

Table 3. Test results

Test	Test 1		Test 2		Test 3		Test 4		Test 5		Test 6		Test 7	
Tested	*Global Language Skills*		*Global Language Skills*		*Global Language Skills*		*Fill-In Reading Test*		*Fill-In Reading Test*		*Vocabulary*		*Vocabulary*	
Test type	*fill-in-the-blank: Cloze*		*fill-in-the-blank: Cloze*		*fill-in-the-blank: Cloze*		*interpretive reading skills*		*interpretive reading skills*		*multiple choice*		*multiple choice*	
No. of questions	*71 questions*		*65 questions*		*37 questions*		*10 questions*		*15 questions*		*240 questions*		*50 questions*	
Year	Year 1	Year 3	Year 1	Year 3	Year 1	Year 3	Year 1	Year 3	Year 1	Year 3	Year 1	Year 3	Year 1	Year 3
Mean Scores	30.5	34.04	36.5	45.38	18.13	23.75	6.88	7.58	10.75	11.79	141.33	173.5	23.08	30.5
Variance	68.7	75.87	82.87	110.07	31.51	35.67	4.11	4.17	10.54	9.3	1469.36	1448.87	44.17	60.87
Observations (students tested)	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Hypothesized Mean Difference	0		0		0		0		0		0		0	
t Stat	-1.44		-2.94		-3.43		-1.22		-1.13		-2.91		-3.6	
P (T<=t) one-tail	0.081	***NS***	0.0037	***S***	0.0011	***S***	0.118	***NS***	0.135	***NS***	0.0039	***S***	0.00075	***S***

Note: S = SIGNIFICANT. NS = NOT SIGNIFICANT

results of that particular test. Although Test 1 has an adequate number of questions and demonstrates a mean score increase between years 1 and 3 (30.5-34.04), this test was not statistically significant. In Tests 2 and 3, cloze (fill-in-the-blank) tests, show mean score increases from 36.5 to 45.37 and 18.12 to 23.75 respectively, which were statistically significant. Tests 4 and 5 (testing interpretive reading skills) show mean score increases of 6.87 to 7.58 and 10.75 to 11.79 respectively, but again, statistical significance was not noted. Test 6, the multiple choice vocabulary test shows dramatic mean score change, from 141.33 to 173.5, and is noted to be statistically significant. Also, Test 7, the multiple choice Listening exam, shows a mean score increase of 23.08 to 30.5 and is also noted to be statistically significant.

Discussion

The success of students' demonstrating mean score increases in all exams, and statistically significant improvement being noted in 4 of the 7 exams, stems from the coordinated approach to vocabulary development. Furthermore, integrating the study skills curriculum and instructor in the overall curriculum, in both the decision-making process and grading process, assisted in the coordination of prescriptive remedial study skills assistance. The academic instructors noted when students were having particular difficulty in specific academic tasks and requested remedial assistance to the identified student. Then remedial course work was made available to students by both student request and by administrative designation. For instance, students noted to have problems with note-taking skills were provided additional work in that arena. Students having difficulty in ascertaining the main idea in academic reading passages were provided additional work on a prescriptive basis with improvements noted not just in testing results, but also in academic performance. While there was no pre- or post-activity testing on prescriptive study skills assistance, overall performance improvement was noted in the JABSOM/LAB testing process.

Overall, the most significant and overwhelmingly productive assistance provided to students was vocabulary development. Through increased vocabulary, students reading scores increased, they could understand highly academic passages without re-reading passages several times, could take more fluent and concise notes on medically oriented reading passages, and could understand spoken "medical" English more easily and quickly. Through vocabulary development, students' global English skills increased and as a result, their academic work load was less demanding.

Organized and coordinated vocabulary development had an impact on scores measured in Vocabulary (Test 6), Reading (Tests 2 and 3), and Listening Skills (Test 7). Because there was only one grader for the Writing test, biased results supersede any ability for analysis. Overall, the PBMOTP study skills program appeared to be quite successful in preparing students for the study of medicine. The success of study skills instruction was dependent on coordination with the content courses and other curricular activities students were involved in. Vocabulary development was consistent with their PBL modules, communication theory was organized in response to their need to present in front of fellow students and doctors, note-taking and mapping practice was organized around their reading assignments, test-taking strat-

egies were employed both before and after they took exams. The coordinated effort of all instructors in addressing students' needs resulted in students no longer viewing study skills as a separate academic course, but as a tool they could employ in their academic and medical work. Such coordination is not common.

There appear to be three features to the PBMOTP and the place of study skills/English instruction in the curriculum and the program as whole. First was the support given study skills program and instructor in meeting the needs of the program's students. Involving the study skills instructor in both the administrative decision making process and curriculum development has been both educationally and professionally rewarding. The students came primarily from educationally disadvantaged backgrounds; their backgrounds had to be recognized, but could not be used as an excuse for quitting or allowing students to perform at less than their full potential, or at a potential that would be less than acceptable at any other recognized institution of higher education. Through participation in the decision making process, I could coordinate activities making them more rewarding to students and informing faculty of difficulties students might be having. Additionally, faculty identified students who were having difficulty and I could attempt to provide instruction to assist that student in succeeding.

" The coordinated effort of all instructors in addressing students' needs resulted in students no longer viewing study skills as a separate academic course, but as a tool they could employ in their academic and medical work. "

The second benefit of that kind of coordination was the ability to modify the course to the specific needs of the students, which change greatly over time. Students, as they became more familiar with their duel role as students and health care providers, came to take more control over their education. They were not passive students in the second year! Being able to become more a partner in education, rather than the "expert", led to a closer and more rewarding work experience for me, and a more student generated curriculum in the study skills portion of the program. In several instances, students identified a difficulty and asked for lessons on solving or practicing that particular skill. When the curriculum is more student generated, it also tends to be more rewarding to the student. In short, they do not go to "study skills class" because they have to, they go because they can learn or practice a skill that will help them succeed.

Finally, the integration of the "English teacher" in the PBL process assisted the program in meeting students' needs in innovative ways. The medical educators included someone with a background in Micronesian education (beyond the Micronesian doctors on the staff) and this presented input to the rest of the program on how it might be possible to address specific issues. It presented the program with a coordinated attack on student problems. It provided the program with a view that did not originate from within the program, but more from outside. I assisted the program in addressing student deficiencies at their source; problems that stemmed from language difficulties were addressed as language difficulties (as in vocabulary development).

English instruction has to be a tool students can use when they need a tool of that kind. When the need for that tool is lessened, the students can, and did, take more responsibility for their own learning. English and study skills instruction was initially a prerequisite to success in the program. Once the foundation for success was laid, the building was stable enough to stand on its own. Coordination between areas of study, including English instruction, is a prerequisite to more effective education. It is time effective education should be the goal of all programs, so such coordination should be encouraged as it was in the PBMOTP.

Acknowledgements

I thank the administration of the College of Micronesia,FSM for allowing me to participate in teaching at the PBMOTP while also maintaining a full-time commitment at COM. I also thank the faculty, staff and students of the PBMOTP for putting up with an instructor whose hourly devotion to the "other job" decreased over time because of multiple responsibilities.

References

1. Spencer M. Micronesia Area Research Center (MARC) Talofofo Guam: University of Guam; Summer, 1991, p 291.
2. Kaplan R. Cultural thought patterns in intercultural education. In: Kroft, K, *Readings in English as a Second Language for Teachers and Teacher Trainees. (2nd ed.)*, Winthrop Pub, Cambridge, Mass. 1980; pp 399-424.
3. Lawrence M. *Developing Medical Vocabulary (2nd ed.)*. Saunders and Saunders, Mass.; 1991. □