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Report of Visit to the United States Engineering Team (USET) Kabul, Afghanistan by R. G. Carson, Chairman, Kabul Afghan-American Program Steering Committee, March 12-28, 1970

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I. Introduction.

It has been eighteen months since a member of the Steering Committee visited the Program in Kabul so it was decided that, when a new chairman was elected for the period 1970-73, he would be asked to make a visit with a view toward better acquainting himself with the operation of the program, its successes and its problems, and to bring to the Steering Committee first-hand information about the program. The visit would also serve to better acquaint AID officials in Washington and Afghanistan and Afghan officials, including those at the University, with policies of the Steering Committee and details of the program itself. Such a visit was made in March 1970 arriving in Kabul on Tuesday, March 17, and leaving on Saturday, March 28. March 17, 18, 19 turned out to be registration days for the new school year with March 20 and 21 as holidays for both Afghan and American staff members. Classes began on Sunday, March 22, and moved into high gear on Monday, March 23. While the normal flurries of activity associated with registration and beginning of classes may not have been ideal for all of the purposes of the visit, it did afford an opportunity to observe this important beginning phase while still allowing time for a week when classes were in session.

II. Successes.

The Kabul Afghan-American Program can take pride in the work of its USET team and the things that this group has been able to accomplish in Kabul. Almost without exception AID and Afghan officials indicated the high esteem in which the Faculty of Engineering at Kabul is held. It is considered to be perhaps the most prestigious unit within the University, not only by outsiders, but by University personnel. This has reflected itself in many ways including

the high caliber of students seeking to enter engineering. Among the more specific recent indications of success in the program are the following:

A. The undergraduate program has been extended to five years with the third year divided equally between a practical work experience and study on the campus arranged so that half of the students work for six months and then the other half take over those same jobs for six months. This is a significant development because of the almost complete lack of information available to young people about what engineering is and the almost unrealistic expectations of the students themselves. It took several years to develop the necessary contacts with the various government ministries and projects and to obtain approval for the budget to finance this activity. The first group of students entered the first work period as the current semester got underway. About a week at the beginning of the semester was used to have industrial and ministry officials talk to this group of students and by having them make visits to nearby industrial and engineering projects. A returned participant, Mr. Bahramiy, is devoting full time to this activity but its success is due in no small measure to the efforts put into it by Dr. Frank Ahimaz, USET member from IIT. It represents a new departure in the educational pattern of the University. Therefore, though it was not easy to initiate, the students and faculty alike are greeting this project with enthusiasm.

B. The academic year at Kabul University for 1970 is somewhat foreshortened due to problems originating in the closing of the University as a result of student unrest for a major part of 1969. In order not to be faced with the prospect of having to admit two graduating high school classes at the same time, the University plans to close out the 1969-70 school year with a short semester beginning March 17 and ending in early June. All units of the University will conform to this calendar except the Faculty of Engineering and the Polytechnic.

These two units together obtained permission from the University Senate and the Minister of Education to extend the present semester through July 7. The next academic year is to start early in September hopefully for the entire University. It was necessary for engineering to have a longer semester in order to have any meaningful course content. The Afghan faculty joined with USET in pushing this proposal and obtained the cooperation of the Polytechnic. This may not be easy to carry through when the other units of the University close and other faculty and students begin their summer holiday.

C. All laboratory equipment and commodities furnished by AID are in the process of being shifted to Afghan ownership. Mr. Robert Loddengaard, administrative officer of USET, is working hard to develop inventory records and help the Afghan staff to develop a system of information and controls for the equipment and material. This includes the books and the bookroom as well as laboratories and commodities.

D. Participants have continued to perform well at a number of institutions in the United States especially so when one considers that many of them were picked at a time when it is not always possible to predict with confidence the performance of students. There is no question but that they have the capability of developing not only an adequate but a first-rate group of professional engineering educators and that the group of returning participants and those currently in participant status will have the academic training to successfully carry on good undergraduate engineering programs in Kabul.

III. Problems.

There are problems and very serious problems associated with the potential success of the program and it is easy for a visitor to become

overwhelmed with the magnitude and the pervasiveness of some of these. These are listed in order of importance.

A. The Faculty of Engineering as a group must be relatively stable and have opportunities for continued professional development. Currently the Afghan faculty is at a low point in the cycle due to the number of participants now studying in the United States. The most serious problem of all, however, are some recent indications of potential defections by participants. These began when Mr. A. A. Daunish failed to return to Kabul after his period of training in the United States. He might have been considered an isolated case but more recently Mr. Shakill has exhibited considerable reluctance to leave the Atlanta area and has indicated that his future plans for returning to Kabul are very uncertain. In addition, Mr. Natic left IIT on schedule but has not been heard from by USET since that time. In another case, one of the Rashidi brothers took considerable liberties with his relationships to the Faculty of Engineering and to the University. Other indications of unrest are harder to pinpoint but the prevailing view among USET faculty members and Steering Committee members, some of whom have established very close relationships with some of the participants, indicate that these may only be harbingers of things to come. The reasons for the problem and the cure for it are not simple and not entirely clear. There is a spirit of independence developing as the country develops and coming and going across borders becomes progressively easier and no doubt contributes to this problem. But faculty salaries are pitifully low. On \$40 to \$60 per month the possibility of a faculty member accumulating enough reserves through his salary to finance travels or studies abroad are almost insurmountable. Some potential faculty members, therefore, consider a scholarship abroad and the earnings possibilities

abroad excessively attractive in contrast to the situation at the Faculty of Engineering. On the other hand, family ties are very strong and a feeling of nationalism is also strong in some of the participants. Somehow, therefore, the opportunities at the Faculty of Engineering must be made attractive enough and the prospects for the teacher must be attractive enough to make it worthwhile for a participant to return to and stay at the University for a reasonable length of time. The prospects for short periods of study abroad at future dates and a better salary situation at the University would help tremendously. Fringe benefits, such as the provision of faculty housing for faculty members (such housing is provided at the Polytechnic) would indirectly be an economic assist. If participants do not return and stay for a reasonable length of time with the faculty, the whole project comes to naught. This problem is recognized by USET, the Steering Committee, AID and the Afghan leadership at the University and ministry levels. The solutions and the economic means to achieve these solutions, however, are not so clear since both dollars and Afghanis are very tight at this time.

It is easy to become an alarmist and to read too much into what may be a temporary spate of disaffections. On the other hand, if the current situation is truly indicative of things to come, the sooner everyone recognizes it, the better. If corrective measures can be taken, well and good, there is some hope for ultimate success. If corrective measures cannot be taken, this project needs to be terminated, perhaps by allowing it to die a natural death when the contract terminates in July, 1973, and when the current participants complete their programs.

B. A second problem is that of leadership of the Faculty of Engineering and of the University. The current procedure requires that the Dean of

Engineering be elected every two years. The last election was close and the Dean himself expresses some frustration with a system which requires that he be conscious of whether a faculty member may vote for him or not. The University president is in somewhat the same situation. I did not meet with the University leadership since the president had resigned and a new president was elected during the latter part of my visit. He received majority of the Senate vote although there were three candidates (reduced from five at an earlier date) at the time the ballots were cast. It is entirely possible that when the current crop of participants return, they may put forward their own candidate for Dean and get him elected. It is not clear that the Afghan staff members have enough maturity and foresight to overlook personalities and give consideration to the election of a person who will make the best Dean and provide the best leadership. Two years ago, a new constitution was promulgated for the University which, in effect, established a Board of Trustees and moved in the direction of autonomy and non-political influence in the leadership of the University. The constitution was in effect briefly but failed to receive the required endorsement by one of the bodies of the Legislature (The entire political channels necessary for a move such as an approval of this type of legislation are not completely clear to me. Suffice it to say that for a period it was in effect but was later rescinded.) There is a possibility that a modified form of this constitution may be acceptable to the Parliament and to the ministries differing from the previous one in some of the details relating to political activities of students. The Parliament is now in session and the University is now in session. Actions of the students and progress of the University no doubt will have some effect on whether or not the constitution issue will be revised and the progress it

will make. Adoption of the constitution would move the University toward an administrative pattern more nearly that of an American state university and would, I believe, provide greater stability at both the school and university level in the leadership.

C. The use of English as the language of instruction in the Faculty of Engineering has been and continues to be a problem. It has been USET policy to teach classes in English. This is a policy which is not unanimously accepted by the Afghan staff and no doubt there are lapses, particularly in laboratory instruction. There are those who feel that at times the use of English may be pushed to the point where understanding English becomes more important than understanding the subject matter and where the amount of material which the instructor attempts to get across is seriously limited by both his and his classes' understanding of the English language. There is no disagreement by anybody on the absolute need of the student to be able to continue his own professional development and updating through an ability to understand a foreign language, since all of his texts and all of the current literature are going to be in some language other than his native tongue. We all agree that English should be this language for the Faculty of Engineering. Students, however, are not well enough equipped by their high school training to understand lectures in English and therefore English has been provided in the Faculty of Engineering as a supplementary subject with the instruction being provided by volunteers, Peace Corps people and others. There is an internal University problem at the present time relating to the allocation of English instruction to the Faculty of Education and whether or not the Faculty of Engineering should be allowed to have classes separate from the Faculty of Education. The appointment of a particular individual furthermore seems to complicate this situation

with the Faculty of Engineering pushing for his appointment and with others in the University holding back. In addition, there is the complication of the calendar and the view of some that the Faculty of Education could not or would not provide adequate English instruction. Also related to this might be the short-term view of getting the job done now versus the long-term view of separate units beginning to operate as a university. The question, of course, is not simple but the Faculty of Engineering and USET have taken strong positions and lines have been drawn. Involved also are other AID teams including the University of Indiana team which is providing assistance at the administrative level of the University. The new leadership of the University and compromises in the way of differentiating this instruction from the normal English instruction (technical report writing, technical language, etc.) may provide a way for settlement of what is really a relatively important issue.

Incidentally, two first-rate language laboratories, one at the AIT adjacent to the Faculty of Engineering and another in the Faculty of Education, appear to receive little or no use by the engineering students or their English instructors.

D. The civil engineering replacement from a Consortium university has not yet been obtained. An alternative would be the continuation of the administrative position and getting a worthwhile replacement for Mr. Loddengaard or of getting a short term electrical engineering staff member. There will be a need to work with the Afghans on their administrative procedures within the school for some time to come.

IV. Post 1973

There is general agreement by all concerned, USET staff members, AID staff members, Afghan staff members, the Afghan Minister of Education, and others,

for a need to continue beyond July 1973 with assistance in the development of the Faculty of Engineering. The amount of assistance and the number of people in the field are of course not generally agreed upon. Assistance can be thought of as 1) people in the field; that is, USET staff members; 2) participant training; 3) commodities, laboratory equipment, supplies, etc.; 4) other assistance, such as faculty professional development fund, research fund, and so forth. AID-Afghanistan indicates a desire to place major emphasis on participant training and on item 4; that is, funds which would allow for professional development of the Afghan staff, perhaps by encouraging research, by encouraging visits to nearby institutions, by encouraging visits to Kabul from faculty at nearby institutions, and so forth. AID/A plays down much continued US commodities assistance feeling that the Afghans could and should pick this up, and their estimate of the number of USET staff members needed in the field will probably differ from that of USET or the Steering Committee by a wide margin. In general, USET staff members would like to see a field team of at least five which would provide for one man in each discipline, CE, EE, ME, plus a leader to work with the Dean and the Faculty of Engineering administration plus a position which could be used for short-term, one-semester visits for people in special areas. The Minister of Education very strongly hopes for heavy continued U. S. support but is not in the position to talk about number. Views on the magnitude of the participant training program are not quite as clear. Most USET people would favor two or three participants per year which might mean six to nine participants in the U. S. at a given time.

V. Participant Training

A. Many USET staff members favor the use of Middle East universities for as much participant training as possible. This approach appears to have con-

siderable merit. It may ameliorate the situation of having the Afghan faculty member return to his own university for the financial and economic opportunities would not be as attractive in the Middle East as in the United States. This also has the advantage of sending the participant to a university which is aware of the problems of the Middle East and whose programs are hopefully somewhat more oriented in that direction. Some participant training, perhaps PhD level training, should continue to be carried on in the United States. The Asian Institute of Technology at Bangkok seems to be particularly well suited for civil engineering participant training. The American University at Beirut and the Middle East Technical University in Ankara as well as various institutions in India would also appear to be suitable for some kinds of participant training. The Afghan staff, including the leadership of the Faculty of Engineering and the participants themselves, will resist such a change vigorously. In spite of this, I feel it would be a very worthwhile change to inaugurate.

B. The potential purchase and use of a computer for the School of Engineering is another small problem. The USET team is almost 100% agreed that it would be a mistake to put funds into a computer at this stage of the development of the institution. Maintenance would be almost impossible and actual use of the computer would be very small. On the other hand, the team leadership seems to lean toward the purchase of a computer. In my own view, the purchase would be a mistake. There would be no prospect whatever for the students to use it and very limited use by the staff. No doubt, some returning participants have learned to use the computer in the United States and may insist that it is necessary for research of the type they want to carry out but, without question, the computer capability would not begin to approach the

facilities they were used to in the United States.

VI. People Consulted

A. Each individual USET member separately. This was accomplished through having a meal with each USET member and his family as well as through individual conversations.

B. Dean A. G. Qaissaanee on several occasions, both individually and in conferences with Dr. John Nankivell.

C. Two separate small groups of Afghan faculty members, about four each time, in open-ended sessions and in an effort to have them talk about the program and the problems related to it.

D. Several Peace Corps people teaching at the University particularly in the English program and in Architecture.

E. The Fulbright Fellow chiefly responsible for the architecture program, Mr. Peter M. Cohen.

F. AID officials

1. Dr. Ken Howe, Acting Education Director while Dr. Martin is in the United States. Several long and cordial conferences were held with Dr. Howe who exhibited a good understanding of the program and its objectives and a thorough willingness to cooperate. Dr. Howe is shortly moving to Turkey where he will be Education Director.

2. Mr. Barlett Harvey, AID Director for Afghanistan. Mr. Harvey is relatively new in the country but experienced in AID affairs. Two separate individual conferences were held with him and in addition, I had an opportunity to attend a meeting of all AID project leaders at which he presided.

G. The Minister of Education and Second Deputy Prime Minister,

Dr. Abdul Kayeum. Dr. Kayeum is relatively new in this post but not to government, and indicated a desire to later review the program at greater length. Both Dr. Nankivell and Dean Qaissaunee were present at this meeting when several points were brought out including the problem of faculty stability. Dr. Kayeum is anxious to have American support of the program continue.

H. Dr. Robert G. Neumann, American Ambassador to Afghanistan. The conference with Dr. Neumann was very short but meetings with him at a reception at Dr. Nankivell's house were somewhat more productive.

I. A number of Afghan students, mostly through informal contacts while making plant visits and between classes at the University.

J. Team chiefs of several of the other education teams in Kabul and of a number of other AID projects including the directors for Afghanistan of Minor Associates and Nathan Associates.

K. Mr. Wilbur M. Waffle was visited in Washington, D. C., before making the trip to Afghanistan. He has recently returned after serving as Technical Education Advisor in Kabul for a period of eight years. He will be associated with the program through the Washington office from hereout.

VII. Visits

A. Jungalak Factories. This visit was made with the entire group of third year students who were making a plant tour prior to reporting to their work assignments. I had previously visited this factory in 1965 and things looked very much the same. The factory is engaged in a number of different manufacturing enterprises ranging from furniture, chip board, bus body, motor and chassis rebuilding, castings, electric motor rebuilding, pumps, farm

implements, beds, and a variety of other items. In general, the engineering content is low but the factory has some good equipment well maintained and well-run. Some Russian advisers have been used in the factory and a number of AIT graduates are employed there. So far as anyone knows, no engineering faculty graduates are employed; however, several will be there as a part of the training program and hopefully this will lead to eventual employment. Some of the shops are well run and appear to be hardworking. The tour was relatively superficial and greeted with varying degrees of interest by the students themselves. For example, civil engineering students were little interested.

B. The Polytechnic unit of the University, with Drs. Howe, Qaissaanee and Nankivell on a tour arranged by Dr. Qaissaanee. It is gratifying to note that the two Afghan deans get along well together and cooperate in a number of ways. Several Russian team members were met and talked to during the tour. For the most part, these were fairly young, apparently well-educated and enthusiastic people interested in their laboratories and in showing what was possible with their equipment. The buildings and laboratories are well-equipped and well laid out and, on the whole, considerably more extensive than the Faculty of Engineering's. The Polytechnic is in its own compound with its own dormitories, cafeterias, and faculty housing apartment buildings. At the present time, however, only the Dean from among the Afghan faculty uses this housing. The rest is occupied by the Russian advisers. There are some 130 participants in Russia who go for a six-year period but are able to return to Afghanistan each summer, thus renewing their home ties and maintaining their contacts within the country. At one point, it was indicated that students other than Polytechnic students also use some of the dormitories. Interestingly

enough, both deans and the Minister of Education spoke in terms of the long-run cooperation of these two institutions even referring to possible common first and second year programs with the Minister of Education making specific and repeated reference to his desire to have the Faculty of Engineering remain the dominant (meaning, I think, highest level) engineering program in the University.

C. A visit was made to the Afghan Institute of Technology located adjacent to the Faculty of Engineering. This institution, well equipped, is a little more advanced in terms of the Afghan staff taking over full responsibility. The present AID team contract expires on July 1, 1970, and after that time only one U. S. advisor will be present along with a small amount of participant aid. In the view of some, this will not begin to be enough support to keep the program operating properly. The AIT has well equipped classrooms and shops and is making an effort to meet the changing needs for technicians, dropping and adding programs as appropriate.

D. The Seismic Station and the Seismic Center at the University. This visit was made in the company of Dr. Lorne Heuckroth, who has a considerable amount of enthusiasm for the program and apparently has done a wonderful job in putting the station together and getting it operating. The station issues regular reports and is functioning properly though the back-up Afghan help is very thin. One publication in the bulletin of the Seismological Society of America has resulted from this activity.

E. A visit was made through the library which appeared to be well used, many of the tables occupied by students studying either individually or together. Some aspects of the library, however, were a little discouraging. The periodicals racks were carefully labeled and in one of them the April 1965

issue of the Reporter, a magazine no longer published, was prominently displayed. On another, a more recent issue of Yachting seemed somewhat out of place. On the other hand, the Journal of Engineering Education was present and in place, but a special rack marked "Engineering Publications" set off by itself in one corner of the room had not a single engineering publication but was filled entirely with medical journals. This rack came into being when one of the faculty of engineering staff members was appointed as library liaison and attempted to step up the use of the library by engineers.

F. Two power projects.

The Maripar Project in the gorge which currently is not functioning due to a problem with sand resulting in excessive abrasion of some of the components of the turbines and the Nagaloo Project built under Russian sponsorship with some Russian advisors still present. The Nagaloo Project at present is the main power supply for the city of Kabul and the local industries but is not used to capacity. It and the Maripar Project are about the same size, each being about 66 thousand kw. The Maripar Project was built with the assistance of the West Germans and apparently the responsibilities for straightening out the sand problem is still in dispute but since the power is not needed at the moment, there seems to be no great urgency to get the project back into immediate operation. The two visits were made in the company of Dr. Arthur Eckels and two of the younger Afghan Electrical Engineering Faculty Members.

VIII. General Conditions.

A. Parts of Kabul have an underground power system which appears to be well installed and functioning properly. The USET residences, at least, no

longer have problems with variations in voltage and cycles. Several streets including several of the main thoroughfares are well lit with modern street lights.

B. Kabul has a dial telephone system which is widely used and at least in the sections I visited, was working well. In addition, the first sidewalk telephone booths were being installed and were drawing considerable attention from passersby.

C. Traffic conditions have not improved and since the number of automobiles has increased, in general are worse. However, traffic cops with bull horns are located in several places and are making an effort to introduce some order to the traffic. Part of the current program is pointed toward having pedestrians cross the intersections with the light or at least at the corners. I could not help but note, however, that one two-block stretch of a one-way street near the Staff Aid House was regularly negotiated in either direction and with no apparent concern on the part of either pedestrians or motor traffic.

D. The hotel situation is much improved with two or three hotels of the Spinazar Class as well as a brand new Intercontinental (Hilton class) Hotel located on a high hill overlooking the Polytechnic. This hotel is equal to a good hotel anywhere with prices to match. It is complete with bars, ballroom, convention facilities and rental cars.

E. Money is apparently very tight. The government is having problems with its national budget. This makes the job for everybody difficult because many problems revolve around the need for money and of course in the long run the Afghans themselves must support their educational institutions. It makes even more significant, however, things such as the practical training programs

for which the University had to allot almost 900 thousand afs. The national financial picture was referred to by a number of people including the Ambassador, the AID Director, and the Minister of Education, so apparently it is very real.

F. In spite of the fact that the law is reported to limit camel caravans through the f Kabul to between the hours of 6 p.m. and 6 a.m., I saw at least three during the later daylight hours making their way through busy parts of town. People still relieve themselves in the open fields near the University and near other built up areas of town, and people still buy nan and clamp it with no wrapping to the rear of their bicycles for transportation from one part of town to another.

IX. Related USET Matters

A. On the whole, the USET faculty members and their families are thoroughly enjoying their stay in Afghanistan. Most of them are hard working and dedicated and are also taking advantage of their tours to visit other parts of the Middle East and to learn about Afghan culture. Several of the wives are engaged in charitable projects such as help with the University English Program, help with the hospitals, working with ladies' groups, etc. The social life is good and a visitor is well looked after, for while I stayed in the AID Staff House, all my lunches and all but one of the evening meals were taken up by visits to the USET families, receptions, dinners, and picnics. The American community is well looked after by AID and their physical wants are well taken care of. The turn-over of personnel at all levels, that is USET members, University AID Director, Minister of Education, and I am sure a number in between, makes for some lack of continuity in programs and makes for a continual need for re-education people.

B. Dr. Ahimez has taken a leadership role in establishing standards for and laying out the new industrial park near Kabul carried out with a combination of student and Afghan staff help. Four industries are currently located there and others are interested in locating there. This is an important piece of work in itself and also has important implications for the future as it may provide a source for some consulting activity for the engineering faculty as well as job opportunities for the graduates. Dr. Ahimez is due considerable credit for carrying through this project.

C. The architecture program is not provided for in the University budget other than support of the two Afghan staff members trained at IIT. There will probably be another Fulbright man for another year or two if a good one can be found. The group is working together well doing some outside work, part of the income from which is used for their own supplies.



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