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**DEVELOPMENT ASSOCIATES, INC.**

MANAGEMENT AND GOVERNMENTAL CONSULTANTS

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**FINAL REPORT**

**"The University Preparation Programme  
in South Africa: A Mid-Term  
Evaluation Report"**

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**THE UNIVERSITY PREPARATION PROGRAMME IN SOUTH AFRICA:  
A MID-TERM EVALUATION REPORT**

**INTRODUCTION**

This report contains the results of an evaluation of the University Preparation Programme (UPP) in the Republic of South Africa. The UPP is a program funded by the U.S. Agency for International Development (AID) in South Africa for the benefit of that country's legally disadvantaged population. It operates in the private voluntary sector and outside official South African government auspices.

The objective of the UPP is to prepare non-white South African high school students, and certain others -- including teachers who have not done so -- to pass the country's Joint Matriculation Board (JMB) examination. Those passing the JMB are qualified for entry into higher education and for training for jobs requiring technical skills.

In September 1982 AID signed a contract with a private U.S. firm, The Consulting Group, Incorporated (CGI), to develop and manage the UPP. The contract, with an estimated cost of more than \$1.8 million and a two-year life, called for activities in:

- The development of worksheets to assist the non-white student examination preparation process;
- The training of teacher trainers who, in turn, are to instruct other teachers in the UPP system;
- The development of a community support system to provide a venue for the dissemination of the materials developed; and
- The establishment of a system for ongoing data gathering, monitoring and evaluation of student progress.

The contract also called for a mid-term evaluation of contractor progress toward specified goals. Because of delays in getting the project underway, the evaluation was delayed until the spring of 1985. At that time AID's Africa Bureau, working in conjunction with the AID representative in South Africa, asked Development Associates, Inc., to help design an evaluation and to recruit an expert team to undertake it. Ultimately, agreement was reached on a format and personnel for the

evaluation. The evaluation itself was to be process oriented in which the inputs and outputs of the project thus far were to be examined, rather than attempting on meager evidence to ascertain the project's actual impact. While the study was to consider potential alternatives to the UPP, it was not to be retrospective in its outlook: that is, it was not aimed at pointing blame or censure on any individual or group for alleged or real flaws in the project -- but rather to point the way to improvement where shortcomings were evident.

Team members included a human resource development specialist with considerable experience with AID, Dr. Ray San Giovanni, who also was team leader; a curriculum development specialist, Dr. James Perry; and a social scientist with considerable background in South Africa, Dr. Beverlee Bruce. The team was assisted in its efforts by Dr. Meredith Gall, also a curriculum development specialist, who reviewed the materials prepared by CGI for their quality and appropriateness.

Drs. San Giovanni, Perry and Gall visited CGI in San Diego. Subsequently, the first two and Dr. Bruce visited South Africa, traveling extensively over the country to appropriate sites. They interviewed some 78 interested persons, using questionnaires of their own development (See Annexes E and F). After a period of analysis, the team provided a briefing on April 29 for the AID Affairs Officer on its findings and conclusions, and on May 3 for the U.S. Ambassador to South Africa. Before leaving the country, the team completed an executive summary of its findings, conclusions and recommendations and submitted it to the AID representative. Upon returning to the United States they enhanced that material by adding more exposition and documentation to back up their conclusions, being particularly careful to respond to suggestions for additional materials from U.S. officials who attended their briefings. The result of those additional efforts is this evaluation report. The report has eight sections:

Section I is the executive summary.

Section II provides the background and setting for the UPP.

Sections III through VI provide additional information on each of the major elements of the UPP.

Section VII deals with other pertinent issues that arose about the project.

Section VIII gives a full treatment of the team's conclusions and recommendations.

Finally, several annexes are provided. Among them two are of particular substantive interest. Annex A contains observations by Dr. San Giovanni on the problems of introducing new educational technologies into the milieu of black education in South Africa. Annex B presents Dr. Gall's report -- which was contracted for directly by AID -- on the appropriateness of the materials prepared by CGI.

Finally, the team wishes to express its gratitude for the help, cooperation and support of the many dozens of people, both in South Africa and the United States, who care deeply about the creation of educational opportunities for non-whites in South Africa.

### A Note of Explanation

The University Preparation Programme (UPP) originally was meant to assist the Black African population of South Africa. Its initial locus was townships like Soweto that surround Johannesburg. As the project became better known, however, other locales expressed an interest in participating, among them those whose principal disadvantaged groups are so-called "coloureds" and "Asians" by South African definition. Thus, the UPP has become a project to benefit all legally disadvantaged groups.

It is important that the terminology used in this report be clear. As is the practice in South Africa, a reference to "blacks" (non-capitalized) means all the legally disadvantaged. When individual subgroups are being singled out within that larger body, they will be designated Blacks (for the black African population), coloureds, or Indians (Asians).

## I. EXECUTIVE SUMMARY

On March 25, 1985, the Agency for International Development (AID) contracted with Development Associates, Inc., to conduct a mid-term process evaluation of a special non-formal secondary education project in South Africa. A three-person team conducted the evaluation in San Diego, California (the project contractor's home base), and in South Africa between April 3 and May 1, 1985.

The evaluation consisted of documents analysis, personal observations of tutor training workshops, and personal interviews with representatives of the U.S. Government, the prime contractor (CGI), and the South African educators and community leaders participating in the project.

This executive summary contains several parts:

1. A description of the project and its three phases, of which this evaluation directly addresses the third phase.
2. Major findings about the process elements of the contractor's performance.
3. A response to the central question about the worth of the UPP.
4. Recommendations for the future.

### A. Project Description

The University Preparation Programme (UPP), a five-year \$2.7 million AID-funded activity, has announced as its goal the development of a national non-formal education system capable of improving the academic skills of approximately 100,000 disadvantaged black, coloured, and Indian secondary school students and teachers to the point that they can pass the highest national university matriculation examination, the Joint Matriculation Board (JMB). The project has had three phases.

The first phase (1980-82) concentrated on writing a training manual and 53 Study Guides in mathematics, physical sciences, and English for students in the last year of high school (Standard 10). The materials emphasized a new learning methodology for South Africa: "student-centered," self-paced

individualized written modules to be used as supplementary materials for students regularly attending traditional classes during the day and working under tutors in late afternoon or weekend classes. Initial, limited experiences with the Study Guides revealed that the materials were too difficult for Standard 10 students, and that tutors had not been trained in their usage.

The second phase of the project (1982-83) had three main objectives: (1) preparing Concept Development Worksheets (actually, booklets of about 50 pages) in mathematics (for Standards 9 and 10); (2) conducting pilot training workshops for tutor trainers in South Africa; and (3) determining whether to expand from this pilot project to a full-scale national system.

The third phase -- the subject of this mid-term evaluation -- is a two-year effort (1983-1985) to conduct activities in four major areas:

1. Continued Development and Testing of Concept Development Worksheets (CDWs) that would serve as building blocks to permit the more effective use of the Study Guides. Specifically, the contract with CGI called for:
  - Field testing 25 math CDWs produced in Phase II, and
  - Designing, reviewing, field testing, revising and producing 60 more CDWs in math, 40 in English, and 50 in the physical sciences.
2. Training of tutor trainers who, in turn, would instruct other teachers in the tutoring system. Goals were:
  - Training 12 tutor trainers,
  - 150-200 tutors trained within the first 18 months, and
  - 350-400 additional tutors trained by the end of the project, set for September 30, 1985.
3. Coordination and Communication: Establishment of a Project Steering Committee, during the first six months of the project, with representatives of the country's major geographic regions, and including representatives from the following organizations: (1) South African Council of Churches (SACC) and the Educational Opportunities Committee (EOC) of SACC; (2) South

African Committee of Higher Education (SACHED); (3) St. Barnabas School; (4) Teachers Action Committee (TAC); (5) Witwatersrand University professors, and (6) South African Institute of Race Relations (SAIRR). A national coordinator was to be named and attached to the Steering Committee, and the Committee was charged with conducting activities leading to long-term institutional development of South African alternative (non-formal) education programs, including the creation of a nationwide training network as a vehicle for dissemination of the developed materials.

4. Research and Evaluation: Establishing a system for ongoing data collection, monitoring, and evaluation of student progress, instructional materials, and teaching methodology.

## B. Major Findings

### 1. Concept Development Worksheets

#### Field Testing of 25 Math CDWs

The field testing of the math CDWs has been done, but the methodology of the evaluation prohibits conclusive judgments regarding the validity of results. A CGI representative conducted a review of 25 CDWs using 50 students (40 coloured, 5 black, and 5 Asian). Each of two students reviewed one CDW and answered a series of questions. The students' responses to questionnaires and the CGI's representative's observations affirmed that CDWs are appropriate to the needs of a variety of Standard 9 and 10 non-white South African students. More testing clearly is required.

#### Development and Testing of 125 CDWs

The CDWs are being written on schedule in math, physical science, and English. The 27 English CDWs were due April 1. The 50 math CDWs were changed to 170 "distance" education lessons with CGI writing 90 in Algebra and calculus, and SACHED, an indigenous organization, writing 80 lessons in geometry and trigonometry. CGI has written 44 lessons and expects to

complete the other 56 by December 1985. SACHED has only one math writer, instead of two, and is behind on its 80 lessons. Since no valid field testing of CDWs has been accomplished to date, no findings are possible now as to the utility of CDWs in the UPP.

### Correlation of CDWs with SGs and JMB

The CDWs seem to be positively correlated with the Study Guides, which in turn correlate with JMB. The CDWs are aimed at students in Standard 9 and 10 who must develop skills in understanding basic concepts before they move on to using the Study Guides. The assumption is that students will first study the CDWs, then the Study Guides, and will be prepared adequately to pass the JMB. Since CDWs have not yet been made available to any students, valid judgments regarding correlations with the SGs and the JMB are not possible, nor can judgments be made with respect to the appropriateness of the CDWs in the context of black education in South Africa.

## 2. Training of Trainers and Tutors

### Training of 12 Tutor Trainers

The original project design was modified to train 12 tutor trainers instead of 5, and the training site was changed from the U.S. to South Africa. Only three of the four geographic regions were represented in training. (Natal failed to provide its 2 candidates for training, thus reducing the group to 10 trainees.) Of the 10 tutor trainers completing training in a workshop in Johannesburg in July 1984, six are currently training tutors. Three additional tutor trainers have been certified through a special "apprenticeship" program, whereby they attended a workshop and then were observed in actual classroom situations to determine their suitability to serve as full-fledged tutor trainers.

### Follow-Up Support for Training

Tutor/trainers are paid by CGI to conduct in-service tutor training sessions, and prospective tutors are paid a daily stipend to cover travel and food expenses while undergoing training.

Training of 150-200 Tutors Within the First 18 Months, and 350-400 More by the end of the Project

Approximately 100 tutors have been trained to date in six workshops in the Western Cape (1), Eastern Cape (1), Durban (1), Johannesburg (2), and Petersburg (1). Nine additional workshops are planned by August 31, 1985, to train approximately 270 more tutors, in the Western Cape (4), Eastern Cape (1), Transvaal (3), and Northern Natal (1).

Testing Process

No testing has been conducted to date. Contracts with Regional Coordinating Agencies were signed in February, March, and April 1985, and a fourth is pending. Provision has been made in these contracts to conduct appropriate testing.

Quality of Tutor/Trainers and Tutors

The quality of both tutor trainers and tutors is judged to be very good. All tutor trainers have at least the equivalency of university completion, and most tutors selected have university preparation. Personal observations of two tutor training workshops in Johannesburg and Capetown revealed that the trainers were enthusiastic, understood the concepts underlying the UPP methodology, and gained the respect and confidence of the tutors. They effectively used probing skills and questioning techniques and created a positive learning environment. The training sessions took 30 hours and were held over a weekend. No opportunity was available to observe tutors in actual classroom situations, so no judgments can be made as to their incorporating UPP methodology in their classes.

3. Coordination and Communication

After numerous attempts to comply with the principal requirement of this component, namely, establishing a National Steering Committee, the project was compelled to organize an administrative and operational structure that lessened the authority of a Steering Committee by appointing an executive

secretary rather than a national coordinator and calling the national body the National Advisory/Steering Committee. In addition, owing to the requests of regional groups, Regional Management Committees were established and given more autonomy to organize and manage the UPP in their areas. Representatives from these regional groups were then selected to the National Advisory/Steering Committee. Moreover, to manage operational and evaluative functions, the contractor (The Consulting Group, Incorporated) entered into separate contracts with three Regional Coordinating Agencies; a fourth contract was under negotiation at the time of the evaluation.

All of these complex negotiations have resulted in delays in establishing the Steering Committee, but the evaluation team believes that the contractor has made its best efforts to comply with the spirit and content of this requirement. The naming of Mr. Fanyana Mazibuko, a highly respected black South African, as national executive secretary in February 1984 has given the National Advisory/Steering Committee increasingly effective leadership in this delicate and vital function of the project.

Attempts to include the six specific organizations named in the contract to have representation on the National Advisory/Steering Committee have met with mixed results. Some have agreed to participate; others have not.

The nature and functioning of the National Advisory/Steering Committee, the Regional Management Committees, and the Regional Coordinating Agencies provide insights into the fundamental issues still facing the project and suggest that the fostering of long-term institutional development of South African "alternative" non-formal education programs through the creation of an "integrated" national system will be difficult to achieve. Regional political, cultural and educational differences, management capabilities, financial resources and potential for maintenance of present programs and expansion, attitudes towards the concept and operation of UPP, and the character and personalities of strong individuals participating in the project all militate against reaching consensus on approaches and solutions. The situation raises serious doubts that the program will continue vigorously once U.S. assistance ends by the end of 1985.

Most people interviewed by the evaluation team stated that they believed the revised, "decentralized" organizational and management approach could be successful, but that the scarcity of present funds and the unlikely prospect of generating additional funds for long-term maintenance and expansion were serious obstacles to creating an integrated national non-formal education system.

#### 4. Research and Evaluation

This component is effectively in place. Each of the contracts with the Regional Coordinating Agencies makes specific provision for ongoing data gathering, monitoring, and evaluation of student progress, instructional materials, and teaching methodology.

Materials and systems for the research and evaluation element have been prepared by CGI and distributed to the Regional Coordinating Agencies. For the most part those materials seem appropriate to the requirements, although some question has been raised about the lack of true baseline information on the students which will render it more difficult to measure progress through the use of the UPP. Because of a very real need to keep the program as simple and straightforward as possible, however, the evaluation team does not believe that too many additional burdens should be put on UPP participants -- managers, teachers, students -- in the name of research and evaluation.

Existing research and evaluation systems, it should be noted, have yet to be tested since so little has been done on the programmatic side of UPP.

#### C. Additional Issues

In addition to a review of the four major elements of Phase III of the UPP, the team was asked to consider the following additional issues:

1. Assessment of the UPP Methodology vs. Alternative Approaches

Whether the UPP methodology will prove to be more effective than an alternative method remains to be determined. Nothing like the Study Guides or the Worksheets has previously existed in South Africa. The "distance" learning concept of the South African Council on Higher Education (SACHED) was not seen as a fully integrated approach and the team believes the UPP methodology to be superior.

The question of "cost-effectiveness" for the UPP vis-a-vis the SACHED program or another potential alternative is more complex and, since the impact of the UPP has yet to be determined, the answer is beyond the capabilities of the team.

2. Assessment of the Long-term Relevance of CGI Materials

Today relatively few blacks actually take the JMB. Moreover, information is that the JMB will be discontinued after this year as South Africa's central matriculation test. The evidence is, however, that the replacement examination will cover the same body of knowledge as the JMB and that the UPP materials should remain relevant. Regardless of the form of the exam, the team questions the relevance of the English-language materials, based as they are on the erroneous assumption that English is a first language for most of South Africa's non-whites.

3. Private Sector Institutional Ability to Update Training Materials

Real questions exist about the capability of the private institutional structure in South Africa to make needed revisions in the UPP materials once the AID contract ends. While some encouraging signs are seen -- the involvement of SACHED in the development of materials during UPP Phase III and the increasing number of those using the Study Guides and CDWs -- the ability to update them continually remains in question.

D. Key Conclusions

After a mid-term process evaluation of the UPP, no simple, clear answer is possible to the project's central question, "To what extent is this project

-serving the aspirations and realities of secondary school disadvantaged (Asian, coloured, and -- especially -- black) teachers and students in South Africa today?"

The Evaluation Team has found that:

- 1) Failure to conduct an appropriate "needs analysis" at the start of the project resulted in the preparation of inappropriate materials (the Study Guides) as the first stage of materials preparation.
- 2) The execution of the UPP has been beset by persistent philosophical, political, social, and economic problems.
- 3) The timeframe to achieve all project objectives was overly-optimistic. Thus, the project is behind schedule with respect to the provision of some inputs and deliverable outputs.
- 4) The amount of project funds is inadequate to meet all project objectives, especially South African in-country needs.
- 5) The allocation of funds has unduly favoured the U.S. contractor at the expense of the South African cooperating entities.
- 6) The prime contractor (Consulting Group International), AID, and cooperating regional and local entities have demonstrated willingness and positive actions, to the best of their abilities, to meet project objectives.

#### E. Summary of Recommendations

1. The Agency for International Development (AID) should provide sufficient additional time and financial support to ensure that complete sets of Concept Development Worksheets are written, field tested, revised, printed and distributed to South African regional organizations currently participating in the UPP.
2. Additional time and funds should be provided to conduct follow-up training sessions for both tutor trainers and tutors.
3. Mr. Fanyana Mazibuko should be retained as executive secretary of the National Advisory/Steering Committee until project activities are completed.
4. As part of its overall strategy for assistance to South Africa, AID should favorably consider further educational activities, especially those related to non-formal, "alternative," non-governmental educational systems, especially for blacks. Particularly appropriate are in-service teacher training programs at the secondary level. Participant training programs abroad for educators should also be considered.
5. Should further funding become available, AID should consider direct financial support to selected university-level students attending integrated or black institutions, via bursary grants, especially to those choosing professional education careers.

## II. PROJECT BACKGROUND AND DESCRIPTION

### A. Black Education in South Africa

The current deplorable status of black education in South Africa is the direct result of a long history of the apartheid system, which is a deliberate attempt by a white-dominated government to restrict access to political and social participation by the majority of the non-white residents of the Republic. The introduction in 1968 of a separate educational structure for whites, blacks ("Bantu Education"), coloured ("Coloured Relations") and Asians ("Indian Affairs) insured that while the systems would be separate, they would never be equal.

Underlying the status of black education in South Africa is a tense, complex, dynamic process of philosophical, political, economic, and social activity that will inevitably affect the future course of relations between the minority whites and the majority Africans, coloureds, and Asians. These processes are rooted in the determination of the disadvantaged groups to bring a speedy end to apartheid, and the determination of the white groups to maintain control of the nation. Thus, actions in every sphere of South African life are inextricably linked with the issue of apartheid.

The black population, the principal target group for the University Preparation Programme, has a history of resistance to white domination dating back three centuries. Resistance has taken the form of boycotts, "stay aways", and mass demonstrations in response to government policies, which have disenfranchised the black majority by effectively barring their participation in the political process.

Growing dissatisfaction with the inferior African education systems reached a crisis in June 1976 when riots erupted in a black ghetto of Johannesburg, (Soweto) over an attempt to force the compulsory use of the Afrikaans language

as the official medium of instruction in African schools. The riots spread throughout the nation, affecting coloured and Indian schools as well, and widespread school boycotts lasted over two years. The government countered by increasing expenditures to African education, allowing a few more black students to attend the "open" universities, providing for the gradual introduction of compulsory education for all groups, and creating a separate Ministry of Bantu Education, but the main request of blacks -- placing control of education for all groups under a single ministry -- was denied.

The response by anti-apartheid groups in South Africa has been to dismiss the dispensation as a sham. On the other hand, those who have opted to participate for the purpose of effecting change from within have been labeled either as moderates or collaborators. Group action against collaborators (e.g., members of township councils and government-appointed school committees) has led to mass resignations, leaving mechanisms of social control in the townships to the South African Police (SAP) and the South African Defense Force (SADF).

However bleak the situation may seem, though, categories of individuals working in local and national organizations are playing significant roles in the process of non-violent social change. Judged by their independence from and resistance to the status quo, they enjoy varying degrees of community support for their efforts. Predictably, individual, organizational, and institutional credibility is guarded judiciously, since behavior considered inimical to community interests can result in the loss of that hard-won credibility. For example, in spite of its increasingly consultative role in developing community projects, the Urban Foundation continues to be linked to government and business interests concerned with the development of a better trained, more efficient work force. On the other hand, the South African Council on Higher Education (SACHED) continues to receive high marks for its track record in black education, even though there is criticism about its history of white liberal leadership. As an example of an organization which has lost its credibility among blacks, the South African Institute of Race Relations (SAIRR) is acknowledged for the quality and significance of its research, but discredited for its retrenchment

of community projects, some of which were successful. Finally, the South African Council of Churches (SACC) is seen as being representative of community interests and aspirations.

At the institutional level, questions are raised about the commitment of such "open" universities as Witwatersrand and University of Capetown to provide tertiary education for poorly prepared blacks. More significantly, local organizations at the community level are working to address community needs. Many of these organizations are relatively new and are in the process of developing the requisite management skills to provide an efficient administrative infrastructure.

It is against this backdrop of separate and unequal education that black education must be viewed. The following data reveals the current status of non-white education and explains in part the rationale for U.S. government assistance to assist disadvantaged minority groups to improve their educational status through a non-formal, "alternative" educational approach for secondary school students.

**B. Statistics on Non-White Education**

Population

The official estimated population of South Africa for mid-1983 was as follows:

<u>Group</u>	<u>Numbers (000's)</u>	<u>Percent of Total Population</u>
White	4,748	15.3
Coloured	2,765	8.9
Indian (Asian)	870	2.8
African (Black)	22,729	73.0
Total	31,112	100.0

School Enrollments

A comparison of white and African enrollments in 1983 shows the following:

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<u>Level</u>	<u>Enrollments (Whites)</u>	<u>Enrollments (Black, Indians and Coloured)</u>
Primary	612,527	4,391,089
Secondary	373,749	912,453
University	126,566	51,555
<b>Total</b>	<b>1,112,842</b>	<b>5,355,097</b>

The number of black, coloured, and Indian students who applied for and were either granted or refused permission to study at white universities in 1983 were as follows:

<u>Race</u>	<u>No. Applicants</u>	<u>Granted</u>	<u>Refused</u>	<u>% Refused</u>
Black	2,605	954	1,651	63.4
Coloured	1,371	1255	116	8.5
Indian	1,679	1323	356	21.2

### Literacy and Dropouts

A report by the Human Sciences Research Council estimated present literacy rates among Africans ranged between 50-60%, while whites rated 98%.<sup>1</sup>

A literacy profile developed in 1970 indicated that over one-half (50%) of all black Africans 20 years of age and over had no schooling, compared with 25% of all coloureds, 20% of all Indians, and 1/100 % of all whites. The same profile estimated that persons educated to a level below Standard 6 (U.S. Grade 8) were as follows: 9 of every 10 blacks, 6 of every 10 Indians, 7 of every 10 coloureds, and less than 1 of every 10 whites.<sup>2</sup>

### Teachers

The South African Institute of Race Relations in 1983 stated, "If a post-Standard 10 teacher certificate or diploma is regarded as the minimum acceptable qualification for a teacher, ... only 23.1 % of the teachers in African schools are properly qualified."

In 1982, the qualifications of African teachers were as follows:

<u>Professionally Qualified</u>	<u>No.</u>	<u>Percent</u>
Standard 6	7,911	9.4
Junior Certificate	40,592	48.5
Technical Certificate	63	0.1
Std 10 w/Primary Teacher Certificate	10,770	13.3
Std 10 w/Secondary Teacher Certificate	4,462	5.4
Degree Incomplete	1,266	1.6
Degree	1,590	2.5
Special Teacher Certificate	279	0.3
Subtotal	<u>66,933</u>	<u>81.1</u>
 <u>No Professional Qualifications, but with:</u>		
Junior Certificate or Lower	11,336	13.6
Technical Certificate	45	0.3
Matriculation or Senior Certificate	3,773	4.6
Degree Incomplete	70	0.0
Degree	208	0.4
Subtotal	<u>15,432</u>	<u>18.9</u>
Total	<u>82,365</u>	<u>100.0</u>

By comparison, a study in 1978 showed that while 84.7% of black teachers had only a Standard 8 qualification, 33% of white teachers had a university degree and an education certificate, and another 33% of white teachers had a university degree but no education certificate.<sup>3</sup>

#### Pupil/Teacher Ratios

Another generally accepted standard of the quality of schooling is the pupil/teacher ratio. In 1983 the figures were as follows:<sup>4</sup>

Whites	18.2 to 1
Indians	23.6 to 1
Coloured	26.7 to 1
Black	42.7 to 1

The black figure, above, does not include the "independent homelands;" the figures for both independent and non-independent homelands in 1981 ranged from 31.9 to 49.2 to 1.

Thus, it is clear that the extremely high pupil/teacher ratios in black African schools contribute to the overall poor quality of black education in South Africa.

Examination Results

African students taking the university matriculation exam in 1983 performed as follows:

Candidates: 72,168; Numbers Passed: 39,876; % Passed: 48.3

In 1981, the Standard 8 exam produced the following results: 71,185 of 110,274 candidates passed the exam (64.5%).

Finance

The total estimated education expenditure for all population groups in 1983/84 was as follows:

<u>Category</u>	<u>Rands(000s)</u>	<u>Percent</u>
Black Ed. in "White" areas	561,318	14.4
Black Ed. in Non-Independent homelands	289,891	7.4
Black Ed. in Independent homelands	317,509	8.1
Indian Education	225,052	5.8
Coloured Education	450,736	11.5
White Education	<u>2,062,624</u>	<u>52.3</u>
	3,907,130	99.5

The per capita expenditure during 1982/83 on the different race groups was as follows:

<u>Group</u>	<u>Including Capital Exp. (Rands)</u>	<u>Excluding Capital Exp.</u>
White	1,385.0	1,211.0
Indian	872.0	711.0
Coloured	593.0	498.0
African	192.0	146.0

Despite the fact that blacks represent over 73% of the total population, it is clear that their proportion of the education finance budget lags considerably behind the whites -- approximately 30% black to 52% white.

C. Pre-Project Activities (Problem Identification)

In 1979 and 1980, the U.S. Information Agency sponsored short-term summer seminars in South Africa dealing with the programs of certain U.S. universities in affirmative action, including the development of academic support program in South African black and "open" universities. The team included Dr. Kenneth Majer from the University of California, San Diego. Extensive discussions with numerous educational and community leaders connected with "alternative" schools (non-governmental, religious, and community schools) in the Johannesburg area apparently indicated that the most pressing problem facing black students was their inability to pass the Joint Matriculation Board examination, a requirement for white university entrance or entry into jobs and training programs requiring technical skills. Over 50% of blacks who take the JMB, fail it, and those who do pass lack sufficient verbal, physical science, and mathematical skills to successfully pursue university studies. Black teachers also were reported to be deficient in basic skills in these areas. The top priority, then, was providing an assistance program that would enable Standard 10 students to pass the JMB, through supplementary materials and direct access to be tutored in after-school, non-formal education classes.

As a result of these seminars and subsequent discussions, a decision was made to fund an activity to produce appropriate materials. In 1980, a two-year grant of U.S. \$470,000 was provided by AID to a U.S. firm, The Consulting Group, Incorporated, headed by Dr. Majer, to produce a series of Study Guides as supplementary materials to existing textbooks. An analysis of JMB examinations over a ten year period formed the basis of the Study Guides, which were aimed at students in Standard 10 (U.S. Grade 12). A guiding principle was the use of the individualized, self-paced instructional technology, which is learner-centered rather than teacher-centered. Another principle was that students would use the Study Guides in organized classes several times a week, usually late afternoon or on weekends. Students, therefore, would have constant access to a trained tutor during these classes held in non-governmental facilities ("alternative, non-formal" schooling). All students would continue attending classes in their formal school system, often with non-CGI trained teachers, and also would attend these "supplementary" classes. The actual writing of the Study Guides was done in San Diego,

California, (the headquarters of CGI) by a U.S. team of experts, with occasional consulting help from several South African educators.

One of the key findings of an assessment of the first phase was that the Study Guides, based on limited field use, proved to be too difficult for the Standard 10 students, and also difficult for many black teachers. Although many Standard 10 students had been promoted to that level, they had not mastered the required concepts and skills through their previous formal schooling.

Based upon these findings, it was decided to launch a second, preparatory phase of materials writing. AID, in 1981, provided another grant of U.S. \$300,000 for a two-year project to produce 25 Concept Development Worksheets (actually booklets of lessons averaging 50 pages) in mathematics. Math was chosen because it was the subject area identified as the one in which black students were most deficient. This phase of the project ended without the 25 CDWs being field tested. Two other activities were also planned for this phase: (1) conducting pilot training workshops in the U.S. for tutor trainers, and (2) determining whether to expand from this pilot project to a full-scale national system.

D. UPP - Phase III

A third phase of the pilot project was started in September 1983 with a three year grant from AID of U.S. \$1.86 million. The four main areas of activity under this phase, which is the subject of this mid-term process evaluation, were:

- The development of 150 Concept Development Worksheets (CDWs) in mathematics, the physical sciences and English, and the continuing field testing, revising and production of those materials -- as well as testing of 25 CDWs developed during Phase II;
- The training of 12 persons as trainers in the UPP system who in turn would train tutors for the direct work of instruction. These tutor trainers were to prepare 150-200 tutors during the first 18 months of the project with an additional 350-400 expected to be trained by the end of the project, set for September 30, 1985;
- Under a concept of "coordination and communication," the contractor was to coordinate the establishment of an indigenous South African "project steering committee" whose existence was to help insure a continuing institutional structure for the use of the UPP materials; and

- The establishment of a system for ongoing data collection, monitoring and evaluation of student progress, instructional materials and teaching methodology.

Early in 1984, it became clear that changes would be required in the way that the project was being implemented: It became clear that the timeframe to accomplish the results was too short and that there had been an inappropriate distribution of financial resources to accomplish all project objectives. The UPP increased as a center of controversy both among constituent groups in South Africa and with interested observers in the United States.

Thus, the Consulting Group, Inc., on February 17, 1984, received approval from the Agency for International Development to amend its contract to make changes to the scope of work. Now CGI was to:

1. Work closely with non-formal educators in South Africa to jointly develop the Concept Development Worksheets. This would include an exchange of writing staff between the Contractor and the South African Council of Higher Education (SACHED).
2. Revise and reprint, as appropriate, the UPP Study Guides (developed previously under grants from the United States Information Agency) incorporating changes suggested in an evaluation report done by the Urban Foundation in South Africa.
3. Train all teacher trainers in South Africa rather than training some in the United States.
4. Implement the program with the assistance of regional management committees.
5. Decrease the number of CDWs to be produced from 150 to 100.
6. Increase travel and per diem for CGI writers allowing them to spend four to six weeks in South Africa to work with SACHED staff on CDWs development.
7. Add funds for revision and reprinting of Study Guides.

These amendments changed the scope of work to focus more on South African concerns. In addition to reducing the number of CDWs, the American company was to produce the changes brought the South African entity, SACHED, into the process of developing lessons -- specifically in geometry and trigonometry.

E. Chronology of Project's Main Activities

Between January 1, 1984, and April 30, 1985, the following major project activities were conducted.

<u>Activity</u>	<u>Due Date</u>	<u>Date Completed</u>	<u>Remarks</u>
1. Transvaal Advisory/ Steering Committee Members Selected	12/31/83	1/26/84	Several meetings needed to comply
2. First National Advisory/ Steering Committee Meeting	1/84	2/10/84	Held in Johannesburg
3. Complete Field Tests of 25 Math CDWs	3/31/84	4/8/84	Results reported in 2nd quarterly report to AID
4. Training of Tutor Trainers	12/31/84	7/7/84	Changed from 5-12 Tutor Trainers, and site changed to South Africa
5. Jointly develop CDWs: CGI and SACHED	Ongoing		Contract Amendment #1 2/1/84
6. 3 Senior CGI Writers Consult with SACHED in South Africa.			Contract Amendment #1 2/1/84
7. Train Tutors in Research and Evaluation	N/A	Ongoing beginning 4/84	Started with Tutor Training Workshop, 6/25-7/7/84
8. Analyze Data for CDW revisions	N/A	Ongoing from 4/1/84	CGI Writers analyzed Volmink's field test results in April 84; started rewrites July, 84
9. Follow-up Support	Ongoing - beginning 4/1/84		First Tutor training Workshop, scheduled for September 84, held January 85 due to student boycotts

<u>Activity</u>	<u>Due Date</u>	<u>Date Completed</u>	<u>Remarks</u>
10. Second National Advisory/Steering Committee Meeting	--	5/11/84	Held in Natal
11. Revision of Study Guides	--	6/30/84	CGI writers in San Diego complied
12. Joint Design by CGI, SACHED of Math CDW Plan		7/17/84	Begun 6/13 and completed 7/14. Plan for 170 lessons
13. Third National Advisory/Steering Committee Meeting		11/23/84	Held in Capetown
14. Review of Revised Study Guides (math and physical science)		1/31/85	Content review by S.A. experts
15. Tutor Training Workshop		2/1/85	12 tutors trained in Port Elizabeth - 10 evenings 7 tutors trained in Soweto, Johannesburg, 10 evenings.
16. Printing of Revised Study guides (math and physical science)		2/28/85	300 sets
17. Fourth National A/S Committee Meeting		3/8/85	Held in Port Elizabeth
18. Tutor Training Workshops	2/22 & 3/3 - 3/29	3/15-16/85 31/85	18 tutors - 4 day Workshop - Natal 12 tutors - 3 day Workshop - Petersburg
19. Review of English revised Study Guides		3/29/85	Content review by South African expert
20. Printing of English			300 sets of first 9 SGs completed; 300 sets of revised 7 SG underway
21. Training of Tutors		3/31/85 4/12-14/84 4/12-27/85	49 Tutors trained as of 3/31/85 13 tutors trained in 3-day workshop, Soweto 20 Tutors - 4-day workshop; Capetown 82 tutors trained as of 4/27/85

Having described in detail the background and implementation of the University Preparation Programme, we turn now to the four major components of the project to determine the progress made toward stated objectives and goals.

### III. CONCEPT DEVELOPMENT WORKSHEETS (CDWs)

#### A. Background: The Study Guides

As has been noted earlier, the CDWs were conceived and developed to act as "building blocks" toward making Study Guides developed under the University Preparation Programme more useful to the target non-white student population. A more thorough understanding of the nature of the Study Guides provides a useful background to progress on the CDWs.

The Study Guides were written during 1980 and 1981 and are based on the JMB syllabus for that period. The Study Guides are, however, meant to be designed so that they will continue to be useful study materials, even if the JMB is altered or abolished. There are three sets of Study Guides. One set is for English (assuming it is a first language), one set for mathematics and one set for physical science. The first section of each Study Guide shows typical examples of the types of the test questions or "item types" that appear on the JMB exam. Working through the Study Guides teaches the student how to answer these types of questions.

The Study Guides are based on an analysis of actual forms of the JMB exam. The questions were analyzed using the process of content task analysis and learning hierarchy analysis.

Each Study Guide is set up as follows.

1. Section 1 presents the item types (sample test questions) that are typical of test items that the student must answer on the JMB examination.
2. Section 2 contains the skills that are needed to answer such test questions.
3. A list of concepts and their definitions are presented in Section 3. These concepts are fundamental to understanding the content of test questions.

4. Section 4 contains references to textbooks (English and physical science), which explain more about each concept. For math, the references are contained in Section 9.
5. Section 5 provides step-by-step solutions to the sample test questions presented in the first section.
6. Practice problems are given in Section 6 for the student to solve independently. The item types (question types) are like those introduced in Section 1. The student is expected to solve the problems using the same approach illustrated in the solutions in Section 5.
7. Section 7 provides answers and explanations for the practice problems.
8. Section 8 is a mastery test in the English and mathematics Study Guides. This test contains the same item types which the student has encountered throughout the Study Guides. (Solutions to the mastery test are contained in the Mastery Test Scoring Book.) In the physical science Study Guide, Section 8 provides solutions for the practical items. The mastery tests for these Study Guides is contained in Section 9. As for the English and mathematics Study Guides, solutions to the mastery tests are contained in the Mastery Test Scoring Book.

The Study Guides are a supplement to the required South African high school curriculum. They are the key component of this community-based program. They also can be used for self-study as part of a formal "Keller Plan" tutorial system. The Keller Plan is also known as the Personalized System of Instruction (PSI).

### B. Development of the CDWs

The Concept Development Worksheets (CDWs) were introduced in the project in 1983 to overcome a major problem encountered when the original materials, the Study Guides, were field tested. They proved to be too difficult for some teachers and most students in the last year of high school (Standard 10). The Study Guides had been developed upon an analysis of the previous ten years of the Joint Matriculation Board exams (JMB) in the areas of English, math, and physical sciences, but it became clear that although many students were enrolled in Standard 10 formal classes, their previous background in those subjects demonstrated significant weaknesses with respect to the language, content, and methodology of the materials. Even teachers presented with the materials had problems understanding them, and most indicated that they found the Study Guides of limited usefulness in guiding their students.

A decision was then reached to prepare a second set of "bridging" materials, the Concept Development Worksheets, which would be used by both Standard 9 and Standard 10 students. The CDWs are actually a series of lessons introducing and describing a basic concept, and providing drill materials, progress tests, and finally, a mastery test. The average number of pages in each CDW is 50, and the material is "self-paced," enabling students to progress at their own rate with tutorial help provided on an "as-needed" basis.

C. Nature of the CDWs

The Concept Development Worksheets (CDWs) are for students who must learn the skills and concepts taught in Standard 9 and 10. They are designed for students who need instruction in the subject matter, while the Study Guides are designed for students needing only review. The CDWs are generally linked to the Study Guides in that they treat, at a more basic level, the concept and skills covered in the Study Guides.

The UPP Study Guides together with the CDWs aim to provide the necessary teaching and examination preparation which would enable students who have already passed Standard 8 to pass the JMB. The Study Guides serve the essential function of consolidating and integrating necessary concepts. The CDWs serve to teach the concepts and skills required by the Standard 9 and 10 syllabus in as interactive a way as possible.

Each CDW is organized as follows:

1. General introduction to the purpose and use of all worksheets.
2. Introduction to the Particular lesson.
3. A number of lessons with the following components:
  - a. Introduction - this section prepares the student for the lesson.
  - b. Objectives - This section describes what you will be able to do after completing the lesson.

- c. Review - This section tells the student what he is expected to know already from Standard 8 before going further.
- d. Information and problem solving - This section introduces new information and shows you how to use this information.
- e. Exercises - This section contains problems to see if the student understood what has just been presented in the previous section.
- f. Consolidation - This section summarizes the lesson and contains questions on all the objectives of the lesson.

(The revision, information and problem solving, and exercise may appear more than once in an exercise.)

- 4. A consolidation lesson.
- 5. Worksheet tests.
- 6. References to standard concepts.
- 7. Answers to problems or questions.

D. Status of CDWs by April 30, 1985

According to the original contract, the following materials were to be designed, written, reviewed, field-tested, revised, and produced by CGI:

60 mathematics  
40 English  
50 physical sciences

As a result of extensive negotiation between CGI and the National Advisory/Steering Committee, several modifications of the scope of work were agreed upon, several of which affected the CDWs. To correct shortcomings of the original Study Guides, funds and staff time were diverted for revision and production of some Study Guides. The original target of 150 CDWs was reduced to 100, and CGI agreed to jointly develop the math CDWs with SACHED. Further difficulties arose when SACHED failed to provide two full-time math writers to match CGI's two full-time writers, and a further adjustment was made to produce a total of 170 "lessons" instead of complete CDWs in math. SACHED assumed the responsibility for 80 math lessons, and CGI for 90 math lessons, 26 English CDWs, and 34 physical science CDWs.

As of April 30, 1985, CGI was on schedule in writing the English and physical science CDWs, but was slightly behind schedule on the math CDWs, owing to the need to have SACHED review them in draft. A revised plan calls for the 90 CGI math lessons to be available in November 1985. SACHED now has provided only one full-time writer and is considerably behind its schedule, having produced only 20 of the 57 lessons required by April 30, 1985.

E. Field Test of 25 CDWs in Math

Mr. John Volmink, a math professor at the University of the Western Cape, under contract to CGI, performed the evaluation of the 25 CDWs in math that were developed during Phase II. He used 50 Standard 9 and 10 students, of whom 40 were coloured, five were Blacks, and five were Indians. The predominance of coloured students in the sample results from the evaluation having taken place in Capetown.

Each of two students worked through one CDW. Thus, the field test in Capetown consisted of a test of each of the twenty-five CDWs by just two students to ascertain that the CDWs were appropriate for the Standard 9 and 10 students. Each student was required to answer a series of questions after writing the CDW. The questions concerned the CDW's completeness, ease of reading and comprehension, and provision of drill materials. Volmink summarized the students' responses and offered his own opinions as to the usefulness of the CDWs. Forty-one per cent (41%) of the students thought the CDWs were too long and repetitive in their explanation of concepts; Volmink believed they were just right in length. Twenty-eight per cent (28%) of the students thought more and a greater variety of drill materials should have been furnished, but Volmink disagreed. Volmink concluded that, on balance, the CDWs would be appropriate learning materials for Standard 9 and 10 secondary school students.

F. The Future of CDW Development

Whether the total number of English and physical science CDWs reach the revised number of 90 depends upon AID's pending approval of funding for the final three months of the project (July - September 1985). Additional funding is required

to finish the remaining 14 lessons in math, and the time frame will have to be extended from September 30 to December 31, 1985. Even after these CDWs are written, each CDW must be put in the word processor, sent to graphics, reviewed for corrections, graphics corrections, sent to South Africa for approval, and then to the printer. The CDWs followed the CGI and South African approved format for worksheets which was a general introduction to the topic, a specific introduction to the lesson, objectives, review, new information for problem solving, exercises, summarize the lessons and answers.

#### G. Principal Findings

Two members of the Development Associates evaluation team visited the San Diego headquarters of CGI as the first activity of its review. They were joined by Dr. Meredith Gall, a specialist in curriculum development. The three educators reviewed with CGI officials the progress being made toward the completion of the CDWs and examined the materials for their completeness, cogency and methodology. Based on this inspection and review, and the subsequent discussions on the CDWs in South Africa, these findings are made:

1. The scope, sequence and content of the CDWs appear to be valid for achieving the objectives for which they are intended, based on the inspection and review of the evaluation team's materials experts. (The specific views of Dr. Gall on this subject will be found as Annex B.)
2. Seeing materials in isolation, in the context of their own inner consistency is one thing; quite another is determining their effectiveness and appropriateness in a real teaching context. Many respondents -- particularly those closest to the materials' actual use such as the tutor trainers and the tutors -- indicated their satisfaction with the CDWs. This is a preliminary view only, however, as the CDWs are not yet in general use in the UPP.
3. The methodology of the field test of the 25 math CDWs was inadequate to provide valid judgments about their effectiveness. A more carefully designed and conducted study must be undertaken before final judgments of the utility of the CDWs can be offered.
4. For reasons that are not entirely clear to the team, the English Study Guides and CDWs were developed on the basis that English is a first language for most blacks in South Africa, when in fact it is not. As a result, those materials are of questionable relevance to a major portion of their intended audience.

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#### IV. TRAINING OF TRAINERS AND TUTORS

##### Instruction of Tutor Trainers

The original project design provided for the training in the United States of five (5) South African educators to serve as trainers for the tutors who would implement the UPP in local non-formal education centers. Nominations of the tutor trainers were solicited from each of the regional management/advisory committees, with criteria provided regarding educational background, teaching experience, and personality traits. The U.S. contractor prepared a detailed training manual covering the philosophy and methodology of the Personalized Student Instruction (PSI) system and chose professional members from its staff to conduct the training. Upon further study, however, the South African members of the Regional Management Committees advised the National Advisory/Steering Committee that the plan was unacceptable and offered a counter proposal, which was accepted by CGI. The new plan called for the training of twelve (12) tutor trainers, one in each of the subject matter areas covered by the Study Guides (English, math, and physical sciences) for each of the four regions involved in the project, and the training site was changed from the United States to South Africa.

As a result, the UPP Training Conference for South African Tutor Trainers was conducted in Johannesburg from June 25 to July 7, 1984. The purpose of the conference was to train South African trainers in the methodology of the University Preparation Program (UPP) so that they could, in turn, conduct tutor training workshops for tutors involved in UPP.

Five American educators with substantial experience in teacher training and in academic support programs for the educationally disadvantaged were selected to conduct the training of teacher trainers in South Africa. Two of the team members were academic specialists in English, two in mathematics, and one in science. All members of the team had a training session in Chicago, from June 1 to 3, 1984, for the purpose of orienting them to South Africa and the UPP. The session included a thorough analysis of the UPP training materials.

A total of ten South Africans were nominated by their regional committees to be tutor trainers for the UPP in their respective regions. Committees in Eastern Cape, Transvaal, and the Western Cape supplied four, three, and three trainers respectively. The Natal region elected not to send trainers to the training conference.

Each of the tutor trainers was involved in educational activities and has had some involvement in non-formal education programs for black South Africans. The training activities were based on the UPP Tutor Training Manual. This manual serves as a textbook for tutor training activities. The manual is organized as follows:

1. Chapters 1, 2, and 3 introduce the concept of the individualized instruction with tutors, and discusses how Study Guides are used in the University Preparation Program.
2. Chapters 4, 5, and 6 discuss the skills necessary to be an effective tutor, and explain task analysis, instructional objectives, and the use of these tools in identifying student learning difficulties.
3. Chapter 7 presents an overview of the methods that can lead to more positive interpersonal relationships between tutor, program coordinator, and students.
4. Chapters 8 and 9 describe questioning techniques and problem-solving strategies.
5. Chapter 10 describes how tutors will work the Mastery Tests in cooperation with the student.
6. Chapter 11 outlines procedures for monitoring and evaluating the entire program.

The ten tutor trainers seemingly have mastered the behavioral objective in the training manual and six of them are continuing to train tutors in the Personalized System of Instruction. Three additional tutor trainers have been certified through a special "apprenticeship" program whereby the apprentice tutor trainer participates in one workshop, then he or she is observed in actual teacher training, classroom situations until it is determined the apprentice tutor trainer is ready to become a full-fledged tutor trainer.

The evaluation team believes that an insufficient number of tutor trainers has been trained to sustain the present project or to expand it in the near future. At least twice as many should have been trained initially, to provide double coverage in all subject matter areas to account for inevitable turnover in personnel.

### 1. Quality of Tutor Trainers

The quality of the tutor trainers is judged to be very good based upon observations and interviews during two workshops in Johannesburg and Capetown in April 1985. All tutor trainers have the equivalency of university completion and have mastery of the three subject areas in the UPP English, math, and physical sciences. Each has previous successful teaching experience and each has had some experience in teacher education at the secondary level. The trainers were well-prepared, enthusiastic, and hard-working. They seemed to understand the concepts underlying the UPP methodology, and they seem to have gained the respect and confidence of the tutors. The training sessions took 30 hours and were held over a weekend. No opportunity was available to observe tutor trainers during their regular teaching assignments in black secondary schools, so no judgments can be made as to their incorporating UPP methodology in their classes. In view of the complexity of the UPP methodology, which represents a radical departure from traditional teaching in that it is student-centered rather than teacher-centered, it is the judgment of the evaluation team that additional, follow-up training is essential before the tutor trainers can truly master this innovative methodology.

### 2. Tutors

The original project design also provided for the training of 150-200 tutors within the first 18 months of the project, and an additional 350-400 tutors by the end of the project in September 1985. Tutors were to be chosen from the teaching staffs of the non-white secondary schools, and would be trained in 30-hour workshops in the methodology of the UPP before conducting supplementary classes after school hours in the non-formal education

system. Since most of the students in the UPP program were regularly attending formal school classes during the day with these same teachers, it was believed that continuity and reinforcement would be provided by the tutors, enhancing both the formal and non-formal systems. High standards were set for the prospective tutors and included either university completion or attendance, successful teaching experience, and good character and personality traits. Both tutor trainers and tutors were to be paid, the former by CGI and the latter by the Regional Management Committees. The average wage to the tutors was estimated at R 15-20 (US \$7.50-10.00) per hour, and weekly class hours were set at approximately 15.

The following summarizes the projected and actual training of UPP Tutors:

<u>Category</u>	<u>UPP Tutor Trainers No. Projected to 4/30/85</u>	<u>No. Trained 4/30/85</u>	<u>Original Additional No. Projected to 9/30/85</u>	<u>Revised Additional No. Projected to 9/30/85</u>
Tutors	150 - 200	87	350 - 400	270

Approximately 80 tutors have been trained to date in six workshops in the Western Cape (1), Eastern Cape (1), Natal (1), Johannesburg (2), and Petersburg (1). Nine additional workshops are planned by August 31, 1985, to train approximately 270 more tutors in the Western Cape (4), Eastern Cape (1), Transvaal (3), and Northern Natal (1).

By the estimated completion date of this phase of the project, September 1985, there will be an estimated shortfall in tutor training of 130 - 230 tutors, based upon the original targets. Among the numerous reasons for this reduced tutor training, the most important is the growing tensions between blacks and the government, manifested in school boycotts by students, reluctance of teachers to report for classes, and uncertainty about the near future of black schooling. The inability of the system to provide assurances that both formal and non-formal schooling will take place regularly casts a pall especially over teachers, and it is difficult to persuade them to undertake tutor training when there is no assurance that

classes can in fact be held. Other reasons include difficulties in planning and coordinating training sessions, scarce resources to sponsor tutors, and selecting appropriate training sites. The evaluation team concludes that all cooperating entities in this project have done well in accomplishing as much training as they have.

### 3. Tutor Training

#### Transvaal (Johannesburg)

On February 11, 1985, the Part-Time University Students Association (PATUSA) signed a contract with CGI to serve as the UPP Regional Coordinating Agency for the Transvaal area. PATUSA has completed the training of the 13 tutors in April and project the training of 40 tutors in East Rand, 40 tutors in West Rand and 40 tutors in Pretoria. The quality of the training of tutors in the two training programs in Johannesburg and Capetown was very good. The trainers understood the personalized system of instruction, were enthusiastic about presenting it, and won the respect and confidence of their tutors very early in the training. In Johannesburg, during the presentation of the first chapter of the training manual, "Introduction to UPP," and the second chapter, "Introduction to Individualization with Tutors," participation was slow, tutors did not know each other, and also did not know the trainers, but then by the time the participants reached chapter three, they began to interact more and more until all tutors were participating. The tutor trainers were very effective in using probing skills and questioning techniques, and in creating a positive learning atmosphere. They also enjoyed the chapter on probing skills and questioning techniques. They organized into subject area groups and demonstrated the different types of probing questions that could be used in their major teaching areas.

The time schedule for the training session was from 6:00 p.m. Friday to 10:00 p.m. All of the 13 tutors participated in the entire weekend. The evaluator attended the training Friday evening, all day and evening Saturday and from 4 - 6 p.m. on Sunday. At the time of leaving, the enthusiasm was still very good, tutor participation was still high, even though the hours were long.

### Western Cape Region (Capetown)

The Cape Teacher's Professional Association, the UPP Regional Coordinating Agency for the Western Cape, signed a contract to serve in this capacity on February 15, 1985. The regional committee has set up five two-weekend tutor training sessions which began on April 24, 1985. They have trained 20 tutors in the first group and will train 20 in each group until they have trained 100 tutors.

In Cape Town the 20 tutors in the first session were all experienced; teachers felt secure in their established methods of teaching. The personalized system of instruction was foreign to them and in the beginning of the training session, they were not anxious to change their methodology. The evaluator was only able to observe the first part of the training which was not entirely positive. However, after the original shock, the tutors should be able to understand the new technology and get some new strategies for teaching their classes.

### Eastern Cape (Port Elizabeth)

On February 19, 1985, the Center for Continuing Education (CENCE) signed a contract with CGI to serve as the UPP Regional Coordinating Agency in Port Elizabeth for the Eastern Cape Region. From February to October 1984, CENCE had 29 weeks of tutorials using UPP technology and materials as well as other materials. Their results were positive and quantifiable. The school boycott brought pressure on students not to attend any classes and the UPP classes had to close. One building in which tutorials were held was stoned one hour after tutors and students had left.

In 1985 because of the small improvement in students test scores in math, English and physical science, CENCE was anxious to get started again. On January 21-31, 1985, at the University of Port Elizabeth, 16 tutors were trained and a tutorial program was set up for April 15 to May 15, 1985. At present, Port Elizabeth continues to have unrest; however, it is hoped that

the UPP classes can continue because the tutors are enthusiastic about the technology and are using some of the Study Guides. They are ready for the CDWs. One benefit of the UPP is that the black science teachers are meeting together for the first time and they are sharing common professional concerns. The English and math teachers are doing likewise.

#### Natal Region (Durban)

The Urban Foundation has served as the UPP Regional Coordinating Agency; however, as of May 1, 1985, no agency in the Natal Region had signed a contractual agreement. During February and March 1985, 22 tutors had been trained and 50 more tutors are projected for training in Northern Natal. The Shell Science Center may become the Regional Coordinating Agency for Natal.

#### 4. Quality of Tutors and Training Programs

It has been reported to the evaluation team that all tutors selected for training workshops have passed the university matriculation examination, have attended universities (it is claimed that all are graduates), and have at least three years of teaching experience. The team has already commented upon the quality of the training workshops with respect to the tutor trainers. Regarding the tutors, it appeared to us that the tutors were enthusiastic, hard working, and capable of understanding the complex new methodology involved in the UPP. Judging from brief observations during the workshops, the tutors participated actively in individual and group assignments, and were reluctant to see the training sessions ended.

Not having had an opportunity to actually observe the tutors teaching in their regular classes, no judgments can be made as to their incorporating UPP methodology in their classes. Discussions with ten of the tutors in the Capetown workshop revealed, however, several problems regarding the implementation of the UPP methodology and materials in actual classrooms. First, although the Study Guides and CDWs are designed to supplement the

materials students use in their regular formal classes, teachers reported that, in many cases, these materials will serve as the only resource materials available to students. The importance of the Study Guides as resource materials for the teachers and the Concept Development Worksheets for the students, therefore, cannot be overemphasized. They apparently will serve as the single most valuable learning resource both in formal school and non-formal, alternative programs.

Second, the nature of the methodology of the UPP and the materials place a special responsibility and -- in some respects -- a burden on the tutors. Unlike the programs using the traditional teacher-centered approach, the UPP program requires the teacher to maintain a closer contact with individual students, monitoring progress and guiding individual learning from concept development, through drill exercises, to mastery of individual units. The self-paced nature of the system requires more recordkeeping and more interaction of teachers and students. Third, irregular attendance by students in after-school, nonformal programs also places a special burden on teachers to maintain adequate student progress. During the brief period that the Study Guides have been available, teachers report that attendance was adversely affected by boycotts, extra-curricular school activities (such as sports events), and home responsibilities. Whether this problem is due to the difficulty of the Study Guides or the unsettled political situation is difficult to assess. The school boycotts likely will remain as a problem in the near future, but the evaluation team believes that the introduction of the Concept Development Worksheets may result in a resurgence of teacher and student interest in the non-formal education programs. The enthusiasm of the tutors to participate in the program is evident by their willingness to undertake training without pay, the only compensation being transportation and food costs. Whether the tutors will actually incorporate the UPP methodology in their regular classes and in the supplementary classes remains to be seen. The evaluation team believes that the transition from a familiar, traditional teaching approach to the innovative UPP methodology will not be an easy one for most teachers, and highlights a recommendation that further follow-up training for both tutor trainers and tutors is essential if the new technology is to take root and flourish.

## V. COMMUNICATION AND COORDINATION

This section addresses the third major element of the UPP-Phase III project -- the effort to develop an indigenous institutional base for the project among local organizations either operated by blacks or whites sympathetic to their cause. Addressed here under the heading of "communication and coordination," the project element goes to the heart of the dilemmas posed to U.S. policy in attempting to better the lot of discriminated-against peoples in South Africa.

As a result -- and risking the danger of repeating points made earlier (e.g., Section II) -- the treatment here attempts an explanation of why the U.S. and its contractor, CGI, have so frequently been frustrated by the seeming inability of national groups of blacks to trust or cooperate with each other in a common endeavor such as UPP.

### A. Background and Overview

In 1979, educators from the University of California at San Diego were invited to South Africa by the United States Information Service (USIS) to conduct a series of seminars designed to address affirmative action and academic support issues related to admitting black students to open English-speaking white universities in South Africa. Encouraged by the outcome of the seminars and challenged by discussions with educators from Witswatersrand University, the American educators proposed the University Preparation Programme as a likely intervention for assisting black high school students enrolled in Standard 10 matriculation courses. Focused on study guides in English, physical science, and mathematics, the UPP was intended to introduce into the South African black education milieu, student-centered, self-paced instruction, supplementary to the formal curriculum. Assisted directly by tutors and peer aides and indirectly by tutor trainers, students enrolled in the UPP were to learn the critical thinking required to pass the prestigious Joint Matriculation Board examination, thereby qualifying for university admission. According to Consulting Group International (CGI) in their unsolicited proposal submitted to USAID in 1981, preliminary research included contact with 65 groups involved in non-formal black education and the analysis of JMB examinations for the

preceding 10 years. Clearly, the implication of these two assertions was that the California educators, having incorporated as CGI, had done their homework and were ready to undertake the task of reversing the dismal failure rate of black and other non-white students on matriculation examinations. However, subsequent events were to prove otherwise.

B. Dilemmas of the Non-White Communities

Instituted in 1953 by the South African Government, Bantu Education has been effective in limiting Black African achievement through proscribed curricula, poorly trained teachers, inadequate facilities and the selection of unenlightened school board and parent council members. Consequently, proposals for innovation in education which hold out the promise for reversing the trend of failure among students command the attention of parents, teachers, students, academics and members of business, community, religious, and anti-apartheid groups. That is, proposals for social change through education are of interest to numerous categories of individuals in the South African sociocultural milieu.

Parents and teachers are embattled. Students are frustrated. Predictably, there is a total loss of control as parents are unable to negotiate with the government on behalf of their children. A crucial dilemma for black parents, then, is that when their children are in school, the education they receive is inadequate. Yet, when they are out of school there is no education at all. For black parents, the issue is not legitimacy of student grievances but rather the strategy for their redress. Academics take the position that university preparation for black students has never been more crucial given the intention of the South African government to provide subsidies to those universities which produce particular results. Since productivity will be measured by student retention rates, research, and publication, the admission of black students to white universities will be minimal, at best. For example, last year at the University of Capetown (UCT) the faculty in which social work is included had 15 black students out of 100; this year there are three. In the meantime, members of the business community are intent on improving the productive capacity and the skill level of the work force while community, religious, and

anti-apartheid groups are committed to dismantling apartheid and enfranchising the black majority. In addition, there are local and national organizations which have as their focus alternative non-formal education programs for blacks which share one or more of these views about the goal of innovation in black education. As might be imagined, choosing which category of groups with which to affiliate is a crucial decision for a contractor, as was the case for CGI.

C. The Groups

According to CGI, in reaching the decision to prepare black students for the JMB, it consulted with 65 community organization representatives, non-formal educators and program administrators. What is puzzling about this assertion, though, is that individuals interviewed in these categories, with one exception, disclaimed having been involved with CGI from the inception of UPP. The exception is Stanley Khan who informed us that the idea for the program was developed in his office at Witswatersrand University with CGI principals. This admission underscores the efficacy of the belief advanced by Merlyn Mehl at the University of Western Cape that initial contacts by CGI were in Johannesburg which affected its programmatic thrust elsewhere. Interestingly enough, in each of the regions in which we conducted interviews -- Johannesburg, Capetown, Port Elizabeth, and Durban -- the charge was made that groups involved in non-formal education had had no significant input into the project. As Mehl put it, it was as if South Africa were a tabula rasa with nothing taking place in the educational field until CGI arrived with the new technology. It should not be surprising, then, that in responding to what was seen as CGI's failure to involve itself with what were considered significant community groups, the Subcommittee on Africa of the U.S. House of Representatives Committee acted to insure broad-based community participation and support. Six groups -- SACHED, SAIRR, SACC, EOC, TAC, and Witswatersrand professors Kamhule and Mphalele -- were made a condition for funding. That is, unless these groups and persons agreed to serve on the Steering Committee, funds allocated to the project were not to be released.

D. Community Organizations and the UPP

This component under the project called for the establishment of a national Steering Committee within the first six months of the project, with representatives of the country's four major geographic regions (Transvaal, Western Cape, Eastern Cape, and Natal). Specially to be included were representatives from the following six organizations:

1. South African Council of Churches (SACC) and the Educational Opportunities Committee (EOC) of SACC
2. South African Council of Higher Education (SACHED)
3. St. Barnabas Schools
4. Teachers Action Committee (TAC)
5. Witwatersrand University professors
6. South African Institute of Race Relations (SAIRR)

A national coordinator was to be selected and attached to the Steering Committee, and the Committee was charged with conducting activities leading to long-term institutional development of South African alternative (non-formal) education programs, including the creation of a nationwide training network as as vehicle for dissemination of the developed materials.

Attempts to include the six specific organizations named in the contract to have representation on the National Advisory Steering Committee have met with mixed results.

During a visit to South Africa in late 1983 by two CGI representatives, nominees from three of the four geographic regions (Natal, Eastern Cape, and Western Cape) were selected, but only two representatives from the Transvaal (Johannesburg) expressed a commitment to serve (SACHED and Council for Black Education and Research). During a January 26, 1984, follow-up meeting, the Transvaal affirmed the inclusion of SACHED and Council for Black Education and Research and added representatives from the South African Council of Churches and the Career Centre, Soweto. Two of the six specified (The Educational

Opportunities Council and the Teachers' Action Committee) do not have a representative on the National Advisory Steering Committee but participate through the Transvaal Regional Management Committee. The two remaining organizations, St. Barnabas School and the South African Institute of Race Relations, chose not to participate in or to be affiliated with the project, perhaps because they do not include non-formal tutoring activities like the UPP in their normal programs.

After numerous attempts to comply with the requirements of this component as it was originally designed, it was mutually decided to effect certain modifications. Preliminary meetings to form the national committee and select representative members from the different regions revealed that considerable resistance emerged to the idea of a single, powerful national governing body, with too much authority vested in a national director. The regions wanted a looser design which conferred more autonomy and resources to the regions. A National Advisory/Steering Committee was finally selected, but an executive secretary (rather than a national director) was chosen to foster communication and coordination among the regional groups. The naming of Mr. Fanyana Mazibuko, a highly respected black South African, as national executive secretary in February 1984 has given the National Advisory/Steering Committee increasingly effective leadership in this delicate and vital function of the project.

Regional Management Committees were formed and given more autonomy over planning and managing activities in their respective areas. Representatives were then selected from all of the regional groups to serve on the National Advisory Steering Committee, but no attempt was made to insure equal representation from the regions. Thus, it has been possible for some regions to have more members than other regions on the national committee. Moreover, to manage operational and evaluation activities, the U.S. contractor entered into separate contracts with three Regional Coordinating Agencies; a fourth contract is under negotiation.

The nature and functioning of the National Advisory Steering Committee, the Regional Management Committees, and the Regional Coordinating Agencies provide

insights into the fundamental issues still facing the project and suggest that the fostering of long-term institutional development of South African "alternative" non-formal education programs through the creation of an "integrated" national system will be difficult to achieve. Regional political, cultural and educational differences, management capabilities, financial resources and potential for maintenance of present programs and expansion, attitudes towards the concept and operation of UPP, and the character and personalities of strong individuals participating in the project militate against reaching consensus on approaches and solutions, and raise serious doubts that the program will continue vigorously if AID assistance ends as scheduled when 1985 ends.

Most of the people interviewed by the Evaluation Team stated that they believed the revised, "decentralized" organizational and management approach could be successful, but that the scarcity of present funds and the unlikely prospect of generating additional funds for long-term maintenance and expansion were serious obstacles to creating an integrated national, non-formal education system.

#### E. Credibility, Legitimacy, Collaboration

The black population in South Africa, the primary target group for the University Preparation Programme, has a history of resistance to white domination dating back three centuries to the time of the initial intergroup contact and conflict and continuing to the present. Resistance has taken the form of boycotts, stay-aways and mass demonstrations in response to government policy which has disenfranchised the black majority by effectively barring their participation in the political process. Consequently, individuals regarded as community representatives are politically astute recognizing as they must that most interactions in the South African context have to do with power relations between and among population groups. It is this history and consequent social interaction which constitute both "the mine field" that is South Africa today and the context in which CGI attempted an educational intervention principally designed to increase matriculation pass rates for black students disadvantaged by Bantu Education.

Since 1976 when world attention and the South Africa government focused on the systemic inequities in black education, students have used the boycott as an effective tool for fostering debate on the issues posed by Bantu Education. In 1976 the issue was the proposal to introduce Afrikaans as a language of instruction in black schools. Following the initial outbreak in Soweto, unrest continued throughout the country during the next two years. In 1980 disruptions led to student representative councils being permitted in so-called coloured schools in the Western Cape. In late 1983 school boycotts began in Northern Transvaal over enforcement of age restrictions applied to continued schooling which had a disproportionate effect on African students. Since then student unrest has spread to other areas of the country including the Eastern Cape. Against this backdrop, the Botha regime effected the New Dispensation extending limited participation in the political process to so-called coloured and Indian population groups by virtue of a tricameral legislature convened in separate chambers to handle their own affairs.

The response by anti-apartheid groups in South Africa has been to dismiss the dispensation as a sham. On the other hand, those who have opted to participate on the basis of effective change from within have been labelled by their critics as either moderates (at best) or as collaborators (at worst). In the latter circumstance, group action, (in keeping with the ANC position taken in 1949 that there could be no collaboration with government institutions), against members of township councils and government-appointed school committees has led to mass resignations often leaving mechanisms of social control in the townships to the South African Police (SAP) and the South African Defense Force (SADF).

However bleak the situation may seem, though, categories of individuals working in local and national organizations are playing significant roles in the process of non-violent social change. Judged by their independence from and resistance to the status quo, they enjoy varying degrees of community support for their efforts. Predictably, individual, organizational, and institutional credibility is guarded judiciously, given that behavior considered inimical to community interests can result in the loss of that hard-won credibility. For example, in spite of its increasingly consultative approach in developing community projects the Urban Foundation continues to be linked to government

and business interests concerned with the development of a better trained, more efficient work force. One of the persons we interviewed said, "The Urban Foundation's concern is with the creation of a black managerial class and the need to upgrade qualifications of the black workforce." On the other hand, SACHED continues to receive high marks for its track record in black education even though there is criticism about its history of white liberal leadership. For example, we were advised to "check SACHED's directorate to determine which, if any, of its members are black." As an example of an organization which has lost its credibility, the SAIRR is acknowledged for the quality and significance of its research, but discredited for its retrenchment of community projects, some of which, like the open school in East London where black students passed the JMB in relatively large numbers, were successful. The SACC which provided funds for a December 29, 1984, meeting of the National Parents Committee convened to consider ways to counter the intransigence of the government in dealing with the grievances underlying continued student boycotts is seen as representing community interests and aspirations. At the institutional level, questions are raised about the commitment of such open universities as Witswatersrand and UCT to provide tertiary education for poorly prepared blacks. And, significantly, there are local organizations at the community level working to address community needs, some of which, like the Black Students Study Project (BSSP) and the Part Time University Students Association (PATUSA) are relatively new and are in the process of developing the requisite management skills to boast an efficient infrastructure. Others are in the process of being identified in a national community study conducted by the Institute of Black Research. Dr. Fatima Meer in the Department of Sociology at the University of Natal directs the Institute which is funded by the Ford Foundation.

This discussion is intended to provide the basis for understanding the dynamics involved in introducing the UPP into the South African milieu in relation to participating groups. For example, the decision to recruit specific organizational representation to the National Steering Committee did not result in creating a network of participants involved in the program. Rather, representatives were resistant about lending their considerable organizational and institutional credibility to the program and tended to distance themselves

from a project for which they could not and did not claim ownership, given the fact they were not involved in it from the beginning. At present, of the groups functioning in the UPP as Regional Coordinating Agencies (implemented as an alternative to the suggested National Steering Committee model), the credibility of two of the three groups that signed contracts with CGI this spring has been questioned. One of the two, the Cape Teachers Professional Association (CTPA), is an organization which many blacks do not regard as representative, given its moderate stance vis-a-vis South African Government policy. Its chairman almost became Minister of Education for the so-called coloured in the tricameral legislature; previously he was a member of the President's Council which acted in an advisory capacity to the Prime Minister. Other more likely choices were SACHED and CRIC, but each gave as a reason for not accepting the allocation of scarce resources to other priorities. It has been said, however, that CTPA is aware of how it is perceived in the community, and understands the hesitancy of some groups to participate with them as the Regional Coordinating Agency. For example, the BSSP has taken the position that even though it has expressed an interest in the UPP, it would rather work directly with the executive secretary than through an organization which has not "sufficiently distanced itself from the status quo." In the other instance, questions have been raised about the Center for Continuing Education (CENCE) and the University of Port Elizabeth (UPE). According to community members, CENCE is coordinating the UPP to improve its image and that of UPE since both lack credibility in the black community because of their Afrikaaner mentality. UPE is against admitting blacks, even part-time, and Fort Hare, the nearest black school, is 250 km away.

#### F. Analysis

From the point of view of community development, the most crucial aspect in assessing the Consulting Group International and the University Preparation Programme it developed lies in the institutional and organizational framework with which it was associated during the period of its presence in South Africa. For in apartheid South Africa, one is either anti-apartheid or one is not, which determines institutional behavior and institutional alliances. For the outsider who comes bearing gifts of great promise in the form of state-of-the-art educational technology, the tendency is to affiliate with those groups with whom you speak the same language and with whom you share the

same world view; for this is, after all, another culture. In any event, it is easy to choose the wrong reference point in treading unfamiliar terrain, as CGI seemingly has done. For how else to explain the decision to prepare black students to take the JMB in large numbers when, because of apartheid, few in number do so since the law requires them to take the National Senior Certificate exam; or the assumption that English is a first language for most black South Africans when it is not; or that because a student is in Standard 10, he or she is performing at that grade level; or that community groups would have both the means and the will to duplicate the materials at significant expense to themselves. How else explain the failure to become familiar with South Africa by relocating CGI operations. How else explain the failure to forge a national network of non-formal, non-white education groups as required by contract?

Hopefully, this analysis will provide a basis for understanding the dynamics involved in introducing UPP into the South African cultural milieu. For instance, the decision to recruit specific organizational representation to the National Steering Committee did not achieve its intended effect because some representatives were hesitant about lending their considerable individual, organizational and institutional credibility to a project for which they did not claim ownership. Consequently, in visiting the four regions in which the project is being implemented few, if any, groups or individuals not directly involved in the project knew anything about it. However, a communications network as suggested by the proposed structure might have served if it had become functional. For example, while everyone interviewed agreed that education for South African blacks is of primary importance, many thought UPP was too late to undo the damage of Bantu Education. Others were concerned about the choice of particular groups selected to manage the project at the regional level, raising the issue of whites working on behalf of blacks rather than having provided the opportunity for blacks to work on their own behalf. Still others raised the question of organizational credibility, but were of the opinion that if the program appeared to be achieving its goals, communities accustomed to "making do" would resolve their dilemmas and participate.

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## VI. EVALUATION AND RESEARCH

Under Phase III of the UPP the contractor is charged with establishing a system for ongoing data gathering, the monitoring and evaluation of student progress, and the continual review of instructional materials and teaching methodology.

In fulfilling this commitment, CGI has turned to three Regional Coordinating Agencies. They are employed by the firm to manage in-country implementation of the UPP. Among the elements of the research and evaluation function for which they are to be responsible are:

- Keeping records, on the prescribed forms, of all tutor training that takes place in the region of operation of the Co-ordinating Agency;
- Sending copies of all such records to the executive secretary of the UPP at the request of the executive secretary;
- Distributing the participating organizations' evaluation forms and other evaluation documentation received from the executive secretary of the UPP; and,
- Collecting all completed evaluation forms and reports from the participating organizations and forwarding these to the executive secretary each month.

Instruction on the methodology of research and evaluation have been sent into the field by CGI. The evaluation team survey indicated that the systems, which appeared to be geared to obtaining the desired results, have been received in the field by responsible coordinating agencies. The systems provide for the gathering of baseline data on the tutors, the participants and program results. Because very little has happened yet in the actual use of the CGI materials and since, at this writing, no student from the UPP has taken the target examination, the actual effectiveness of the systems are yet to be tested.

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## VII. ADDITIONAL ISSUES

The evaluation team was requested to consider the following additional issues:

### A. Assessment of the UPP Methodology vs. Alternative Approaches

The objective of the UPP was to develop an effective teaching and learning methodology that would significantly improve the chances of disadvantaged black students passing the highest university matriculation exam, the Joint Matriculation Board (JMB). The past history of black performance on matriculation exams was poor (over 50% fail) and assessments of the present educational capabilities of most black teachers and students indicated that they urgently needed additional remedial instruction to close the gap between themselves and their white counterparts. Supplementary instruction for both teachers and students was to be given in non-formal ("out-of-school") classes because the government-sponsored programs were of low quality. "Alternative" programs run by private non-governmental and church groups were selected as the learning milieu.

Given the status of black formal schooling, the selection of a non-formal school approach emphasizing an individualized, self-paced, tutorially-backed, written materials system appears to be educationally sound and justified.

Whether the UPP methodology will prove to be more effective than an alternative methodology, such as the South African Council on Higher Education (SACHED) methodology, remains to be determined. At the time the decision was made to introduce the UPP methodology, SACHED was not seen as a fully integrated approach designed to meet the unique needs of black students attending formal school programs. SACHED is basically a "distance learning" methodology relying upon students mainly working alone on correspondence-type materials. Direct contact with tutors and other resource persons is minimal. UPP, on the other hand, is based upon frequent, direct interaction between students and tutors in organized classes held regularly after formal school attendance by the students. This approach, the evaluation team concludes, is superior to the SACHED methodology.

The learning materials available in both programs are judged to be of high quality, but it is significant that recent SACHED materials preparation activities seem to be going in the direction of adopting the UPP approach.

In summary, since the UPP system is more integrated in linking materials, students, and teachers in an active, continuing relationship, the evaluation team believes that it will prove to be a more effective learning/teaching methodology.

Another alternative approach could have been to concentrate on teacher education because of its long-term "multiplier effect" consequence. The problem, however, was that until such a system could be designed and implemented, no immediate benefit would be available to disadvantaged non-white secondary students, and pressures existed to provide them quickly with tutorial and appropriate materials interventions. It is unfortunate that this practical consideration has not itself been realized, but the selection of the UPP approach still seems justified considering the circumstances under which it was selected.

The question of "cost effectiveness" between the UPP and SACHED (or other comparable methodologies) is more complex, and beyond the capabilities of the present evaluation team to determine. For further material developed by the evaluation team on this subject, see Annex C in which Dr. Perry has reviewed other educational and training materials available in South Africa and compared their utility with the materials developed by UPP.

B. Assessment of Long-Term Relevance of CGI Materials for JMB Examination

The team has been informed that the JMB exam will cease to exist after 1985, and that efforts are being made to revise the entire matriculation examination system in South Africa. One strong possibility is that a single national matriculation exam will be adopted, and that numerous other regional/national exams (e.g., The National Senior Certificate, a black exam) will be discontinued.

According to well informed sources (e.g., Mr. Michael Corke, St. Barnabas School), any future national exam will still center around the subject matter syllabi for Standard 10 students. It is unlikely, therefore, that significant curriculum changes will occur in the near or foreseeable future.

UPP materials, now designed to cover Standard 8 - 10 requirements in math and the physical sciences, will probably continue to be relevant for a long time in South Africa. Moreover, the CGI materials, as opposed to many existing learning systems in South Africa, are keyed to inculcating and enhancing creative thinking among their users. The effect of introducing such methodologies into the educational experience of blacks, while not capable of being measured, clearly is important.

One area of serious concern regarding UPP materials relevancy, however, is in English. As noted previously, these materials were developed on the assumption that black students would be able to master them adequately, assuming English as a first language for all non-whites. Preliminary analysis and judgments by South African language teaching specialists indicate that since English is a second language for most blacks, the UPP materials are inappropriate and too difficult for them.

C. Private Sector Institutional Capability to Continually Update Training Materials

Given the fact that initial training materials were developed by U.S. experts with little contribution from South African experts, the apparent conclusion is that once U.S. assistance ends, South Africans will not have the technical capability of making needed revisions. However, the involvement of SACHED writers in creating Concept Development Worksheets in math is an encouraging sign.

The training of tutor trainers and tutors during the life of the project also provides some evidence that a growing capability exists within South Africa to perform this needed and vital function. It is nevertheless unfortunate that the original project design did not make specific provision for the active involvement of South African educators in the writing of all materials. Had that been done, we would be more confident that this continuing function would be in capable hands. Writing sophisticated learning materials in an integrated

system like UPP will not be an easy task for cooperating South African educators, even if they had been trained by U.S. experts. One can only lament the exclusion of this important component in the total project because its long-term effects could be very adverse.

Another problem which has been slighted is the cost implications of continually revising, printing, and distributing materials in sufficient quantities to meet growing demands. How soon South African entities can marshal the human and financial resources to undertake this considerable task is open to serious question. Complaints have been voiced strongly and often that local resources have not been available to print and distribute even the modest supplies required during the pilot project. What responsible expectation exists that local entities will be able to generate the necessary funds for maintaining, revising, and expanding the UPP system? The evaluation team believes that no reasonable expectation does in fact exist, particularly under present circumstances in which U.S. funding is to end with calendar 1985.

## VIII. EVALUATION TEAM RECOMMENDATIONS

### A. Continuation of Project

Despite continuing problems related to providing appropriate time and financial resources to fully establish an in-country South African capability to plan, manage, and evaluate the innovative UPP, the evaluation team believes that the project should be continued.\* The UPP provides a tangible asset to disadvantaged African, coloured, and Asian secondary school teachers and students trying to pass various university matriculation examinations, to pursue further studies in universities and technical schools, and to enter technical fields requiring completion of secondary education with the requisite attitudes, understandings and skills provided by the UPP program. The UPP has introduced an exciting innovative teaching and learning methodology that offers great promise for students who have been denied a high quality education under the present teacher-centered system, which provides scant and inappropriate learning materials and under-trained teachers. Even the presently available Study Guides, criticized as being too difficult for students, serve today as excellent resource materials for teachers, and should the Concept Development Worksheets live up to expectations, the Study Guides will remain as appropriate follow-on materials for both teachers and students. Good beginnings have been made in tutor training; regional management, research, and evaluation activities; and the training of South African materials writers. Relatively modest additional inputs will help insure that many original project goals are reached.

Some of the problems besetting the project can be resolved with the provision of more time and financial resources (e.g., completing the Concept Development Worksheets phase, training sufficient numbers of tutor trainers and tutors through longer initial and regular follow-up workshops; assisting local and regional groups to firmly establish materials development, management, research and evaluation systems, and improving national/regional/local communication and coordination).

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\* Dr. Bruce believes the project should be continued only to the extent it is necessary to complete the CDWs, test and revise them, print and distribute them. These activities should be carried out in South Africa by participating groups, to the fullest possible extent.

While believing that it would be wrong to cut off the UPP at this point and thus be left with a "white elephant," the team believes that the English language materials require serious re-thought. No more CDWs in English should be produced that are based on the concept of English-as-a-first-language for South African blacks. If it is possible to convert the production of these CDWs (and to revise the others) on the basis of English as a second language, the work could go forward.

Given the present and growing political tensions between black and white groups in South Africa, however, doubts remain whether the UPP will be permitted to accomplish its goals. Teacher and student boycotts are a stark current reality, and are likely to continue and spread in the near future. National, regional, and local leaders of the black non-formal, alternative education systems are becoming increasingly cautious with respect to being openly and strongly identified with the UPP because it produces risks in their delicate power relationships with the white government, business, and industrial groups. The program still is not accepted by non-white South Africans as being "theirs." Many harbor resentments about its being imposed upon them by outsiders, and they believe strongly that they have not received a fair share of the project's total financial resources.

Specific recommendations for project continuation follow.

1. Completion of Concept Development Worksheets

Sufficient funds and time should be provided to finish writing, printing, field-testing, revising, and distributing initial stocks of complete sets to participating groups.

2. Training of Tutor Trainers and Tutors

- a) Additional preservice training should be provided for new tutor trainers and tutors, for a period of at least one full month.
- b) Regular, intensive follow-up training should be provided for all tutor trainers and tutors through flexibly arranged inservice workshops lasting at least one full week annually.

3. Training of South African Writers, Project Managers, Research and Evaluation Specialists

Concentrating on in-country training activities mainly, but with some provision for advanced training abroad, South African writers, project managers, and research and evaluation specialists should be provided with regular training to develop lasting capability to plan, manage, and evaluate a comprehensive UPP system. Project managers especially require training in fund-raising and management activities.

4. Additional Funds and Time

It is estimated that a minimum of two more years, and approximately \$1 million dollars, will be required to meet the original project goals. This figure was provided to us from several sources and while we have seen no detailed budget breakdown, \$1 million seems generally in line with what would be required in fully establishing the UPP in South Africa.

B. The U.S. Contractor (Consulting Group International)

1. Modify the role of the U.S. contractor to focus on the provision of technical expertise in materials preparation, testing and revision; teacher and specialist training; and research and evaluation activities. To the extent possible, these activities should take place in South Africa. If activities are also required in the U.S., involve South Africans in both planning and conducting these activities.
2. Minimize, or exclude, the U.S. contractor's involvement in the management, coordination, and communications activities in South Africa among South African groups. The building of South African institutional capability is necessary if full acceptance, maintenance, and expansion of the project is to occur. Ultimately, the project must be seen as beneficial to South African groups, not mainly benefitting a "remote" U.S. firm.
3. Retain the full-time services of the present National Advisory/Steering Committee executive secretary.

Mr. Fanyana Mazibuko is highly respected among most South African formal and non-formal educational groups, and his prior successful experience in the project will enhance its chances of being acceptable and successful. The present Regional Management Committee model, with advisory help from the National Advisory/Steering Committee, should be retained. The model has proved workable so far, and should enjoy even greater success if additional funds are provided to launch it properly.

C. Additional Funds for Other Non-Formal, "Alternative" Education Activities

1. Provide funds for in-service training of black educators in formal black secondary schools.

This activity will support and reinforce the activities of black secondary teachers who serve as tutors in the UPP, by improving their teaching skills and enabling better communication and coordination to exist between the tutors and other teachers with whom they cooperate in the formal school system.

2. Provide participant training grants for study and observation abroad for administrators, specialists, and teacher trainers.

This activity also will provide reinforcement to the UPP and formal school programs in the black education system and will improve the chances that a truly national system will exist for blacks.

D. Financial Support for University-level Black Students

1. Provide direct financial support, through scholarship and bursary grants, to selected university-level non-white students to enable them to attend black and "open" universities.
2. Priority should be given to subject-matter specialists in education degree programs, especially in mathematics, physical sciences, and English. This activity will help insure that a regular program of assistance is available to eligible black teachers who can pursue educational careers in black primary and secondary schools.

**ANNEXES**

- ANNEX A: Appropriate Technology and the UPP**
- ANNEX B: Evaluation Report by Dr. Meredith D. Gall**
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## ANNEX A

### APPROPRIATE TECHNOLOGY AND THE UPP by Ray San Giovanni, PhD

An important question concerning the basic design of this project is its technological appropriateness for black South African education today or in the near future. An appropriate educational technology should contain at least the following characteristics:

#### 1. A Demonstrated Need for the Technology

Considerable research is required before approving a decision to introduce a new educational technology in any society. A "needs" assessment must be undertaken to determine what technologies are currently available, the extent to which they serve their intended purposes, and the recurring expenses required to maintain them. Societal and "uses" acceptance of the technology must also be established.

In the case of introducing a new technology the above issues must be addressed, as well as new ones (e.g., the capital costs of introducing it and a strong justification for the need for yet another technology).

#### 2. Adequate Advance Planning

Issues related to the introduction, maintenance, and expansion of the technology must be considered carefully and in depth. Included here are early and continuous involvement of appropriate societal and professional groups and individuals to insure acceptance and support for the technology, development of rational implementation plans that consider physical and human resources, financial requirements, evaluation techniques, and coordinating activities.

3. Sufficient Understanding of the Principles and Practices Relating to the Technology by Its "Users" and Beneficiaries

Within the educational community, planners, administrators, specialists, teachers, and students must be provided with sufficient orientation and practical experiences to understand and be comfortable with employing the new technology. The larger society likewise must understand the technology in order to support it.

Essential to developing this understanding usually is the provision of valid pilot testing experiences on a smaller scale before decisions are made to adopt the technology for wider application. Trained administrators and teachers who are familiar with the technology must be used in such pilot testing.

4. Awareness of the Possible Political, Cultural, and Financial Consequences of the Technology to the Users and to Society

The introduction of any new technology has both intended and unintended consequences. Wise planners seek to minimize the number and kind of unintended consequences.

Little research was conducted on UPP to determine whether a demonstrated use existed for the introduction of a sophisticated new teaching and learning methodology. Opinions were sought from a selected number of educational leaders in one area of South Africa, the Transvaal (Johannesburg), but apparently little evidence was collected regarding the educational level of attachment of the pupils or the qualifications of the teachers to be involved in the project. The initial effort focussed upon preparation of a series of Study Guides for Standard 10 (U.S. grade 12) black students, and the materials were written by U.S. educators in the United States, based upon an analysis of previous Joint JMB examinations.

A limited review of the study guides by a panel of South African educators revealed certain conceptual and typographical errors, and revisions were made. When the materials were submitted to teachers and students, it was determined

that the materials were too difficult. A second stage of "bridging" materials, Concept Development Worksheets, were then contracted for writing, this time with more involvement of South African educators from a non-formal, correspondence-type organization, the South African Council on Higher Education (SACREJ). At the time of this evaluation no CDWs have been distributed and field tested, except for 25 CDWs in mathematics. The CDWs aim at students who have finished Standard 8 (U.S. grade 10) and cover English, mathematics, and physical sciences.

The lack of adequate advance planning for the project is also seen in the failure to establish appropriate implementation plans for project organization, management, and evaluation before the new technology was launched. It was only after the pilot project had completed two phases (materials preparation) over three years that attention was devoted to expanding the project to a national system, and this before evidence existed that the methodology and the materials were appropriate for South Africa. Insufficient provision was made for training tutor trainers and tutors and no funds were provided for follow-up training of tutors, launching regional management committees, or printing and distributing initial stocks of materials to cooperating "alternative" non-formal programs. Most of the funds allocated in South Africa by UPP go to management of the National Advisory Committee's Executive Secretariat, and to Regional Coordinating Agencies for distribution, monitoring, and evaluation purposes. No assurances are present that the project can be sustained or expanded by South African entities when U.S. assistance ends in late 1985.

The lack of consensus on the part of cooperating entities regarding major philosophical, political, cultural and educational issues casts serious doubt on the viability of this project's approach and implementation. Even apart from the lack of local funds to sustain and expand the project after U.S. assistance ends, major questions remain regarding the need for, and acceptability of, the UPP in South Africa today.

Since a fair test of the validity of the materials and the entire system has not yet been undertaken, no final judgments of the appropriateness of the UPP is possible. The project has unquestionably appealed to certain segments of non-white education in South Africa. Most tutor trainers, tutors, and local

non-white administrators involved in the project have voiced strong support for the concept and the materials. Whether this enthusiasm continues, or whether their judgments are based upon sufficient experience with the UPP, remain to be demonstrated.

If the basic decision to provide this project to South African black education groups was based primarily upon political considerations, the project was a good idea and worth doing. If the decision was based upon educational relevance, the evaluation team has strong reservations about its technological appropriateness.

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**ANNEX B**

**Evaluation of an Education Project in South Africa  
under September 1982 contract by the Agency for  
International Development with The Consulting  
Group, Inc.**

**Reported by:**  
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**Date of report:**  
May 3, 1985

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I. Scope of Evaluation

1. To the extent possible, I carried out the scope of work specified in the document prepared by Development Associates, Inc. (1). (Numbers in parentheses refer to documents listed at the end of the report.) Because I did not go to South Africa in April with the project team led by Dr. Ray San Giovanni, the report does not address questions in Development Associate's scope of work that would require visitation to South Africa project sites. The report, however, does consider questions and issues that are not included in their scope of work, but that may be of interest to AID.
2. One basis for my evaluation of the project was a series of interviews with Consulting Group, Inc. (CGI) project staff at their San Diego office. The interviews occurred on March 27, 28, and 29, during which time I was accompanied by two members of the project evaluation team, Dr. Ray San Giovanni and Dr. Jim Perry. I interviewed the following staff: Ken Majer, President of CGI and Principal Investigator for the project; Roger Scott, Vice-President of CGI and Instructional Systems Design Specialist; Earl Yates, Project Director; Doreen Milner, developer of Chemistry curriculum materials; developer of Physics curriculum materials; Emily Wright, developer of English curriculum materials; Steve Tuthill and Paul Roudebush, developers of mathematics curriculum materials; and Angelica Villagrana, administrative assistant. I also had the opportunity to be briefed by and to interview by conference call John Marcum, professor at the University of California at Santa Cruz.

3. Because I happened to be in Chicago the week following the San Diego site visit, I was able to interview in person Larry Hedges, professor at the University of Chicago, who is Senior Advisor to the project and its Training Program Coordinator.
4. While at the San Diego offices of CGI, I inspected many of the project curriculum materials and project documents. I was also able to take many of these materials and documents to my home office to use in preparing this report.
5. The project staff were cooperative in giving me all information, curriculum materials, and documents that I requested for my evaluation.

## II. Evaluation of Project Objectives and Methods

### A. Are the project objectives desirable?

1. The project has two main objectives. The primary objective is to provide South African black students with instruction so that they can pass the Joint Matriculation board (JMB) examination with a sufficiently high score to qualify for admission to a South African university. The contract states this objective explicitly: "The purpose of this project is to prepare black South African high school students, as well as those teachers who have not done so, to pass the Joint Matriculation Board (JMB) examination..." (1.1).

A secondary objective of the project is to transfer a particular instructional technology into the South African educational system. I will discuss each objective separately.

## 2. The JMB

2.0 One justification for focussing on the objective of preparing black students for the JMB is that various South African agencies have requested assistance in achieving this objective. One document (2, page 1) states that Consulting Group, Incorporated "was asked by the U.S. Government and black South African community leaders to help design a programme for students aspiring to pass the critical matriculation examinations."

I could not locate evidence that a formal needs assessment was conducted to demonstrate this need. Thus, we do not know the number and characteristics of community leaders requesting assistance in helping black students prepare for the JMB. An exception is a telex (3) from Bishop Desmond Tutu stating that "we would appreciate it immensely if this work is funded for completion."

2.1 Another justification for the objective of preparing black South African students for the JMB is that many of these students fail it. I could only locate the following statistics documenting the extent of the problem:

- a. "Only one in ten black students who wrote matric last year [1982] passed it well enough to earn university entrance" (4).
- b. "One-third of 1% of Black pupils are in matric compared with 5% of Whites" (5, page 24). I assume that "in matric" means "takes the JMB."

If I interpret these statistics correctly, they mean that very few black students pass the JMB, but also very few of them take it.

My impression from studying the JMB syllabus and exams is that they reflect an abstract, elite curriculum based on the British system of university-preparatory education. As a comparison, I would guess that only 5 to 10 percent of American high school students are in the kind of program that is geared to the requirements of the JMB. Similarly, it appears that only 5 percent of white South African students are in high school programs that prepare them for the JMB (5, page 24).

- 2.2 The CGI project assumes that if black students pass the JMB, they (a) will be admitted to the "white" universities, (b) will choose to attend those universities, and (c) will succeed academically there. I could locate no evidence in the documents available to me to support or refute these assumptions. My experience with other educational systems, however, leads me to conclude that high test scores on a university entrance examination are no guarantee of academic success and degree completion.
- 2.3 The project objective is to prepare black students for the JMB, Higher Grade. It is possible, however, for these students to take one of two other end-of-high school examinations: JMB, Lower Grade, or the National Senior Certification.

The Study Guides developed by CGI under a previous contract and the Concept Development worksheets being prepared by CGI under the current contract are apparently intended to prepare students

for the JMB, Higher Grade. The Urban Foundation's evaluation of the project (6) indicates that this objective might disadvantage some black students. Their report notes that "almost all black schools write the National Senior Certificate (NSC) examinations. Comparison of available examination papers revealed significant differences in the types of questions set in both examinations... Although the JMB examinations and syllabi probably come close to university requirements, preparation for the JMB might disadvantage students preparing for the NSC" (p. 10).

Another concern identified in the Urban Foundation's report is that the CGI materials do not distinguish between the different requirements of the Standard Grade (SG) and Higher Grade (HG) examinations. The report states, "This obviously places SG pupils at a disadvantage as the study guides [prepared under the previous contract] distinctly cover the HG syllabus" (p. 10).

These findings of the Urban Foundation evaluation suggest that the project could have the effect of helping black students who are preparing for the JMB, Higher Grade, but also of disadvantaging black students who are preparing for other end-of-high school examinations. I could not conduct an independent assessment of this problem because the necessary materials were not available to me. Even if the materials were available, the assessment would require a very time-consuming, difficult content analysis.

2.4 I was told that a passing score on the JMB is not a requirement for admission to VISTA, one of the new South African universities. If

this is true, the project objective would not be relevant to black students seeking admission to this university.

- 2.5 A recent article (7) in NETWORK, the newsletter of the University Preparation Programme, discussed "the rumoured phasing out of the JMB" (p.3). The rumor was given sufficient credence that a petition to retain the JMB was signed by representatives of various South African groups. If the JMB is phased out, it would have the effect of making the project objective obsolete.
- 2.6 The CDWs under development cover only 3 of the 8 curriculum areas tested by the JMB. Thus, it is possible for black students to benefit from these CDWs yet do poorly on the JMB because they are poorly prepared in the other 5 curriculum areas.
- 2.7 Conclusion. I conclude that the objective of preparing black South African students for the JMB is desirable, although the need is not well-documented. I also conclude that this objective is worth pursuing so long as one realizes that it is limited and shortterm in scope.

The objective is limited in that even under much improved educational conditions, only a small percentage of black (and white) students are likely to take the JMB. The objective is also limited in that it does not address the very serious deficiencies in the black South African educational infrastructure. The deficiencies are evidenced by the fact that, at least until recently, just one dollar has been spent on a black student's education for every ten dollars spent on a white student's education.

The objective is shortterm in that even if black students pass the JMB, there is some question about whether these students will be able to attend universities, do well there, and do well in post-university life. It is also shortterm in that there seems to be some question about how long the JMB will remain in existence.

I must note at this point that I am only referring to one intended objective of the project. The project may be having desirable side-effects, such as strengthening the infrastructure of South African black education. These side-effects may well be more important than the intended objective. I shall discuss them at a subsequent point in this report.

I am concerned about the possibility that the CGI materials could mislead students preparing for end-of-high school examinations other than the JMB, Higher Grade. The project staff should assess the extent of the problem and then take appropriate action.

### 3. Transfer of Technology

3.1 The materials and methods being developed by CGI involve an instructional technology called the "Keller Plan" or "Personalized System of Instruction." When the project evaluation team met with the CGI staff in late March, we spent some time discussing the issues and problems of transferring this technology to the South African situation. Based on these discussions, it appears that a secondary objective of the project is to promote transfer of Keller Plan technology to the South African education system. This

objective is also implied by a statement in the proposal for the project (9): "The philosophy of the project as an 'in-country' development effort includes ownership and eventual program administration by black South Africans with start-up development and training by the American Team" (9, see Executive Summary).

- 3.2 I wish to draw a distinction between implementation and transfer. Implementation involves whether the particular materials and procedures being developed by CGI are being used as intended. (I discuss this issue of implementation in other sections of the project, especially Section VI C.) Transfer involves whether the introduction of these particular materials and procedures leads to the development and use of new materials and procedures in the recipient country. Thus, transfer involves the infusion of new ideas into a country; these ideas can be used by indigenous persons to develop their own materials and procedures.
- 3.3 I find much evidence that this project will achieve its secondary objective of promoting the transfer of Keller Plan technology into South African education. First, this instructional technology appears relatively culture-free. It was originally developed in Brazil, spread to the United States, and is now used in many countries worldwide. Variants of the Keller Plan (for example, mastery learning and audio-tutorial instruction) have enjoyed similar success.
- 3.4 The major reason for the widespread use of the Keller Plan and its variants is their demonstrated effectiveness in improving students'

academic achievement.

- 3.5 The study guides developed in the first CGI-AID contract involve Keller Plan technology. The Urban Foundation evaluated their use in a disadvantageous setting, yet found that they "were welcomed by teachers and received enthusiastically" (8, page 24). Also, CGI has received requests from South African groups for printing the study guides. I think that the Concept Development worksheets will be received as enthusiastically and will prompt the development of other curriculum materials employing the same instructional technology.
- 3.6 The Study Guides and Concept Development worksheets are intended for use in the University Preparation Programme, which is a "student development and teacher upgrade project" for black South Africans administered in non-formal instructional settings by non-governmental agencies. Given the power of the Keller Plan technology, I expect that the CDWs themselves and the technology on which they are based to spread to other educational contexts -- kindergarten through university, distance education programs, professional preparation programs. My reading of the literature on the Keller Plan indicates that its greatest use in the United States is in post-secondary education, especially in scientific and technical programs of study.
- 3.7 The amended contract between CGI and AID calls for CGI staff to work closely with the South African Council for Higher Education (SACHED) to develop many of the Concept Development Worksheets.

This joint development effort should result in increased capacity of South African educators to use Keller Plan technology for new applications in their country.

**3.8** The Urban Foundation evaluation (8) found a discrepancy between the methodology typically used in formal classroom instruction (teacher-centered groupwork) and Keller Plan instructional methodology (student-entered, tutorial work). This discrepancy should not pose a serious problem. With appropriate modification, Keller Plan materials (such as the Study Guides and Concept Development Worksheets) should be usable with a variety of instructional methodologies. Conversely, Keller Plan instructional methods should be usable with a variety of curriculum materials. Thus, I see no reason why instructional conditions in South Africa would limit the transfer of Keller Plan technology.

**3.9** Charges of cultural imperialism have been levied at the project (4). To the extent that South African educators have this view, they will resist transferring Keller Plan technology into their system of education. I could only find the view expressed in one document, however, and I doubt that it is a serious problem. If the technology is given a fair test, its value for instruction and its freedom from cultural bias should become apparent.

**3.10** Conclusions. I am optimistic that Keller Plan technology, on which the Study Guides and Curriculum Development Worksheets are based, can be transferred successfully to the South African education system. Since this technology is of demonstrated effectiveness,

its transfer to South Africa promises to result in higher academic achievement for black South African students.

### III, Evaluation of Concept Development Worksheets (CDWs)

#### A. Do the CDWs relate meaningfully to the Study Guides?

1. The Study Guides developed under the original contract are intended to help students prepare to take the JMB. They are similar to the many books available in American bookstores that prepare students to take the SAT, GRE, MCAT, and other examinations required for admission to post-secondary degree programs. The purpose of these books (including the Study Guides) is not to teach academic subjects, but rather to help the student quickly review them before taking the examination.
2. The Concept Development Worksheets (CDWs) being developed under the contract amendment of 2/1/84 have a different purpose than the Study Guides. They are intended to provide instruction in the concepts and skills of academic subjects whose mastery is tested on the JMB. In effect, the CDWs function like a textbook, except that they cover a course of study (e.g., algebra) in a series of 60 page-or-so booklets rather than a single large book.
3. I think, then, that the Study Guides do relate meaningfully to each other. The CDWs provide instruction in three subject areas (English, mathematics, and the physical sciences), and the Study Guides provide review in the same three subject areas. The CDWs are written for instruction in Standards 6-8, the grade levels at

which these subjects are taught, and the CDWs are written for review in Standard 10, the grade level at which many students are thinking about getting ready for the JMB.

4. The CDWs and Study Guides also relate meaningfully to each other in that the content of both is determined by the syllabus for the JMB.
5. Conclusions. The CDWs are a worthwhile extension of the Study Guides. Each serves an important, non-redundant instructional purpose.

B. Do the CDWs relate meaningfully to the Joint Matriculation Board examination?

1. My discussions with the curriculum developers working on the CDWs in mathematics, English, and the physical sciences revealed that they are conscientious about basing the CDWs on the JMB syllabus.
2. Ken Majer, principal investigator for the project, told me that he and the curriculum developers analyzed JMBs administered over the past 10 years in order to determine the content and skills to be covered in the CDWs.
3. The CDWs (and Study Guides) cover three of the eight subject areas tested on the JMB. Thus, the possibility exists that students could master the concepts and skills in the CDWs, do well on the three parts of the JMB covering those concepts and skills, and do poorly on the other five parts of the JMB not covered by the CDWs.
4. The CGI-AID contract specified development of 60 CDWs in mathematics, 50 CDWs in the physical sciences, and 40 CDWs in English.

This amount of CDW development was thought to be necessary to provide instruction in all of the concepts and skills included in the JMB syllabus for mathematics, physical sciences, and English.

5. A letter from Ken Majer to Roger Carlson, dated August 7, 1984, indicates "a reduction of the number of CDWs to be produced to 26 in English and 32 in physical science." The same letter indicates that the originally specified number of CDWs in mathematics to be developed would remain unchanged. It seems, then, that the CDWs in English and the physical sciences will fall well short of covering all of the concepts and skills included in the JMB syllabus.
6. Conclusions. It is clear that the CDWs will provide only partial coverage of the JMB syllabus. I do not know the effect that this limitation will have on instructional use of the CDWs or on students' ability to pass the JMB. South African educators and students should be made aware that the CDWs provide very limited coverage of the concepts and skills in the JMB syllabus, so that they do not place undue reliance on the CDWs as instructional texts.

C. Is the design of the CDWs technically sound and culturally appropriate?

1. I had the opportunity to examine many of the CDWs during my visit to CGI. The design of the CDWs, in my opinion, is of high technical quality. Each CDW contains elements that are standard features of Keller Plan materials. Similar elements (i.e., objectives, statement of prerequisites, self-check exercises, and summaries) are found in other state-of-the-art instructional materials being developed currently in the United States.

2. I think it would be desirable for the CDWs to include alternate forms of a mastery test. This feature would enable a student who failed the first mastery test to re-study the CDW and then to take another mastery test. This feature could be added easily to the existing CDWs if users felt it was desirable.
3. The curriculum content appears well-analyzed. Each lesson of a CDW presents a limited amount of new content so that the student is not overwhelmed.
4. I did not do a readability analysis of the materials using standard readability formulas because I am not at all certain that the grade-level norms for these formulas would apply to black South African education. My impression is that the CDWs would require a high reading level. The text is well-written, but most of the concepts and principles being presented are at a high level of abstraction. If the CDWs were to be used in this country, they probably would be appropriate only for academically capable, college-bound students in their junior or senior year of high school.
5. I do not find anything in the CDWs that would make them culturally inappropriate. The JMB syllabus appears heavily influenced by the traditional British curriculum for university-bound students. The curriculum is based on study of the major academic disciplines. The CDW format seems well suited for this purpose.
6. The technology on which the CDWs are based calls for these materials to be used in a setting involving self-paced, individualized instruction. The Urban Foundation reports (6,8) indicate that South

African instruction primarily involves teacher-paced, group instruction. Thus, there would be a discrepancy if the CDWs were to be used in that setting. I think that appropriate adjustments could be made by most teachers, however, to accommodate the CDWs within their conventional mode of instruction.

7. Discrepancies in instructional methodology should be no problem when the CDWs are used in nonformal, community-based instruction. In fact, the CDWs seem ideally suited for this purpose. The segmented, sequential features of the CDWs make it very easy for a tutor and student to start and stop instruction in a curriculum subject.
8. The CDWs are based entirely on print technology. The page layout consists of one-color type and graphics, and so it is easy to produce multiple copies. It is not certain at this point whether the final version of the CDWs will be typeset. Although typesetting is a desirable feature, the present versions, which are typed by a computer printer, look good.
9. Even though print is an inexpensive medium of instruction, costs do need to be considered. In his August 7, 1984 letter to Roger Carlson, Ken Majer noted that, "To print the 10,000 sets [of CDWs] needed to serve the community's needs over the life of the project, our South African printing company estimates a cost of \$426,000." In the same letter Dr. Majer observes that only \$56,250 has been budgeted for this purpose. Since black South African education is severely underfunded, the CDWs -- inexpensive as they are -- may not

reach all students who could benefit from them.

10. Conclusions. I find that the CDWs represent a high level of technical sophistication and cultural appropriateness. My only concerns are these: the CDWs will be difficult for students with weak reading skills; the CDWs will need to be modified if used for conventional classroom instruction; and printing costs could be a problem in disseminating them. I recommend development of alternate mastery tests for each CDW, but this is not a high priority.

D. Is a sound process being used to develop the CDWs?

1. The process for developing the CDWs is specified in an early planning document prepared by CGI (9, page 2):
  - a. Task analysis of UPP Study Guide concepts
  - b. Specification of instructional objectives
  - c. Draft of CDW by curriculum writer
  - d. Review I by senior program overseer
  - e. Review II by SACHED community expert
  - f. Revised CDW
  - g. In-house field test by black South African students
  - h. Revised CDW
  - i. South African field test by community

This is a sound process for developing curriculum materials. It is a process widely advocated and practiced by instructional technologists.

2. The process appears to be being followed, with one major exception. I can find little evidence that field testing of the CDWs is

occurring. The only instance of field testing that I could locate occurred in early 1984 in Cape Town (10). Fifty African, Asian, and "coloured" students reviewed 25 of the math CDWs. In my opinion, this was a very limited field test because the students did not use the materials under actual field conditions. Rather the students "reviewed" the materials by reading them and then providing feedback on a questionnaire. This kind of data is useful, but it provides no information about strengths and weaknesses of the materials under actual tutorial or group teaching conditions.

3. My conversations with the writers of CDWs in San Diego indicated that the lack of field test data has hindered the development process. Continual feedback from students and teachers is crucial to insuring that the materials are clear and usable.
4. One of the project administrators in San Diego told me, "We wanted to field test and revise, but there was pressure to get on with it." It appears that the priority is to use project resources to write a large number of CDWs rather than to conduct extensive field testing on a smaller number of CDWs.
5. Despite the lack of field testing, the curriculum writers appear to be doing a good job of developing the CDWs. I was impressed by the quality of personnel recruited for these positions. Each of them is an expert in his or her curriculum specialty, and each of them is dedicated to achieving the project objectives. They also appear to be well supervised, as evidenced by the fact that the quality and

- style of the CDWs both within and across the three subjects (English, math, and the physical sciences) are highly consistent.
6. The support services for curriculum development at CGI are very good. The curriculum writers have available good graphic artists, state-of-the-art word processing equipment, and comfortable work space. I was impressed, too, by the flowcharting of the curriculum development process. A flowchart is updated regularly so that anyone can determine where a particular CDW is in the development process.
  7. CGI and the South African Committee for Higher Education (SACHED) entered into a joint agreement (11) dated 4/2/84 to co-develop a series of math CDWs. The co-development process outlined in their letter of agreement is, in my opinion, sound. My conversations with the two math curriculum writers in San Diego revealed that the actual co-development process is proceeding smoothly.
  8. A statement in one of the quarterly process reports (10, page 11) has implications for the success of the CGI-SACHED collaboration:  
"SACHED's distance-learning materials are indeed more comprehensive and more fully self-instructional than the UPP CDWs. The CDWs rely more heavily on tutors, but SACHED's distance-learning courses have incorporated certain elements of the Keller Plan methodology and also use tutors, but mainly for encouraging the student. CDWs are designed to be supplemental to classroom instruction and are targeted mainly at high school students. SACHED's materials are targeted mainly at

adults or other out-of-school learners. The two sets of instructional materials share, however, the common objective of educating students whose formal education is inadequate."

Since the two agencies share a similar instructional technology, the collaborative development effort is likely to be productive. Also, it appears that SACHED -- and perhaps other South African agencies as well -- could take increased responsibility for developing CDWs should AID and CGI wish to move in that direction.

9. Conclusions. The approach being used by CGI to develop CDWs is sound. It conforms well to the approach recommended by experts in instructional technology. The curriculum writers and support services for the CDWs are excellent. The collaboration between CGI and SACHED in developing math CDWs is very promising. The only substantial weakness in the development process is the fact that most of the CDWs developed to date have undergone no field testing. Steps should be taken to insure that field testing and revision of the CDWs occurs before they are disseminated for operational use.

E. Is development of the CDWs on schedule?

1. The original AID-CGI contract specified that 150 CDWs were to be developed. We were told by the project administrators that because of various contract modifications and amendments, the number of CDWs to be developed has been reduced. The current contractual obligation is to (a) develop, (b) field test, (c) revise, and (d) print 100 CDWs.
2. Jim Perry and I examined the CDWs to determine which ones have been

developed to date. We found that a total of 98 CDWs have been written. Their distribution across subject areas is as follows: 22 English CDWs; 44 math CDWs; 15 physics CDWs; and 17 chemistry CDWs. Approximately one-fourth of them were not completely written, word-processed, and/or illustrated as of the end of March, when we visited CGI's offices.

3. We were told by the project administrators that funding runs out for the physical science and English CDWs in June 1985, and for the math CDWs in September. It appears that these funding termination dates will cause the project to fall well short of meeting its contractual obligations.
4. Several explanations were offered by the project administrators for the fact that CDW development is seriously behind schedule. These explanations involve unanticipated events in South Africa, Washington - imposed hiatuses that have shut down the project for up to five months at a time, and diversion of CDW development funds for other purposes relating to the contract.
5. Conclusions. It appears that the development of the CDWs is seriously off schedule. If funding runs out before the initial drafts of the 100 CDWs are completed, it will be difficult to complete them at some future point. The reason is that once the curriculum writers have left the project, new curriculum writers probably will experience many problems in conceptualizing the curriculum scope and sequence to determine what remains to be done. Either the writing of the CDWs should be funded to

completion, or the current curriculum writers should make careful notes when they leave so that new writers will know how to pick up the threads.

#### IV. Evaluation of Trainer and Tutor Components

##### A. Is the process used to train trainers technically sound and culturally appropriate?

1. Tutoring is the instructional method used with the CDWs. When the CDWs and Study Guides are used in the context of the University Preparation Programme, the tutoring is done by volunteers, many of whom apparently have not completed a teacher education program. Therefore, the volunteer tutors need training in effective tutoring techniques. The plan under the CGI-AID contract is to have "trainers" who will teach the effective tutoring techniques to the volunteer tutors. In turn, the trainers need training in techniques for conducting this work effectively. Thus, the "training of trainers" is an important component of the CGI-AID contract.
2. The primary material used to train the trainers is a book developed by CGI (12). Called Training Manual, this book contains tutoring concepts and procedures needed to use the CDWs and Study Guides effectively. An instructional videotape on probing techniques accompanies Chapter B.
3. The Training Manual is well-written and comprehensive. I think it is a text that can be used effectively by trainers to train tutors.
4. A major limitation of the Training Manual is that it is primarily

oriented to techniques for tutoring students who are using the Study Guides. This limitation exists because the manual was written before the CDWs were developed. (I made this inference based on the fact that the copyright date for the manual is 1981, which is before development of CDWs began.) It seems to me likely that tutoring students on CDWs would differ markedly from tutoring students on Study Guides. There is no discussion of these differences in the manual.

5. The procedures used in the training of trainers are described in one of the Quarterly Progress Reports (13, see Attachment C) and in the report of a training conference held in mid-1984 (14). The objectives for the workshop (see page 2 of the report), the schedule of activities (see page 3), and the training method (see page 2) appear sound. The training might be more effective, however, if the CGI staff would demonstrate effective tutoring techniques by using them with a few actual students invited to the conference for this purpose.
6. The cost-effectiveness of the training of trainers component is a possible concern. In the 1984 training conference, a team of five American educators trained a total of ten South African trainers for two weeks. It may be difficult in the future to justify this large a team of American "trainers of trainers" unless a much larger number of South African trainers attend the conference.
7. The ten South Africans who attended the 1984 "training of trainers" conference generally responded favorably to the training procedures

(13, see appendix B). No one made any mention of cultural bias in the materials or training procedures.

- B. Conclusions. The process used to train trainers is, for the most part, technically sound and culturally appropriate. I see the need, however, to revise the Training Manual to include techniques for using the CDWs. Instructional videotapes of tutoring with these materials also would be desirable.

It may be necessary to revise the manual or to write a separate manual on procedures for using CDWs and Study Guides in the context of regular classroom instruction.

B. Is the training on schedule?

1. The CGI-AID contract (1.1) calls for training of five South African trainers "from politically and geographically representative groups throughout the country and one incountry training center" (page 2). Since ten trainers from different regions were trained in the Johannesburg conference of June 25-July 7, 1984 (14), it appears that the schedule for training has been met and exceeded.
2. Training of trainers from the Natal region appears to be a problem. No trainers from this region attended the conference (15), and despite continuing efforts (16), no potential Natal trainers have been identified.
3. The CGI-AID contract (1.1) further specifies "follow-up support to these trainers in their initiation of tutor/teacher training in South Africa." Also, CGI is contractually obligated to "assist the trainers in implementation of their training activities, ensuring

that 150-200 tutors/teachers are trained in the first 18 months of the project, and an additional 350-400 tutors/teachers are trained by the end of the contract period" (page 2).

4. I could locate only a few sources of information about whether support of the trainers in implementing training activities has occurred. An allusion to implementation activities was made in the letter of September 27, 1984 from Ken Majer to Steve Weissman. In that letter Ken Majer referred to the "training of trainers" conference in Johannesburg (14), and he stated that these trainers would begin training tutors in October 1984.

Another report (17) refers to a tutor training workshop conducted at Port Elizabeth January 21-31, 1985. Two of the trainers who attended the Johannesburg conference (14) conducted the workshop with the assistance of a CGI consultant. The number of tutors trained in the workshop is not specified in the report.

5. Conclusions. The training of trainers has occurred on schedule and, in fact, more trainers participated than were required by the AID-CGI contract. I cannot determine, however, whether all of these trainers have received follow-up support from CGI and whether they have trained the number of tutors specified in the contract.

C. Is the process used to train tutors technically sound and culturally appropriate?

1. The procedures for training tutors are essentially the same as those used for training the trainers (see IV.A above). These

procedures appear technically sound and culturally appropriate for both groups.

2. The plan for the tutor training workshop at Port Elizabeth University (17) includes a process in which trainers supervise tutors in the field after the tutors have been trained. Chapter 11 of the tutor training manual (12) specify procedures and forms for this purpose. The supervisory component of the tutor training process is essential and is likely to be effective if implemented.
3. As I stated in section IV.A, the training of trainers is primarily oriented to the Study Guides rather than to the CDWs. The same orientation apparently applies to the training of tutors.
4. The purpose of the tutor training is to enable tutors to assist South African students to use CDWs to learn three highly academic subjects -- English, mathematics, and the physical sciences. Effective tutoring requires a sophisticated knowledge of these academic subjects, especially if the tutor is to use properly the task analysis techniques described in the training manual (12, see Chapters 5 and 6.) I could not find in any of the documents available to me a set of procedures and criteria for selecting tutors who are academically qualified to assist students with the CDWs. The identification of tutors with the required qualifications is likely to be an enormous problem.
5. Conclusions. The process used to train tutors appears technically sound and culturally appropriate in most respects. Additional materials may need to be developed to insure that academically

qualified tutors are selected and that the tutors can use the CDWs effectively. Identification of qualified tutors could be a serious problem.

D. Is the training of tutors on schedule?

1. As I indicated in Section IV.B.1) above, CGI is contractually obligated to train at least 150 tutors by the end of the contract period.
2. During my visit to CGI's offices in March, I was told by the project administrators that approximately 50 tutors had been trained at that point in time. Another 30 tutors were to be trained in the next few weeks. The first group of tutors had been trained in January of that year.
3. One cause for the low number of tutors trained to this point in the project is the black student boycotts in South Africa. An indication of the problem can be found in CGI's Quarterly Progress Report of January 1985 (16):

"... plans for the Black Student Study Project (BSSP) to have its tutors trained by UPP Trainers had been proceeding rapidly. The continuing boycotts caused debates within that organization as to whether its students should engage even in non-formal tutoring. Consequently, UPP training for the BSSP tutors did not take place during the Quarter as planned" (p. 3).

4. Conclusions. It does not appear likely that CGI will be able to train at least 500 tutors by the end of the contract period.

Factors beyond CGI's control appear to be at least partially responsible for the problem.

#### V. Evaluation of Coordination and Communication Components

##### A. Are the coordination and communication components technically sound and culturally appropriate?

1. I did not formally seek to answer this question as part of my evaluation of the CGI-AID project. Therefore, I have only a few observations to make about this aspect of the project.
2. The CDWs and Study Guides are intended to be used in a "community-based tutorial program" (9, see page 1). The extent to which such a "program" exists is unclear in the documents I examined and in my discussions with the project administrators. It appears, instead, that there are multiple programs that vary in organizational structure. There is the University Preparation Programme, distance education programs, and programs of privately financed tuition centers. There is also some indication in the documents available to me that the CDWs are or will be used in black formal education.
3. The programs vary in the degree to which they are formal or non-formal. In non-formal programs, tutoring students with the use of CDWs and Study Guides is to occur after school hours, on weekends, and during school vacations.
4. It is important to keep in mind that the content of the Study Guides and CDWs covers an elite, highly abstract, and demanding

curriculum. If they are to be used in the context of a non-formal program, the program will need to be very well-organized and supervised. I imagine that it would be very difficult to recruit and retain tutors who have expertise in the subject matter covered by the Study Guides and CDWs.

5. Conclusions. I do not have sufficient data to judge whether South African non-formal agencies have the organizational capability to sponsor the type of tutoring program required to prepare students for the JMB. If they do not have the capability, it may be very difficult to develop since I imagine that highly trained personnel (i.e., tutors who are expert in the JMB syllabus and supervisors of the tutors) needed for the program would not be readily available. An alternative approach would be to develop further the organizational capability of existing formal education agencies to serve students preparing for the JMB.

#### VI. Evaluation of Project Evaluation Components

##### A. Is the plan for project evaluation technically sound and culturally appropriate?

1. The AID-CGI contract (1.1) specifies that project evaluation will occur on a regular, systematic basis. The contract language (see page 4) implies development of a plan for project evaluation that includes the following procedures:
  - a. a procedure for training South African trainers in the techniques of data collection and evaluation.

- b. a procedure for tutors to use in recording student progress data.
- c. a procedure for collecting student progress data from tutors on a monthly basis and transmitting the data to the program coordinator and to CGI.
- d. a procedure for identifying requirements for additional non-formal training and instructional development in South Africa beyond the life and scope of the contract.

The contract also specifies that the results of these evaluation efforts will be communicated to AID in CGI's quarterly progress reports.

2. Some of the elements of an evaluation plan can be found in a proposal prepared by CGI in June 1982 (9, see pages 3-4). The specified elements are sound, but I can find no indication that a full-scale evaluation plan has been developed by CGI.
3. The Urban Foundation's evaluations of the Study Guides (6,8) appear to have resulted from a deliberate evaluation plan. I could find no indication, however, that their plan was influenced by, or in response to, CGI's contractual obligations for evaluation.
4. Given the scope of project evaluation in the AID-CGI contract (see section VI.A.1 of this report), I would expect that the plan would specify procedures for collecting data on the following items on a regular basis:
  - a. number of program coordinators
  - b. number of trainers

- c. number of tutors
- d. number of students being tutored or using the CDWs and Study Guides
- e. student progress in completing CDWs
- f. perceived strengths and weaknesses of the CDWs and Study Guides
- g. organizations adopting the CDWs and Study Guides
- h. instances of South African curriculum development influenced by the project's instructional technology
- i. status of normal and formal education for black South Africans
- j. percentage of black South Africans taking and passing the JMB

None of CGI's quarterly process reports or other documents provide evidence that data on any of these items is being collected on a regular, systematic basis.

5. Conclusions. It appears that a plan for project evaluation has not been developed yet. Therefore, it is not possible to judge its technical soundness and cultural appropriateness.

B. Is project evaluation on schedule?

- 1. There are some indications of project evaluation among the documents available to me.
- 2. The Urban Foundation is conducting a three-phase evaluation of the Study Guides. Two of the phases have been completed and reported

(6,8). The first phase focussed on an evaluation of the Study Guides. The second phase focussed on an evaluation of the implementation of the Study Guides. The third phase will evaluate the examination performance of students who have used the Study Guides. Surprisingly, the intent of the evaluators is to use student performance on the National Senior Certificate examinations, rather than on the JMB examinations, as the criterion (8, see page 2). This plan is surprising since the specific purpose of the Study Guides and CDWs is to improve student performance on the JMB examinations.

3. It should be noted that the design of the Urban foundation's evaluation applies only to the Study Guides. With slight modifications, the same design could be applied to an evaluation of the CDWs.
4. Letters of agreement involving CGI and the Part Time University Students' Association (18), the Cape Teachers' Professional Association (19), and the Centre for Continuing Education at the University of Port Elizabeth (20) were signed in February 1985. Several of the obligations of these associations and centers involve project evaluation functions. For example:

2.2 Keep records of Study Guides and Concept Development Work Sheets received from the Executive Secretary...

2.3 Prepare, write and forward monthly reports... on the distribution of Study Guides and Concept Development Work Sheets...

2.5 Keep records, on the prescribed forms, of all tutor

training...

- 2.7 Distribute to the participating organizations evaluation forms and other evaluation documentation received from the Executive Secretary of the UPP
- 2.11 Complete the prescribed forms on the hours of tutor training carried out by tutor trainers.

I do not have information about whether these functions have been implemented.

5. Chapter 11 of the Training Manual (12) includes several procedures and forms for evaluating tutor performance and student progress. I do not have information about whether these procedures and forms have been implemented.
6. Conclusions. Elements of project evaluation that are relevant to CGI's contractual obligations appear to be in place. I cannot determine whether project evaluation is on schedule, however, because of the unavailability of a plan for project evaluation and a projected schedule for completion of the evaluation activities.

## VII. Summary of Project Strengths and Weaknesses

### A. Project Strengths

1. The project materials (Study Guides and CDWs) are based on sound instructional technology.
2. The project materials show promise of being adopted and used by South African educators.
3. The instructional technology underlying the materials is likely to

transfer effectively to South Africa and to result in improvement of its educational system.

4. The CDWs currently under development are worthwhile, non-redundant extension of the Study Guides. Their technical quality and cultural appropriateness are good.
5. The collaboration between CGI and SACHED in developing math CDWs is likely to improve in-country capability for developing other materials after the AID-CGI project has been completed.
6. The process for training trainers and tutors is technically sound and culturally appropriate.

#### B. Project Weaknesses

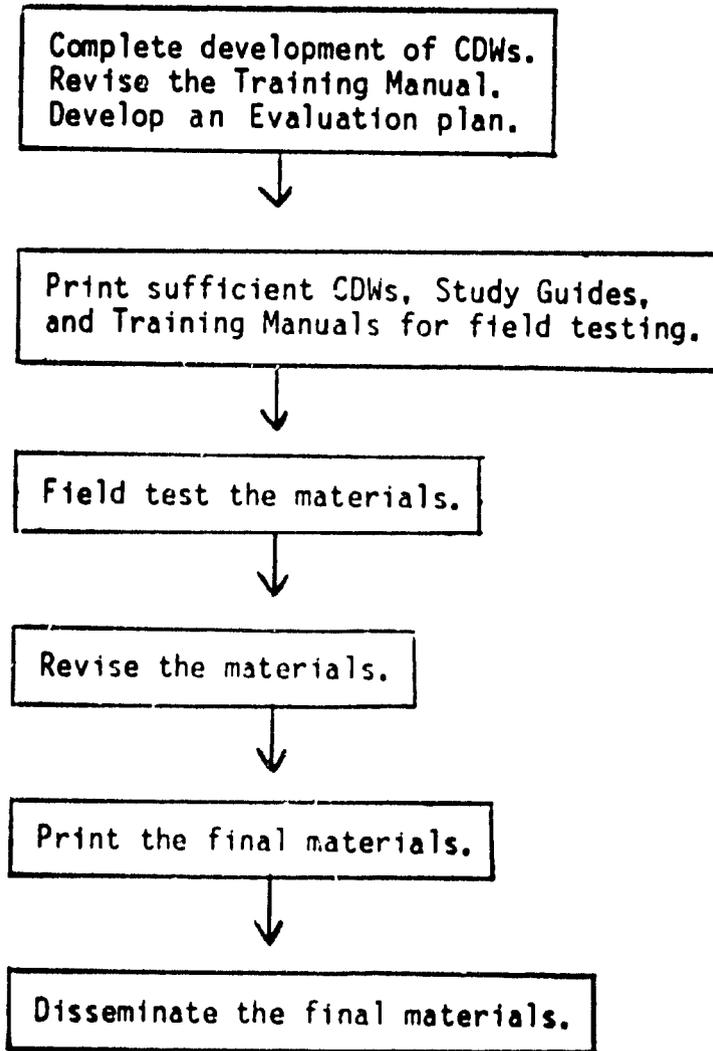
1. There was insufficient documentation at the project's outset that there is a need for these materials.
2. The usefulness of the materials for preparing students for examinations other than the JMB, Higher Grade, has not been demonstrated.
3. The project materials will only prepare students for three of the eight areas of the JMB examination.
4. The lack of field testing is a serious weakness in the process used to develop the project materials.
5. Procedures to insure that qualified tutors are selected have not been developed.
6. A systematic plan for project evaluation has not been developed.
7. The project is behind schedule in development of CDWs and tutor training, and is probably behind schedule in evaluation activities.

### VIII. Possible Courses of Future Action

1. All of the contracted CDWs should be developed. A partially completed set of CDWs for a particular curriculum subject is not likely to be of use to South African educators. Thus, the entire investment in those CDWs would be lost. Additional funds to complete CDW development would insure that the funds invested thus far pay off.
2. The Training Manual should be revised to include techniques for using the CDWs. The present version of the manual only includes techniques for the Study Guides.
3. An evaluation plan should be developed. The focus of the plan should be on procedures for insuring that criticisms and suggestions for revision by field test users of the CDWs, Study Guides, and Training Manual are recorded systematically and fed back to the developers.
4. Printing of the CDWs, Study Guides, and Training Manuals should be limited to the number of copies needed for field testing. Printing of copies for widespread dissemination should wait until field testing and product revision have been completed.
5. My understanding is that all of the project materials are stored on computer discs. These discs should be carefully stored and backed up so that they can be used to revise the project materials. This procedure will save the expense of typing and proofing all of the materials from scratch.

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6. The recommendations stated above suggest the following time line for project completion:



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ANNEX C

AN ASSESSMENT OF EDUCATIONAL MATERIALS COMPARABLE TO UPP

by James Perry, PhD

One of the questions which was to be addressed by the evaluation team was: Are any South African materials equivalent to the Study Guides and CDWs? Do any use a similar technology?

The writer asked each person interviewed are there South African books or materials which are as good as the CGI Study Guides and CDWs? Since respondents had not seen the CDWs they could not answer fully, but they could not point to any specific publications. SACHED did identify four publications which will be evaluated later in this paper. Visits to Juta Press Book Store, CNA Book Store, Edison Educational Book Store, and Exclusive Book Shop produced a very limited supply of JMB review materials. The materials identified are listed below:

Bowen, S. G. Matric Revision Notes, "Chemistry for South African Schools,"  
Macmillian South Africa, Johannesburg 1983.

Morgan, J. F. "Solutions to "H" Grade Mathematics Paper I, Robert Gibson  
Publishers, Glasgow 1982.

Mulholland, H. "Calculus Made Simple" Heinemann, London, 1982.

Roos, R. C., Engelbrecht, D. E., and Vivers C. L. "Mathematics Past Examination  
Papers and Solutions for National Senior Certificate and Department of  
Education and Training First and Second Papers November 1982 - June 1984.  
Hodder and Stoughton, Bergville, South Africa, 1984.

Roberts, O. J. "Matric Revision Notes Physics for South African Schools",  
Macmillian South African Ltd., Johannesburg, 1984.

"Republic of South Africa Department of Education and Training for Adult  
Education."

"Algebra - A Revision Course," Standard grade study aids and notes. Course V.

"Mathematics Exponents and Surds," Course V, Standard 10

Mathematics Study Aid and Notes on "Logarithms," Course V, Standard 10.

Mathematics Study Aid and Notes on "Geometry," Course V, Standard 10.

Mathematics Study Aid and Notes on "Vectors," Course V Standard 10.

Mathematics Study Aid and Notes on "Trigonometry," Standard 10

Physical Science Study Aid and Notes on "Vectors and Scalars," Course V, Standard 10.

Physical Science Study Aid and Notes on "Chemical Bonding," Standard 10.

Physical Science Study Aid and Notes on the "Three Phases of Matter and Solutions," Course V, Standard 10.

Physical Science Study Aid and Notes on "Rates of Chemical Reactions, Equilibrium, Acids and Bases," Course V, Standard 10.

Physical Science Study Aid and Notes on "Displacement, Velocity Time Relationships, Bodies in Motion," Standard 10.

Physical Science Study Aid and Notes on "Electrostatics", Course V, Standard 10.

Physical Science Study Aid and Notes on "Light Electromagnetic Waves, Particles, Waves, and Quanta", Course V, Standard 10.

Physical Science Study Aid and Notes on "Electrochemical cells and organic Chemistry," Course V, Standard 10.

English Literature, Study Aid and Notes on "Julius Caesar" Course V, Standard 10.

SACHED Trust, A Peoples College Book, Write Well Skills For Better English 2, Ravon Press Publication, P. O. Box 31134, Braamfontein 2017 South Africa, 1984.

SACHED Trust, A People College Book, Write Well Skills For Better English 1, Ravon Press Publication, P. O. Box 31134, Braamfontein 2017 South Africa, 1985, second edition.

Turret Correspondence College, The Turret English Literature

Course Poetry 85 JMB Syllabus. Turrets Correspondence College, Corner Kerkand Simmonds Streets, Johannesburg 2001, 1985

Turret Correspondence College, "The Turret Senior English Course," Turrets Correspondence College, Colstaven Building, Corner Kerkand Simmonds Streets, Johannesburg 2001, 1985.

The Robert Gibson Publisher Publication, Maths 100 Solutions "H" Grade Past Paper 1, by J. F. Morgan is based on examination questions given by the Scottish Examination Board. Math topics are identified and all problems are

from past examinations. Solutions are given to each problem. Robert Gibson Publishers puts out a series of "O" level and "H" level examination questions and solutions from previous examinations in the following fields: Biology, Chemistry, English, History, Mathematics, and Physics.

The Publication, Mathematics Past Examination Papers and Solutions for National Senior Certificate and Department of Education and Training First and Second Papers November 1982 - June 1984 by R. C. Roos and others, was published in 1984. It is completely composed of South African National Senior Certificate (NSC) Examination questions and their solutions. It does not identify math subject areas and the print is small. This book would be useful for working with past South African NSC examination questions.

The Matric Revision Series in Physics and Chemistry by O. J. Roberts and S. G. Bowen, respectively, are summary topic reviews of textbook Physics and Chemistry with appropriate problems for each exercise. The content in both these books covers the syllabi for South African Schools in each area. These summaries refer to and are used with leading textbooks in each of the fields. This series of books could be valuable for review for the JMB and NSC.

Calculus Made Simple by H. Mulholland is one of a made-simple series for self education published by Heinemann Publishers in London. The book covers all the calculus required for higher grade syllabuses of main examination boards. It also attempts to relate calculus to some of the current uses in life sciences, environmental studies, astronomy, chemistry, and economics as well as the traditional application in engineering and Physics. This book, could be valuable in studying calculus to prepare for the JMB or NSC.

The South African Department of Education and Training has an adult education set of study aids and notes on each subject taught in standard 10. They also have a course review for each subject in Standard 10. The study aids are by topics; there may be 8, 10, or 15 lessons under each topic. The topics follow a textbook or a syllabus. The student is expected to work all exercises. A review course book covers a complete course in math, physical science, and English. At the end of the review course is a 3 hour examination paper which covers topics learned in the course.

SACHED Trust has published two books in a People College Book Series, Read Well Skills for Better English 2. Read Well was first published in 1983 and again in 1985. Write Well was first published in 1984. Both of these books have attractive covers with large red or purple letters on white background. The books have interesting comments on the cover of the book such as, write good paragraphs and essays, write conversations, write definitions and arguments, read and think, read and understand, and read and study. The books are written in large bold black type and spaced for easy reading. Both of these books are based on black South African culture, and concerns and problems that affect black people. For example in the book, Read Well, Lesson 1 on "Finding the Main Idea" uses a leading newspaper article on Hugh Masekela and Miriam Makeba. Other lessons, used for reading, articles on striking African mine workers, African athletes, and why a protein-rich diet keeps children healthy. Most of the pictures in both books are of African people with whom a student can identify. These books are written so that they can be used in correspondence courses or in a classroom. These materials address the problems of English as a second language for the black student. Both of these books have been researched very well and the content addresses the black student. These books first were published in 1983 and 1984, and were not available when CGI introduced its Study Guides and started preparing CDWs.

The Turrent Senior English Workbook 1 was originally published in 1974 and reprinted in 1983. It is for students preparing to take the matric exam. Turrent College is a correspondence school and therefore this workbook is for students who are not in a classroom. The directions for using the workbook are clearly stated.

The workbook consists of reading, analyzing, and writing newspaper articles and identifying and writing informal and formal letters. The student receives one-half unit for completing the corresponding.

The Turrent English Literature Course Poetry '85 JMB Syllabus Workbook 1 was first published in 1985. The directions are clearly stated. There are nine lessons on selected poems that have appeared on the JMB. The student is given

techniques in reading a poem, detailed look at a poem, summarizing a poem, themes and ideas in a poem, and conclusions in a poem. Appropriate questions are asked about each poem and students write the answers. This is a good correspondence workbook for the poetry part of the JMB.

To answer the question: Are there other South African materials equivalent to CGI's Study Guides and CDWs, the writer would have to say very few materials existed in 1982 when the Study Guides and CDWs were first introduced into South Africa. Currently in 1983 and 1984, materials are being published which are of excellent quality. However, no one has come up with a total package consisting of the new technology of self-paced, mastery learning, individualized, community-based tutorial program with a training component for tutors and a comprehensive evaluation system. Most persons interviewed agree that the self-paced learning and mastery learning were good, useful and innovative ideas for South Africa and should be encouraged. They did not think that the new technology should be discontinued.

ANNEX D

**SUMMARY OF RESPONSES ON UPP BY INDIVIDUALS DIRECTLY INVOLVED**

by Beverlee Bruce, PhD

During the exit briefing of the USAID Affairs Officer by the evaluation team, he expressed interest in a summary of the responses that the team had elicited from individuals directly involved in the UPP as educators or as members of the steering-committee. Some voiced criticisms; some were supportive. The following is a summary of those responses:

**A. Strengths of the UPP**

- The overall project idea is fine. CDWs should have come first, but if they are produced and used, they will be valuable to the pupils. The Study Guides are great for tutors.
- University preparation is a basic need.
- The Study Guides are helpful for higher grade students and teachers.
- UPP is a good enrichment program.
- UPP serves a useful purpose.
- Physical science and math study guides are usable, especially with trained tutors.

**B. Weaknesses of the UPP**

- Given the structure of apartheid and the fact that unless black students are in private schools or enrolled in a correspondence course, they are required to take the National Senior Examination; consequently, preparation for the JMB is seen as a serious design flaw.
- Lack of familiarity with the South African context contributed to another design flaw in that the materials developed in the study guides were too difficult for the students on two levels. The first, on the level of concept mastery and the other at the level of linguistic complexity given the fact for most black students English as a second language and that was not taken into account. As a result of this oversight, it was necessary to develop Concept Development Worksheets which had not been completed at the time of the evaluation. In addition, the design depends on well-trained tutors who are in short supply.

- The project has no provision for measuring student progress in terms of a pre/post-test design, nor one for systematic follow-up of tutor trainers.
- Concern about benefits accruing largely to American contractors with little available for South Africa.
- The fear that participating groups would not have sufficient funds to reproduce and distribute study guides.

C. General Observations on the Program

- The CGI budget for UPP was greater than the annual SACHED operating budget for 10 full-time staff members.
- UPP as a concept is an important move away from authoritarian teacher-centered learning.
- However, teachers are victims of Bantu Education and the weak link in the equation.
- Implementation should have been preceded by a needs assessment since basic assumptions having to do with student preparation are not supported by the facts as determined by the South African case.
- Distance of the contractor from the South African situation.
- The expertise, or lack thereof, of the initial math writers.
- The role of consulted groups in initial negotiations. Were they forthright?
- The climate following the DeLange report was hopeful, which is the context in which UPP was conceived.

D. Suggestions for Improving UPP

- There should be more South African involvement.
- The project should be maintained in order to protect the investment made to date.
- To best improve black education, there should be in-service training for teachers.
- To best improve black education, the focus should be on basic primary education
- There should be a summit of all parties involved in the project to discuss continuing it, if possible.

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ANNEX E

QUESTIONNAIRES DEVELOPED FOR SPECIFIC GROUPS

A. QUESTIONNAIRE: STEERING COMMITTEE MEMBERS

1. Please discuss your involvement in the UPP to date.
  - How did you first hear about the program?
  - When did you first participate?  
In what capacity? How often?
  - Were you an active participant?  
Have you continued to be?
  - What has motivated your participation?
2. What has been the significance of the program to your organization?
  - What was the apparent value of the program to your organization?
  - Has the program met those expectations?
3. What do you consider the strengths of the program to be?
  - Does it prepare students to pass the JMB?
4. What do you consider the weaknesses of the program?
5. Do you think the program should continue beyond September 30 1985. If so, do you recommend any changes?

B. QUESTIONNAIRE: PROSPECTIVE ORGANIZATIONAL PARTICIPANTS

1. Please discuss what you know about UPP.
  - How did you hear about the program? When?
  - Why are you interested in participating?
2. What do you expect the significance of the program will be to your organization?
3. Have you explored alternative possibilities before settling on the UPP to meet the educational requirements for your organizations?
4. What do you see as the strengths of the program? Materials? Methodology? Educational philosophy?
5. Do you think the program should continue beyond September 30, 1985?

C. QUESTIONNAIRE: TUTOR TRAINERS

1. Please discuss your involvement in the UPP to date.

- How did you first hear about the program?
- How were you selected?
- When and where were you trained?
- How would you rate your training?
- How many training sessions have you conducted?
- How many tutors have you trained?

2. What is the significance of the Program?

- How would you rate the training sessions you have conducted?
- How do you rate the materials, methodology, philosophy?
- Have South Africans been involved in decision-making roles to a significant extent?

4. What do you consider the weaknesses of the program to be?

5. Do you think the project should continue beyond September 30, 1985. If so, do you recommend any changes in organization, management, communication, coordination?

D. QUESTIONNAIRE: EDUCATORS

1. Please discuss what you know about the UPP.

- How did you first hear about the program?
- What has been your response to it?

2. What is the significance of the program to black South African Education?

- Will it prepare students for the JMB?
- Is that a realistic goal?
- And if achieved, will it make a difference?

3. What do you consider the strengths of the program to be?

- How do you rate the materials, the methodology, the philosophy?

4. What do you consider the weaknesses of the program to be?

5. Do you think the program should continue?

E. QUESTIONNAIRE: COMMUNITY INTERVIEWS

1. What do you know about the university Preparation Program?
2. What are your thoughts about it?
3. In your opinion, what are the issues facing black South Africans in terms of education?
4. What role might the U.S. play in assisting in the resolution of these issues?

ANNEX F

PERSONS CONTACTED BY REGION  
(April 1985)

I. Johannesburg (Transvaal)

- Brown, Kenneth, Consul General  
Corke, Michael, Principal, St. Barnabas School  
Glennie, Jenny, SACHED  
Goubi, Linden, Coordinator, Black Students Study Program  
Hlapolosa, Jacob, Tutor Trainer (Apprentice)  
Hunter, Peter, Math Professor, University of Witwatersrand  
Kahn, Stan, FUNDA Center Director  
\* Kahynile, Yusuf, Convener, National Parents Committee  
\* Kambule, T.W., Math Professor, Witwatersrand University  
\* Mabe, Sam, The Sowetan  
\* Magubane, Peter, Photographer, National Geographic  
Mazibuko, Fanyana, Executive Secretary, National Advisory Steering Committee,  
UPP  
\* Motlana, Sally, SACC/Black Housewives' League  
\* Motlhabi, Mokgethi, Executive Director, Education Opportunities Council  
Mosala, Bernadette, South Africa Council of Churches  
Mokebe, Sasa, Director of Education, IPELEGENG  
Monyokolo, Michael, Tutor Trainer  
Nkumaue, Yusuf, P.A.T.U.S.A.  
Orkin, Mark, SAIRR  
Peters, Louie, SACHED  
Samuels, John, SACHED  
\* Sepamla, Siphon, Executive Director, FUBA  
Tekane, Ishmael, IBM (Corporate Responsibility)  
\* Thole, Joe, the Sowetan  
Vatsha, Luloma, PATUSA Tutor-Trainer

II. Capetown - Western Cape

- \* Boesak, Allan, Religious Leader  
Englebrecht, Levi, Educator (University of Western Capetown)  
Figazi, Brian, Vice Rector, Peninsula Technikon Member, National  
Advisory/Steering Committee  
Fillis, Ishmail, Tutor Trainer  
Hendrichs, Ron, USIS
- \* Kleinschmidt, McDonald, High School Biology Teacher  
Leonard, Cecil, CTPA (Member, National Advisory/Steering Committee)
- \* Louw, Lionel, Educator, University of Capetown  
Nickel, Herman, Ambassador of the United States  
Mehl, Merylyn, Goldfields Research Center, University of Capetown  
(Member, National Advisory/Steering Committee)  
Moulder, James, Assistant to Vice Chancellor, University of Capetown  
Norman, Obad, Tutor Trainer
- \* Ntsane, Stephen, Journalist
- \* Rive, Richard, Writer/Educator  
Sassman, Frank, USIS  
Sister Monica, St. Francis Adult Education Center  
Tanner, Jordan, Director, American Center (USIS)  
Volmink, John, Math Professor, University of Capetown  
Weber, John, Director, School of Business, Peninsula Technikon  
Yeld, Nan, University of Capetown - Academic Support Program

III. Port Elizabeth, Eastern Cape

- Bergins, Lecturer, Technical College (SACHED Advisor)
- \* Cekisani, Moki, Cooperative Organizer  
Dobrin, John, Consul General, United States
- \* Dukumbana, Muzell, AZAPO  
Erwee, Jan, Director, Center for Continuing Education (CENCE), University of  
Port Elizabeth  
Faba, T., SACHED Teacher
- \* Fazzie, H., PEBCO

- \* Kani, A.W., Anglican Priest  
Lisa, Noma, Assistant Coordinator, UPP, CENCE
- \* Maquina, Patricia, Domestic Workers Association of South Africa  
Mjekala, A.W., Urban Foundation
- \* Ngoni, Edgar, Port Elizabeth Black Community Organization (P.E.B.C.O.)
- \* Ntshona, Winston, Actor  
Pege, D.D., Ex-Principal, Black Secondary School
- \* Samuel, Sean, Umthonyama Publications  
Siwisa, D.D., Director, SACHED, Port Elizabeth  
Sogoni, Ian, Attorney; member SACHED Board
- \* Suka, Eltula, Domestic Workers Association of South Africa
- \* Tyayaza, Nosipmiwo, AZAPO  
Webb, Paul, Coordinator, UP, CENCE
- \* Ximiya, Winkle, Eastern Cape African Chamber of Commerce

IV. Durban (Natal)

- Botha, Philip, Director, Shell Science Center, University of Natal. Formerly, UPP Director, CENCE, Port Elizabeth
- Garrib, Rathan, Director of Education, Urban Foundation, Natal
- Giesel, John, Consul General, Durban
- Maghoo, Asha, Shell Science Center, Formerly, UPP Coordinator, CENCE, and Author Trainer
- \* Meer, Fatima, Sociologist, University of Natal. Director, Institute of Black Research
  - Motala, Enver, Director, SACHED, Natal
  - \* Mzi, Gugu, Department of Sociology, University of Natal

V. Pretoria

- Gosende, Robert, Director, Cultural Affairs (USIS)
- Lattanzi, Frank, Cultural Attache (USIS)
- \* Mkhathshwa, Smangaliso, General Secretary, Southern African Catholic Bishops Conference
  - Philpott, Jimmy O., AID Affairs Officer
  - Wright, Roderick, Political Officer, U.S. Embassy

ANNEX G  
BIBLIOGRAPHY

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ANNEX H

TUTORS TRAINED BETWEEN JANUARY 21 AND MAY 4, 1985

Port Elizabeth Tutors Trained January 21 to February 1, 1985

	<u>NAME</u>	<u>PROGRAM</u>
1.	X. Antoni	CENCE
2.	Nombulelo Dayimani	CENCE
3.	Z. Fatman	CENCE
4.	M. Jama	CENCE
5.	Andy Kawa	CENCE
6.	N. Lallie	CENCE
7.	E. Makamba	CENCE
8.	Z. Matomela	CENCE
9.	I. Mpahlwa	CENCE
10.	Mayolo	CENCE
11.	Vuvu Msutwanta	CENCE
12.	Sonjica	CENCE

Soweto Tutors Trained January 21 to February 1, 1985

	<u>NAME</u>	<u>PROGRAM</u>
1.	Nolwandle Boso	TAC
2.	Lindenl Gumbi	BSSP
3.	Makuntle Hlapolosa	BSSP
4.	Khaya Mnyandu	PATUSA
5.	Lucky Moeketsi	PATUSA
6.	Lulama Vatsha	PATUSA
7.	George Wauchope	BSSP

Note: BSSP - Black Students' Study Project  
CENCE - Centre for Continuing Education, Port Elizabeth  
PATUSA - Part-Time University Students' Association  
TAC - Teachers' Action Committee

Durban Tutors Trained February 22 to 23 and March 15 to 16, 1985

	<u>NAME</u>	<u>PROGRAM</u>
1.	A. Dudhrajh	UF and SMSRC
2.	M. A. Govender	UF and SMSRC
3.	F. M. Hlubi	UF and SMSRC
4.	K. Kalideen	UF and SMSRC
5.	Y. M. Karodia	UF and SMSRC
6.	V. H. Lalla	UF and SMSRC
7.	S. M. Maharaj	UF and SMSRC
8.	J. O. Moreki	UF and SMSRC
9.	J. G. Padayachee	UF and SMSRC
10.	S. V. Parbhoo	UF and SMSRC
11.	M. Ramtahal	UF and SMSRC
12.	R. Ramtahal	UF and SMSRC
13.	T. Reddy	UF and SMSRC
14.	M. K. Shedrick	UF and SMSRC
15.	D. J. Singh	UF and SMSRC
16.	Rajen Singh	UF and SMSRC
17.	R. Singh	UF and SMSRC
18.	P. Taylor	UF and SMSRC

Northern Transvaal Tutors Trained March 29 to 31, 1985

	<u>NAME</u>	<u>PROGRAM</u>
1.	W. Baloyi	BSSP
2.	L. Kondile	BSSP
3.	L. M. Le Hlongoane	BSSP
4.	R. C. T. Makgeledise	BSSP
5.	W. Malubane	BSSP
6.	C. N. Mokhuba	BSSP
7.	G. Motseta	BSSP
8.	M. T. Mpe	BSSP
9.	E. T. Motswaledi	BSSP
10.	M. M. Sepeny	BSSP
11.	J. M. Thobakuale	BSSP
12.	S. M. Tshetlo	BSSP

Note: BSSP - Black Students' Study Project  
 SMSRC - The Shell Mathematics and Science Resource Centre, Durban  
 UF - The Urban Foundation, Durban

Transvaal Tutors Trained April 12, 13 and 14, 1985

<u>NAME</u>	<u>PROGRAM</u>
1. H. T. Tshongwe	PATUSA
2. T. R. Ramashiya	PATUSA
3. R. Tleane	PATUSA
4. James Sepeng	ICC
5. Norman B. Ndaba	ICC
6. Townsend Dlamini	ICC
7. L. Moemise	WCOC
8. O. Dlamini	WCOC
9. W. M. Ngakane	WCOC
10. T. J. Matona	WCOC
11. Mickey Dube	WCOC
12. Mary Sibiva	ITC
13. Zithulele Msimanga	AZANYA

Western Cape Tutors Trained April 12 to 13 and 26 to 27, 1985

<u>NAME</u>	<u>PROGRAM</u>
1. Sam Lim Adams	PTMRP
2. C. D. Afrika	PTMRP
3. C. B. Baxter	PTMRP
4. John Bekker	PTMRP
5. J. S. Daniel	PTMRP
6. M. Hess	PTMRP
7. K. Henderson	PTMRP
8. Z. Ishmael	PTMRP
9. B. C. Jacobs	PTMRP
10. A. Jakoet	PTMRP
11. L. Jansen	PTMRP
12. T. U. Mare	PTMRP
13. M. F. Marlie	PTMRP
14. M. Parker	PTMRP
15. A. Robertson	PTMRP
16. M. Samodien	PTMRP
17. A. T. Scellor	PTMRP
18. J. Scholtz	PTMRP
19. F. Sydney	PTMRP
20. J. E. Swanepoel	PTMRP

Note: AZANA - Azanian National Union  
ICC - Ipelegeng Community Centre  
ITC - Independent Teachers' Centre  
PATUSA - Part-Time University Students' Association  
PRMRP - Peninsula Technikon Math Revision Programme  
WCOC - Witwatersrand Council of Churches

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Western Cape Tutors Trained April 19 to 20 and May 3 to 4, 1985

	NAME	PROGRAM
1.	A. Adolf	PRMRP
2.	C. Adonis	PRMRP
3.	B. Bailey	PRMRP
4.	E. Crawford	PRMRP
5.	W. Daniel	PRMRP
6.	R. C. Fray	PRMRP
7.	J. Isaacs	PRMRP
8.	H. Jacobs	PRMRP
9.	Mark Jacobs	CTPA
10.	J. C. Koeberg	CTPA
11.	N. Lewis	PRMRP
12.	J. Noel	PRMRP
13.	M. Smith	PRMRP
14.	G. Van Schikwyk	PRMRP
15.	G. Wesso	PRMRP

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ANNEX I

CONTRACTOR'S RESPONSE

Prepared by The Consulting Group, Incorporated  
424 F Street, San Diego, California

INTRODUCTION

CGI commends the Evaluation Team for successfully completing the very demanding task of conducting a formative or process evaluation of the University Preparation Programme (UPP). We expect that the Team members came to appreciate the extreme complexity of the environment in which the project is being implemented.

To the extent possible, CGI will use the Final Evaluation Report's findings to improve current and future implementation of the project. We urge that AID accept and act positively and expeditiously on the report's recommendations, so that this very important project will continue. Such action will enable the U.S. to continue to provide the know-how and resources for black South African students to successfully complete their high school matriculation requirements and prepare academically for university study. Equally important, it will provide an opportunity for black South African tutors and teachers to upgrade their teaching skills and professional qualifications.

In reviewing the Draft Final Report, we found certain factual errors of the kind which we understand are unavoidable in evaluating a project of the scale and complexity of UPP. We accepted the offer of Development Associates, Inc. to identify and suggest corrections to such errors, which we did in our letter of June 20, 1985.

We are, on the other hand, very concerned that certain of the Draft Final Report's findings, analyses (particularly Section V), assessments and conclusions are not substantiated and are sometimes contradictory. Further, we believe that the report's observations and overall assessment of CGI's performance under the contract is not balanced. While the report does not hesitate to criticize CGI for perceived failures, it consistently refrains from giving credit due for accomplishments.

We have accepted Development Associates' offer to present in this Annex to the Final Report CGI's clarification of those findings, analyses (Section V), assessments and conclusions that we question.

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**REPORTED FINDINGS FROM THE DEVELOPMENT ASSOCIATES TEAM**

The findings that we question, and for which we provide clarification here, are the following:

1. Executive Summary, Section B.3.  
Coordination and Communication, pp. I-5 and I-6

**Finding:** This section suggests strongly that establishment of the existing Advisory/Steering Committee resulted from a failure to establish what the report calls a "National Steering Committee." The paragraph reads, in part, "In addition, bowing to (emphasis added) the requests of regional groups, Regional Management Committees were established and given more autonomy to manage the UPP in their areas."

**Clarification:** First, CGI's contract with US/AID requires the setting up of a "Project Steering Committee," not a "National Steering Committee." The existing Advisory/Steering Committee differs from the "Project Steering Committee" called for by the contract only in the extent to which it allows for some regional autonomy in implementation of the project, and to which it limits authoritative directing from the national level. (Note: There is little, if anything, that is genuinely national in South Africa. Those education programs in the black community that are not financed by the U.S. Government are also organized on a basis that allows for regional autonomy).

The composition of the Advisory/Steering Committee is much the same as envisaged for the "Project Steering Committee." It is also nationally representative; each of the four major geographic regions is represented by 3 to 5 members who are selected by participating nonformal educators (the Regional Management Committees) from the respective regions. The regional representatives, i.e., members of the Advisory/Steering Committee, meet as often as they determine necessary to discuss problem areas and advise the contractor and participating community organizations on implementation of UPP.

As for "bowing to the requests of regional groups," not only was CGI obligated by contract to seek and follow the advice and guidance of community educators, but the contractor was obligated to implement a nationwide project. This necessitated consulting educators in the four major regions. These were not adversarial consultations in which CGI was insisting on a "National Steering Committee." They were consultative meetings in which the advice and guidance of community educators was sought and followed.

2. Executive Summary, Section B.3.  
Coordination and Communication, p. I-6

Finding: The first full paragraph on p. I-6 begins, "All of these complex negotiations have resulted in delays in establishing the Steering Committee..."

Clarification: There were no delays in establishing the Advisory/Steering Committee. CGI's contract required that it be established within six months of the signature of the contract. The contract being signed on September 29, 1983, the Advisory/Steering Committee had to be established by March 29, 1984.

The Advisory/Steering Committee was fully formed on January 26, 1984, when the Transvaal Regional Management Committee made its final decision on selection of its representatives to the Advisory/Steering Committee.

The Advisory/Steering Committee held its first meeting on February 10, 1984.

3. Executive Summary, Section C.2.  
Assessment of the Long-Term Relevance of CGI Materials for the JMB Examination, p. I-8

Finding: The last sentence of this Section reads, in part, "...the team (Evaluation Team) questions the relevance even now of the English-language materials, based as they are on the erroneous assumption that English is a first language for most of South Africa's non-whites."

Clarification: The decision to write English language instructional materials is not based on an assumption that English is the first language of black South Africans. Such an assumption would, indeed, be so grossly erroneous that it is difficult to imagine how the Evaluation Team could have thought that there was such an assumption.

The decision to write English language instructional materials was based on no such assumptions, but rather on the following facts:

1. English is the language preferred by black South Africans for education, business and politics. (Note: A central cause for the Soweto student revolts of 1976 was the desire to be allowed by the formal school system to study English rather than be compelled to study Afrikaans.) Black South Africans fully recognize that they need a single, international language to communicate most effectively within and beyond the confines of South Africa's apartheid system.
2. Black South African primary school students are taught in their home languages through Standard 4, then English becomes the language of instruction in Standard 5. Because of this and because the majority of black South African students do not learn and speak formal English in their homes, they are seriously handicapped in their ability to master the other subjects, in which the instruction is in English.

This handicap continues into secondary school, where it becomes particularly damaging because it seriously impedes the students' ability to effectively learn mathematics and the sciences. The handicap often extends into university study because the English language teaching in high school, as well as the English language skills of the teachers, are often poor.

Further, it was on the advice and request of black South African educators that the materials be written using the English language as it is used on the highest standards of the JMB exam. This request was made to avoid perpetuating the problem of second rate educational opportunities for black South Africans.

Because we are sure the Evaluation Team was also aware of these facts, we do not understand why the Draft Evaluation Report "questions the relevance even now of the English-language materials."

3. Project Background and Description, Section II.E.9.  
Chronology of Project's Main Activities, p. II-10

**Finding:** The remarks column of item 9 is misleading. It reads, "First Tutor Training Workshop, scheduled for September 84, held January 85 due to student boycotts."

**Clarification:** Because this remark, as presented, could be interpreted to mean boycotts of UPP tutor training, we believe it necessary to make clear, as did the Contract Implementation Schedule/Actions Completion Plan provided to the Evaluation Team, that delays were caused by the boycotting of the formal school system.

Nonformal education programs, including UPP, were affected by these boycotts because students generally became very unsettled during these periods of heightened political protest activity.

4. Concept Development Worksheets (CDWs), Section III.B.  
Development of the CDWs, p. III-2

**Finding:** The last sentence of the first paragraph of this section reads, "Even teachers presented with the materials had problems understanding them, and most indicated that they found the Study Guides of limited usefulness in guiding their students."

**Clarification:** We seriously question the basis of this finding.

One of the principal activities of UPP Phase II, Testing and Evaluation, was to examine the usefulness of the Study Guides for tutoring and teaching students. To do so, CGI conducted introductory seminars in Johannesburg, Kwazulu (University of Zululand) and Cape Town. The majority of the participants in these seminars were formal school teachers who also serve as tutors in nonformal matric preparation programs. These participants completed questionnaires designed to get their assessments of the Study Guides, the prototype CDWs (developed during Phase II), and of the pedagogy on which the project is based. As documented in the October 1982 Phase II Midterm

Evaluation Report presented to AID, the teachers found the materials and the pedagogy highly useful for upgrading their own subject area competence and teaching skills.

Further, the UPP Tutor Trainers, trained by a U.S. team of teacher trainers in June and July 1984, were all qualified and practicing formal school teachers who tutored in nonformal programs. As documented in CGI's Training Conference Report, which was included in the July-September 1984 Quarterly Progress Report, these teachers/tutors found the materials and the pedagogy extremely useful. They indicated in their evaluative questionnaires that the training, which included effective use of the materials, significantly enhanced their teaching skills. It also had the effect of raising their level of personal and professional confidence as teachers, which addresses a fundamental problem for black South African teachers.

Finally, in the UPP Tutor Training Workshops that have been going on since January 1985, the participants, who are teachers and tutors, participate very enthusiastically, as the Draft Evaluation Report itself observes (Section IV, "Training of Trainers and Tutors"). Further, the teachers and tutors indicate that they find the materials and their newly acquired skills for the teaching/tutoring programs very helpful in the teaching in which they are already involved.

In summary on this point, our continuing experience with black South African teachers and tutors is directly contrary to the Report's unsubstantiated finding that "most indicated that they found the Study Guides of limited usefulness in guiding their students."

5. Concept Development Worksheets (CDWs), Section III.D.  
Status of CDWs by April 30, 1985, p. III-4

Finding: The first paragraph of this section correctly notes that CGI, as an adjustment to the implementation plan of the original contract, agreed to jointly develop math CDWs with the South African Committee on Higher Education (SACHED). It then states, however, "Further difficulties arose when SACHED failed to provide two full-time math writers to match CGI's two full-time writers, and a further adjustment was made to produce a total of 170 lessons instead of complete CDWs in math."

This statement does not reflect the accurate sequence of events. It suggests a cause and effect relationship between these events that does not exist and makes a misleading distinction between lessons and CDWs.

Clarification: The fact that SACHED failed to provide two full-time math writers had no bearing on the decision to jointly produce 170 "lessons." The actual sequence of events was as follows:

1. CGI and SACHED agreed in the Spring of 1984 to jointly develop math instructional materials, which would be designed to serve the purposes of UPP's tutor-assisted matric preparation programs and SACHED's distance-learning matric preparation programs. It was also agreed at that time that each organization would commit two full-time math writers to the joint effort.

2. **The joint design of the math materials took place in Johannesburg in June and July 1984 when CGI's two math writers went to Johannesburg and worked for one month with SACHED's math writer and other materials development staff. The writers worked under the assumption that SACHED would soon have a second writer when they established the writing methodology to be employed, the teaching sequences needed to cover the syllabus, the organization of the instructional materials, and the assignment of writing and review tasks of the two organizations.**

As regards organization of the instructional materials, it was decided by the writers during the month-long meetings that the basic unit of instruction would be a lesson. A particular mathematics concept and the skills related to the practical use of that concept would be covered in 2 to 3 lessons. 8 to 10 lessons (3 to 4 concepts) would constitute a book, because SACHED's distance-learning instructional series is presented in the form of books.

In the jointly designed effort, the 2 to 3 lessons needed to cover a particular math concept are together roughly comparable to the UPP Concept Development Worksheet. So, the 170 lessons to be developed jointly by CGI and SACHED would be comparable to about 68 CDWs. We believe the number of CDWs, per se, is not significant, however, because the jointly designed and developed series of materials will cover the entire mathematics syllabus, as the math CDWs would have done if written by CGI alone.

What is significant, and this is the fundamental rationale for the joint effort, is that each joint lesson contains more instruction than do regular UPI lessons. This is necessary because SACHED's distance-learning materials must be "stand-alone" materials, i.e., the student must be able to learn the subject matter from them without the regular assistance of a teacher tutor. Consequently, each lesson is more comprehensive and requires a higher level of effort (staff and other developmental inputs) to complete. Therefore, the joint efforts of two full-time writers of each organization were to be combined to cover the entire syllabus with more in-depth instruction to cover SACHED's distance-learning needs. Therefore, to suggest, as the Report does, that "a total of 170 'lessons' instead of complete CDWs" means a lesser project output is seriously misleading.

6. Communication and Coordination, Section V.C.  
The Groups, p. V-3

Finding: The last sentence of this section reads, in part, "...unless these groups and persons agreed to serve on the Steering Committee, funds allocated to the project were not to be released."

Clarification: There is no such condition in CGI's contract with AID. On this point, the Contract (Article I.B.3.b) provides, "The Contractor will assist the U.S. Government in its efforts to invite and encourage (emphasis added) representations of the following organizations to serve on the Steering Committee:

- (1) The South African Council of Churches (SACC) and the Educational Opportunities Council (EOC) of SACC
- (2) The South African Committee on Higher Education
- (3) St. Barnabas School
- (4) The Teachers' Action Committee (TAC)
- (5) Witwatersrand University professors (e.g., W. Kambule and E. Mphahlele) involved in extra-curricular community education programs
- (6) South African Institute of Race Relations (SAIRR)."

First CGI, as documented in its Quarterly Progress Reports to AID for the October-December 1983 and the January-March 1984 quarters, did invite and encourage all of these groups and persons to participate, and it explained how four of the six were participating as members of either the Advisory/Steering Committee or the Transvaal Regional Management Committee.

Second, there was no stipulation in the contract that "funds allocated to the project were not to be released." The contract effectively obligated the \$1.8 million to CGI, to be disbursed to CGI on a cost-reimbursement basis for services provided under the contract's scope of work.

7. Dr. Gall's Report (Annex B)

Two additional clarifications are necessary:

Do the CDWs relate meaningfully to the Study Guides?  
Item III.A.2., p. 13

The first sentence, referring to CDWs being developed "under the contract amendment of 2/1/84," is misleading. The development of CDWs was stipulated in the original contract. Contract Modification No. 1, dated February 1, 1984, affected the development of CDWs only by reducing the number to be produced from 150 to 100.

Item III.A.3., p. 13

The third sentence is incorrect in two respects. The first error is in stating that the CDWs are written for instruction in Standards 6 to 8, which corresponds to U.S. grades 8 to 10. The CDWs are written for instruction in Standards 9 and 10, which correspond to U.S. grades 11 and 12. They assume completion of Standard 8.

**REPORTED ANALYSES BY THE DEVELOPMENT ASSOCIATES TEAM**

The analyses that we question, and for which we provide clarification here, are the following:

1. Communication and Coordination, Section V.E.  
Credibility, Legitimacy, Collaboration, pp. V-6 to V-9

**Analysis:** The last paragraph of this section states, in part, "...the credibility of two of the three groups that signed the contracts with CGI this spring has been questioned."

**Clarification:** The Report suggests that CGI selected the groups that were to serve as Regional Coordinating Agencies for each region. These groups were, in fact, selected by the Regional Management Committees, i.e., the wide range of nonformal organizations and individual educators interested and involved in UPP.

2. Communication and Coordination, Section V.F.  
Analysis, pp. V-9 to V-10

**Analysis:** The third paragraph reads, in part, "...it is easy to choose the wrong reference point in treading unfamiliar terrain, as CGI seemingly has done. For how else to explain the decision to prepare black students to take the JMB in large numbers when, because of apartheid, few in number do so since the law requires them to take the National Senior Certificate exam."

**Clarification:** The Report does not indicate, or may not recognize, that it is precisely because apartheid law has required black students to take the National Senior Certificate (NSC) that many of them seek alternatives. The NSC is developed and administered by the Department of Education and Training (DET), the South African Government Agency charged with administering black education. The exam is recognized in the black community as a lesser academic credential. It is also very suspect, because black students and parents believe that the scoring of the exam by the SAG is manipulated to keep the number of black matriculants low.

This reality of the NSC's being a lesser academic credential and this perception (real and imagined) of its scoring being manipulated by the SAG are the fundamental reasons why many black South African nonformal educators and black community organizations (including SACHED) commit themselves to preparing students for the JMB.

A second point is of critical importance here. Preparing students for the JMB is important not because it prepares the student for a single exam to the exclusion of all others, but because it prepares them for the highest academic standard at which they can be tested for matriculation in South Africa.

The NSC, and all other racial group or regional exams, cover material taken from a core syllabus of what is taught in the formal school system. The JMB exam covers all the same material, and tests for mastery of additional material. If the student prepares adequately for the JMB exam, the student has also prepared more than adequately for the NSC.

In seeking to assist students in preparing for the JMB, the UPP did not "choose the wrong reference point." It seeks to assist black South African students and teachers to achieve an important educational objective -- to prepare for the highest possible standard of matriculation.

**REPORTED ASSESSMENTS BY THE DEVELOPMENT ASSOCIATES TEAM**

1. Introduction, Fourth Paragraph, p. 1

**Assessment:** The second sentence of the paragraph states, "Because of delays in getting the project underway, the evaluation was delayed until the spring of 1985."

**Clarification:** First, there were no delays in getting the project underway. The Contract was signed on September 29, 1983. Materials writers were hired in San Diego and began working in October 1983. CGI representatives traveled to South Africa in November 1983 and began the formation of the Advisory/Steering Committee and the search for an Executive Secretary.

Second, the delay in starting the evaluation until the spring of 1985 is in no way attributable to CGI. CGI had made numerous requests for the evaluation to be conducted in September-October 1984 as it was scheduled.

2. Executive Summary, Section 2, p. 1-2

**Assessment:** The statement in question here is not an assessment, but purportedly defines the scope or period of coverage of this evaluation. It states, "The third phase -- the subject of this mid-term evaluation -- is a two-year effort (1983-1985) to conduct activities in four major areas..."

**Clarification:** The evaluation did not limit itself to the two-year period or to the four major areas specified in the statement.

We fully accept that the history of the project bears significantly on the present phase, the subject of the evaluation. We are very concerned, however, that the report does not clearly distinguish between criticism of the project that was directed at the first two phases (the pilot and experimental phases) and the evaluation of the present phase. We believe a distinction in the criticism, as regards the phase to which it applies, is important because of the lessons learned in the pilot and experimental phases, as well as in the first six months of the present phase. All of these lessons have guided us in making the project increasingly more responsive to the advice and guidance of black community educators in South Africa.

3. The following three assessment statements are presented together for a single clarification:

A. Executive Summary, Section B.2,  
Quality of Tutor/Trainers and Tutors, p. 1-6

"The quality of both tutor trainers and tutors is judged to be very good."

**B. Training of Trainers and Tutors, Section IV.3**  
**Tutor Training, p. IV-5**

"The quality of the trainers of tutors in the two training programs in Johannesburg and Cape Town was very good. The trainers understood the personalized system of instruction, were enthusiastic about presenting it, and won the respect and confidence of their tutors very early in the training."

"The tutor trainers were very effective in using probing skills and questioning techniques, and in creating a positive learning atmosphere."

**C. Communication and Coordination, Section V.D.**  
**Community Organizations and the UPP, p. V-5**

"The naming of Mr. Fanyana Mazibuko, a highly respected black South African, as national executive secretary in February 1984 has given the National Advisory/Steering Committee increasingly effective leadership in this delicate and vital function of the project."

**Clarification:** Each of the above quoted statements is an example of an unfortunate feature of the Report. While it does not hesitate to criticize CGI for perceived failures, it refrains, almost without exception, from specifically crediting CGI with the significant accomplishments for which it should be rightly credited.

Statement A observes that the "quality of both tutor trainers and tutors is judged to be very good." It does not make clear that this quality results from CGI's training.

Similarly, Statement B comments on how well Tutor Trainers use personalized system of instruction techniques, without noting that they were almost totally unaware of these techniques before being trained as UPP Tutor Trainers by CGI.

Statement C refers to the naming of Fanyana Mazibuko as Executive Secretary as though it was done by the Advisory/Steering Committee or by some "invisible hand." Mr. Mazibuko was hired by CGI to serve as Executive Secretary, not just because of the respect he commands in the black community, but because of the personal and professional commitment he made to ensuring that the UPP would be a nonformal education effort, implemented by and for black South Africans.

**4. Evaluation Team Recommendations, Section VIII.B.**  
**The U.S. Contractor (Consulting Group International), p. VIII-4**

**Assessment:** The last sentence of Item 2 reads, "Ultimately, the project must be seen as beneficial to South African groups, not mainly benefitting a 'remote U.S. firm.'"

**Clarification:** This sentence is added to a recommendation that is otherwise sound. The quoted sentence suggests that UPP is not beneficial to South African groups. Such a suggestion is directly contrary to the conclusions stated on page VIII-1, just two pages earlier in the Report:

"The UPP provides a tangible asset to disadvantaged African, coloured, and Asian secondary school teachers and students trying to pass various university matriculation examinations and successfully pursue further studies in universities and technical schools and to enter technical fields requiring completion of secondary education with the requisite attitudes, understandings and skills provided by the UPP program. The UPP has introduced an existing innovative teaching and learning methodology that offers great promise for students who have been denied a high quality education under the present teacher-centered system, which provides scant and inappropriate learning materials and under-trained teachers."

## CONCLUSIONS BY THE DEVELOPMENT ASSOCIATES TEAM

The conclusions that we question, and for which we provide clarification here, are the following:

1. Executive Summary, Section I.D.  
Key Conclusions, p. I-9

Conclusion: Key conclusion number 5 states, "The allocation of funds has unduly favored the U.S. contractor at the expense of the South African cooperating entities."

Clarification: One of the central objectives of the contract is to transfer to black South African educators a new educational technology. To meet this objective, the project's funds were allocated to train black South African nonformal educators to employ this new technology using the specifically developed materials. To have allotted the project funds differently would only have enabled South Africans to do more of the kind of matric preparation programs than they have done historically in that country. It would not have allowed for the introduction of the new methodology, materials and training skills that CGI introduced through UPP.

The value of these technology transfer activities of UPP is recognized in the Report's Section VIII, Evaluation Team Recommendations. On the basis of its investigations and findings, the team concluded that the conception of this mastery learning, personalized system of instruction to be introduced to nonformal education in South Africa is not within the capability of South African community organizations.

2. Annex B, Dr. Gall's Report, Section II,  
Evaluation of the Project Objectives and Methods, A. (Are the project objectives desirable?), pp. 4-9

Conclusion: The last sentence of Item A.2.5 (p. 8), reads, "If the JMB is phased out, it would have the effect of making the project objective obsolete."

Clarification: This conclusion is erroneous and contradictory to other conclusions in the Report.

All of the South African matriculation exams are based on the same core syllabus. The JMB exam is the most comprehensive of these exams.

It is unlikely, if not impossible, that a phasing out of the JMB would result in an exam that tested for material other than that covered by the core syllabus. In Section VII, Additional Issues, sub-section B, Assessment of Long-Term Relevance of CGI Materials for JMB Examination, the report states, "According to well-informed sources (e.g., Mr. Michael Corke, St. Barnabas School), any future national exam will center around the subject matter syllabi for Standard 10 students. It is unlikely, therefore, that significant curriculum changes will occur in the near or foreseeable future."

Therefore, if the JMB is phased out, neither the project objective nor the instructional materials would be obsolete. UPP would still assist in preparing black South African students for whatever South African matriculation exam they take.

3. Annex B, Dr. Gall's Report, Evaluation of the Concept Development Worksheets (CDWs), Section III.B. (Do the CDWs relate meaningfully to the Joint Matriculation Board examination?), pp. 14-15

A. Item 3

Conclusion: This conclusion states, "The CDWs (and Study Guides) cover three of the eight subject areas tested on the JMB. Thus, the possibility exists that students could master the concepts and skills in the CDWs, do well on the three parts of the JMB covering those concepts and skills, and do poorly on the other five parts of the JMB not covered by the CDWs."

Clarification: Although Dr. Gall's statements are correct, they do not point out three critical considerations. First, the three subject areas covered by UPP are those in which black South African students historically experience the greatest difficulty in learning and in passing on the JMB. Black students have, as a rule, gathered passing marks on other parts (e.g., sociology, history and language [their first language or other African languages]). Their problem, the one that UPP seeks to address, is in preparing for the English, math and science sections of the JMB. They are already passing the others.

Second, it is almost virtually impossible for students to be admitted to university (or to succeed academically in the unlikely event they are admitted) without passing the English, math and science sections of their matriculation exams. And because of the scoring weight given to these three subject areas, passing these sections can enable the student to pass the exam and gain entrance to university, even if they do not pass some of the other sections.

Third, the UPP methodology stresses a generic problem-solving approach that can be applied to other academic areas. These critical thinking skills could well help students in their approach to learning in general.

B. Item 5:

Conclusion: The last sentence reads, "It seems then that the CDWs in English and the physical sciences will fall well short of covering all of the concepts and skills included in the JMB syllabus."

Clarification: This statement is accurate, but could be very misleading because it considers only the information available when Dr. Gall interviewed CGI staff members in San Diego.

CGI has proposed to AID a contract modification that enables CGI to write the full number of CDWs originally planned for these two subject areas (40 in English and 50 in physical science). This would ensure full coverage of the JMB syllabus. We believe that AID is favorably considering this proposal, and that we will be able to fully prepare participating students for the JMB English, physical science (and math) sections.

C. Item 6

Conclusion: The sentence reads, "South African educators and students should be made aware that the CDWs provide very limited coverage of the concepts and skills in the JMB syllabus, so that they do not place undue reliance on the CDWs as instructional texts."

Clarification: The clarification of Items 3 and 5 above together explain why this conclusion is not sound.

3. Annex B, Dr. Gall's Report, Section IV, Evaluation of Trainer and Tutor Components

Conclusions: Item A (Is the process used to train trainers technically sound and culturally appropriate?), pp. 23-25

1. The last sentence of Item 4 reads, "It seems to me likely that tutoring students on CDWs would differ markedly from tutoring students on Study Guides. There is no discussion of the difference in the manual (UPP Training Manual)."
2. Item 8 concludes that it may be necessary "to revise the Training Manual to include techniques for using the CDWs."

Clarification: Tutoring of students using CDWs does not differ from tutoring them with Study Guides. Further, the introduction to the Training Manual explains that the procedures for instruction explained therein apply to the CDWs as well as the Study Guides. It is therefore not necessary to revise the Training Manual to include techniques for using the CDWs. (This clarification also applies to the suggestion in Item C.3., p. 27, that training of tutors is also oriented to the Study Guides and not applicable to the CDWs.)

## FINAL COMMENTS FROM CGI

As a general and final comment on the Draft Final Report's overall assessment of CGI's performance, we believe there are serious omissions. Specifically, the Report does not recognize CGI's pioneering role in the initiation of U.S. Government development assistance programs for black South Africans in South Africa.

UPP was the first project which the U.S. Government attempted to implement inside South Africa. All previous projects provided increased education opportunities for students (refugees or those still in South Africa) who traveled to the United States to study.

UPP was, at the start, an experimental effort to determine whether U.S. Government financed human resources development projects could be implemented inside South Africa. In considering CGI's original proposal to the United States Information Agency (USIA) in 1980, USIA, AID and the State Department had to deliberate unprecedented foreign policy and development assistance issues. The conclusion of these deliberations was that the program objective, i.e., providing increased and expanded opportunity for quality education to black South African students, merited initiation of this experimental project.

The project was originally funded and begun during the Carter Administration, the policy of which was to distance the United States from South Africa and to minimize U.S. involvements in the country. Therefore, CGI was very much "on its own" in implementing this experimental activity.

The project was experimental in every sense. It was to introduce a new teaching and learning methodology into a very authoritarian society and educational system. It was to do so in a country toward which the United States had a very "distant" foreign policy practice. Consequently, there was no government-to-government development assistance agreement, no AID mission in the country, and no possibility (or desire by CGI) of working with, as is normal, the cooperation and support of the host country government. Further, there was far from consensus in the U.S. on the question: "Will badly needed assistance to black South Africans in the education sector inside South Africa justify the risk of giving aid and comfort to the apartheid system?"

Because U.S. Government-financed development assistance activity was such a new and potentially sensitive area of international politics, the U.S. Embassy staff in South Africa was not openly supportive of or associated with UPP. Almost all of CGI's dealings were, therefore, directly with community educators.

Without CGI's proposing and persistently carrying out UPP through its first two phases in these formative, but uncertain years, the experiment would not have answered the tough questions deliberated by the U.S. Government in 1980. There were no other activities being generated, from the U.S. public or private sectors, that ventured into South Africa.

It was only after UPP proved in Phases I and II that U.S. Government-funded development assistance activities could be implemented inside the country that other AID projects could be undertaken in South Africa. These included the Entrepreneurial Training Project for Disadvantaged South Africans, the Labor Unionist Training Project, and the Bursaries (in-country scholarships) Program.

We believe CGI's pioneering effort in this area is worthy of recognition beyond that which has been stated or implied in this evaluation report.