

FINAL REPORT

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I. REPORT BY DEAN NIELSEN, CHIEF OF PARTY

A. INTRODUCTION

The overall objective of this project was to assist BP3K and its associate institutions in testing and further developing the Pamong and Small Schools learning systems and to assist in the development of institutional capability at UNS and its affiliates in the field in providing technical assistance and dissemination planning. This overall objective was further elaborated and quantified in the Project Paper, a document which was never made binding on the GOI, and Annex 1 of the Project Agreement, a document which was considered to be binding on both AID and the GOI.

Reports concerning the fulfillment of the objectives elaborated in the basic documents have already been written and discussed. These include the "Report of SD Pamong Implementation Status, 1980 - 1982" by Nielsen, Bernard, and Mudjiman, May, 1982; the various six-months reports produced by IIR, the last of which was released in September of 1982.

Since all of these reports give a detailed accounting of achievements vis-a-vis specific project objectives, the current report will take a different, more interpretive approach. In it project accomplishments will be briefly presented in narrative form. Following that an examination of project's constraints will be presented and following that a review of methods of work used and lessons learned. Finally, and most importantly, a major section will be devoted to recommendations for further development.

Although the main body of this report was written by the project Chief of Party, Dean Nielsen, many ideas and perceptions were contributed by the Bali field advisor, Doran Bernard, through a memo which he submitted before his departure in December of 1982. Since this memo provides an interesting account of the project's accomplishments, approaches, and activities in Bali and since its recommendations are not always the same as those in the main body, it is presented in its entirety as a separate section in this report.

## B. PROJECT ACCOMPLISHMENTS

1. Pamong and Small Schools systems are operating within routine administrative mechanisms in Gianyar, Bali, and Central Kalimantan. Supervision systems have been set up and are being tried out in Gianyar which will make regular primary school supervisors more aware of the progress and problems in Pamong schools and will give them tools and information needed for making appropriate interventions (e.g., solving problems and suggesting improvements). As evidence of the assimilation of Pamong and Small Schools at the sites, local educational authorities in both areas are planning major expansions of the Pamong/Small Schools networks.

2. Project field staff members (teachers and administrators) have been trained numerous times in numerous ways in various aspects of Pamong/Small Schools implementation. On every occasion field staff perceptions and suggestions have been sought and incorporated where appropriate. New training systems and materials are currently under preparation by the UNS training team. These materials will make Pamong/Small Schools training more systematic and more participatory.

3. Pamong learning materials, both for programmed teaching (Grades One and Two) and for programmed learning (Grades Three - Six) have been produced covering "core" subject matters and are being used in two Pamong sites (Bali and Solo) as well as three Small Schools sites (Kalimantan, Sulawesi, and Madura). Module revisions are currently under way and new forms of modules (textbook study guides) are being experimented with.

4. Management guides for Pamong/Small School implementation have been produced and tried out and are currently being finalized.

5. Various kinds of evaluations have been conducted and results have been fed back to project implementers and decision makers. Two formative evaluation reports have been written, one covering 1980-81 and the other 1981-82. Reports concerning students' achievement and fulfillment of learning targets (based on routine analysis of THB and DKB) have been distributed. A Small Schools evaluation is currently under way in which data collection and analysis are being done by regional teams trained by UNS personnel.

6. Case studies are being conducted in Gianyar to provide in-depth information concerning the day-to-day operations of PKB's and Patjars.

7. Over 400 former school drop-outs have been able to earn primary school certificates in Gianyar through their study and preparations at Pamong Patjars. Over 750 Patjar participants have taken and passed a primary school equivalency examination.

8. A community structure for the promotion of universal primary education has been pioneered in Gianyar.

9. Dissemination strategies for Pamong and Small Schools have been developed by the Directorate of Primary and Secondary Education, with considerable assistance from UPT Pamong. On-going collaboration between UNS and PDM in the planning of Pamong/Small Schools dissemination has been institutionalized.

10. Institutional capability at UNS for providing technical assistance for Pamong development has been enhanced by means of formal and informal (on-the-job) training, staff reorganization and team building, the establishment of a series of regional and national seminars on "Self-Directed Learning," and the ever increasing commitment by the University to establish Pamong as one of its main research and development centers.

11. Regional Pamong and Small Schools staffs have developed increased institutional capability to carry out their functions through formal and informal (on-the-job) training. Small Schools "working groups" have been trained by UNS staff members in module writing, evaluation research, and training materials development.

#### C. CONSTRAINTS ON PROJECT IMPLEMENTATION

Pamong was originally designed to respond to the particular needs and conditions of disadvantaged children and youth in rural and remote areas in Indonesia. When the system was first envisioned, there were severe shortages of trained teachers and insufficient funds to provide conventional schools for all of the country's school-age children. Pamong (with its reliance on programmed materials, student tutors, and community volunteers) was to provide a cost-effective alternative to the conventional school, one which was projected to be extensively disseminated by the end of the current five-year plan (1984).

Now, a little more than a year prior to that target date, it is apparent that the Pamong system will not be taken into the mainstream of primary education delivery as a substitute for regular primary schools. Instead Pamong has been assigned a more modest role: that of serving marginal groups, school drop-outs, and children in remote villages who cannot be reached by the conventional school. This does not mean that Pamong or some kind of Pamong variant will never make it into the mainstream of primary education delivery. But certainly during the current planning cycle, Pamong-based systems will be called upon to fill in gaps in the regular school system rather than to revolutionize it.

The reasons for this shift in Pamong's scope and purpose are numerous. Some of them relate to changes in the very conditions and assumptions that gave rise to Pamong in the first place. Others have to do with organizational or bureaucratic constraints. Still others have to do with problems and weaknesses in the learning system itself and its development.

1. Changes in Conditions and Assumptions.

Foremost among these kinds of changes was the change in Indonesia's economic situation. The enormous jump in the oil prices in the early 70's meant that Indonesia, an OPEC member, all of a sudden was able to finance the training of enormous numbers of new teachers and the building of hundreds of thousands of new classrooms. With such expansion under the so-called INPRES program, Indonesia could begin to plan for universal primary education at whatever the cost. (As the OPEC position deteriorates in the 80's, budgetary constraints will present themselves again; but it is not likely that they will be strong enough to move the ministry from its current trajectory.)

This has meant that attempts to find substitutes for the classroom teacher have become less interesting to educational planners. On the contrary, the rural school teacher is considered to be an important actor in community development and national consolidation. Moreover, the role of teacher is generally considered one of the main avenues of social mobility for rural youth.

There have also been some severe challenges to assumptions about the schools' capacity to mobilize volunteer labor. People of good will and good intentions are found everywhere, but few skilled craftsmen or tutors have been able to commit themselves to regular tasks over a long period of time. In most village settings, the "opportunity costs" for such a commitment are simply too high. There is also the issue of social equality, an issue which is rarely made explicit in this context but which nevertheless is relevant. The issue is that, if urban school children are taught all of their subjects by professionals, why do kids in rural schools have to be taught some subjects by nonprofessional volunteers? To set up the system in that way would be to put a new form of educational taxation on rural communities. If the objective is to promote more parental and community involvement in primary education, the social equity perspective would call for similar kinds of voluntary support in urban schools.

Another area where assumptions have changed is in the role of the community education program, PENMAS, in providing basic education for children and youth. When Pamong was first developed, PENMAS was targetted mainly towards "undereducated" adults. PENMAS, through PAKET A and other programs, was to provide literacy, numeracy, and other basic skills with no concern for the problems of formal certification. Recent changes in PENMAS' "charter," however, have allowed it to cater to primary school-age children, offering them basic education which can lead to their earning a primary school equivalency certificate. This alternative has become popular among youth who have no aspirations for further education at the secondary school level. Although this develop-

ment does not directly relate to the problem of Pamong's exclusion from the mainstream of primary education, it does represent a further restriction in Pamong's sphere of concern.

Finally, assumptions regarding the "marketability" of Pamong modules have been challenged. Pamong planners had always considered Pamong modules to be substituted for regular textbooks, but PDM apparently is unwilling to cut back on textbooks for Pamong classrooms. Thus modules, even in Small Schools, are considered to be options whose costs are to be covered by local funds if available.

## 2. Organizational/Bureaucratic Constraints

Using the clear vision of hindsight, it is now clear that PDM should have been more closely involved in Pamong planning and development from the beginning. The assumption at BP3K and UNS appears to have been PDM would, at the appropriate moment, take over the implementation and dissemination of the full Pamong system. It came as a bit of a shock to Pamong planners when they realized that PDM managers were not interested in widespread dissemination of the Pamong's in-school component. This realization threw Pamong planning into a disarray, since all of the planning deadlines were focused on the date at which the full system would be delivered to PDM. These deadlines apparently were never communicated or recognized by PDM, since the dates in the planning documents were not matched by real events.

At first, IIR field personnel based their operational plan upon the overall project plans mentioned above. But as it became apparent that these plans represented little more than formal exercises on paper, IIR had to fall back on its own structure for work planning, its six-months' reporting cycle.

The weakness of the links between BP3K and PDM is a manifestation of the general problem of fragmentation within the Department of Education and BP3K's isolation from the implementing agencies. This problem was exacerbated by the fact that the vacancy left by Dr. Soemitro at Pusat Inovasi, when he was promoted from Center head to become BP3K's secretary, was not filled for over a year. This meant that no one at BP3K who was in a position to monitor Pamong development on a day-to-day basis and to represent Pamong's interests during crucial PDM planning periods.

Similar leadership problems were evident at UNS where rumors concerning changes in the UPT Pamong directorship were heard during a period of over a year. Problems in leadership in the two places were, in fact, interrelated. Not long after a new head of Pusat Inovasi was installed at BP3K, the leadership at UPT Pamong was also changed.

Other organizational constraints interfered with organizational effectiveness at UNS. During the first year, for example, the module writers were almost all part-timers, contracted to work on a piecemeal basis. This was one of the factors which led to the disruption of project implementation during the first year -- module production schedules simply couldn't be met.

Although that problem was eventually overcome, there are still organization problems which interfere with the development of professionalism at UNS. Since most staff members also have a teaching load at the university, there are often periods of time during which staff attendance at the Pamong office cannot be depended upon (during testing or admissions periods, for instance). In addition, conventions relating to civil servants' compensation in Indonesia exert pressures for staff members all to be generalists. This has made it difficult for UPT Pamong to develop staff members with professional depth in specific areas (e.g., evaluation, training, planning or instructional design).

### 3. Problems and Weaknesses in the Learning System and Its Development

AID entered into this project under the assumption that the Pamong "prototype" was operational and sound and that the only thing required prior to national dissemination was proper insertion into the routine mechanisms of educational administration. In the period prior to actual implementation with AID technical assistance, there was a tendency to confuse Pamong ideals with Pamong reality. In addition, some Pamong ideals were actually at odds with each other (for example, group learning and self-pacing) and never had been reconciled in practice. Close examination of Pamong procedures during the end of the first year of implementation under the project revealed that, in fact, the learning processes did not operate as expected -- group interaction was almost nonexistent, teachers' and tutors' roles were unclear or unrealistic, confusion existed with respect to promotion and grading (e.g., should rate of module completion be taken into consideration?), gaps between faster and slower students were widening instead of narrowing, etc. In short, the dazzling innovation called Pamong was an emperor who was only partially clothed.

Doran Bernard's report goes into detail about how many of these deficiencies were rectified during the second and third years of the project. As both his report and the last section of this report point out, however, system development and refinement are still not complete. In the words of Dr. Robert Morgan, Pamong still needs some "fine tuning." Until this is done and the system clearly demonstrates its cost effectiveness, policy makers are probably justified in their cautious approach to introducing Pamong into the primary school mainstream.

Certain factors have contributed to the slowness with which effective Pamong processes have been developed. First of all was the decision to submit Pamong modules to review by various validation teams instead of using learner feedback. This decision may not have been so unfortunate had the validation teams functioned properly. As it turned out, however, those teachers, pedagogues, and administrators who were supposed to be carefully checking the modules for appropriateness and pedagogical soundness hardly provided any feedback at all.

Had the IIR advisor to UN and Chief of Party had any experience in the development and evaluation of programmed materials, perhaps some of the pitfalls and systemic weaknesses still present in Pamong could have been avoided. Nielsen should have insisted that special assistance in this area be provided through short-term consultants to the project early on instead of at the end of IIR's contract. It is also regrettable that IIR's principal investigator in the project, Mr. Daryl Nichols, an experienced developer of programmed instruction, did not have a chance to have a more direct role in this.

#### D. DELIVERY OF TECHNICAL ASSISTANCE

The two full-time advisors to the Pamong project, Dean Nielsen, Chief of Party and advisor at UNS, and Doran Bernard, advisor to the Gianyar, Bali Sekretariat, arrived in Indonesia in early March of 1980 and immediately went into intensive language training at Satya Wacana Christian University in Salatiga. After one month of language training, they returned to Jakarta for project orientations and then reported for work at their respective field sites in Solo and Bali in the middle of April.

The general approach of both advisors was the same: To assist Indonesian staff members in doing what they had determined needed to be

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done, with the goal of developing in them the capability of doing these things on their own in the future. In Bali this meant preparing sites for project implementation, distributing materials, participating in training sessions, monitoring implementation progress, developing community-based mechanisms for promoting universal primary education, and finding solutions to problems as they arose. In Solo the basic tasks laid out were developing an overall plan, preparing learning materials, organizing training programs, drafting implementation guides, and developing formative evaluation systems.

A description of the ways in which the above tasks were carried out in Bali is included in the report by Doran Bernard (see Section II). What follows is a general description of the ways in which the most important tasks in Solo were carried out.

Just prior to Dr. Nielsen's arrival on the scene at UNS, a "micro-studies" team had been formulated with financing by IDRC. This team was given the task of examining Pamong procedures (learning and management) and documenting them in the form of a first draft of a Pamong management guide. At first the task of advising the micro-studies team was given to the UNESCO research advisor at BP3K, Dr. Donald Holsinger. Soon, however, it became apparent that it was more appropriate for this task to be performed by the Solo-based advisor and so Dr. Nielsen took over as consultant to the micro-studies team.

The first draft of the management guide was finished before start-up of Pamong in Bali during the academic year 1980-81 and was used as the basis for staff training in Pamong procedures. Enough feedback was gleaned from trainees for the first round of revisions on the guide. The next round of revisions was to be based on actual field experiences with the procedures as recorded through formative evaluation.

At first management guide evaluation was designed as a self-contained activity, but soon it was apparent that it should become part of an overall formative evaluation design. An evaluation team was formed at UNS to plan and carry out the formative evaluation and soon a

design was developed based upon the CIPP model (context, input, process, product -- Stufflebeam and Guba) and consultations with field implementers and managers. The evaluation design focused especially on inputs (materials, training, and facilities); processes (the procedures in the ment guides); and products (intermediate outcomes such as rates of module completion, Patjar enrollment, and Patjar "graduation").

The results of the first year's data collection were fed back during school holidays to a group of teachers and administrators from Gianyar who assisted the evaluation team in interpreting the results and formulating recommendations. Besides making revisions in the implementation guides, the UNS staff also came to an awareness that certain topics needed to be given special consideration, namely, group learning procedures for Grades Three - Six, learning/teaching processes in Patjars, and modes of PKB/Patjar supervision. It was decided that these topics would be examined in depth through the medium of "back-up studies."

During the project's second school year (1981-82), UNS continued to implement its evaluation plan, concentrating on programmed teaching, teacher morale, student achievement (based on subdistrict tests), and the status of Patjar graduates. In addition, the first back-up study was conducted, that dealing with group learning strategies. Daryl Nichols of IIR visited the project during this phase and provided some valuable direction concerning group learning procedures.

During the third school year of the project (1982-83) back-up studies relating to Patjar learning processes and supervision were set up, with the Bali Sekretariat taking the lead in the latter. The former took longer than expected because new mechanisms for community involvement in universal primary education (KK Wajar) had to be set up before most Patjars became operational and a new Patjar placement test had to be written, tried out, and normed. While these studies were being carried out, the second year's formative report was being finalized.

With respect to other formative evaluation activities during the third year, it was decided that collection of routine data and feedback to the field would be taken over by the district supervisors who had just been provided with new tools and training for doing so. Beyond that, in-depth analyses of certain aspects of Pamong processes were to be conducted through ethnographic case studies, two concentrating on Patjars and two on PKB's.

In addition, prior to school year 1982-83, UNS was called upon to assist in designing and implementing an evaluation of the Small Schools variant of Pamong. In doing this UNS took the role of catalyst and trainer, helping to clarify evaluation questions and indicators, working with local teams in constructing and pretesting data collection instruments, and providing guidelines and training in the data analysis and the formulation of conclusions and recommendations.

Two other areas in which IIR technical assistance was given were learning materials development and training package development. With respect to the former, IIR, at the specific request of the Mission, recruited Ms. Alice Palmer, publications expert, to assist in setting up specifications for module printing and to conduct training seminars on materials design, editing, and printing. As instructor for these seminars, she was able to recruit some of Indonesia's foremost experts in the publication business.

Although the seminar did result in slightly better editorial procedures for module production and new covers for modules still under production, it actually had very little impact on the quality of the modules and upon the cycle of materials evaluation and revision. Near the end of the third year of the project, Dr. Robert Morgan of Florida State University was invited to examine Pamong procedures and materials. His suggestions on how to revise modules using learner feedback were well received and are likely to be used by Pamong materials developers even at this late date.

The development of training materials for Pamong and Small Schools had been an area of interest and concern through most of the third year of the project. Plans finally gelled for the realization of a workshop on training at the end of 1982. Short-term consultant, Russell Dilts, was invited as a resource person given the task of helping the newly formed training development team of UNS formulate specifications for training packages for Pamong and Small Schools, assisting them in learning about various kinds of training techniques and materials, and helping them develop a detailed plan for the production of the materials specified. This highly successful seminar will be followed up by a second visit by Mr. Dilts during which he will review the materials developed so far and make suggestions concerning future efforts in this area.

#### E. LESSONS LEARNED

##### 1. Project Start-Up

In retrospect it is clear that more time should have been provided for project planning and preparation. The fact that wide-scale implementation began just three months after the advisors arrived on the scene meant that everything was prepared in a state of emergency. This left inadequate time for the development of an adequate materials evaluation and revision system and for the clear determination of the time needed for materials production. A longer preparation period would have provided some time to consider where UPT Pamong staff was strong and weak so that a more systematic program of staff development could have been put into place, using both on-the-job and external training opportunities.

## 2. Appropriate Research Technologies and Strategies

We have learned through experience a lesson which has been common knowledge in the research world for a long time: There is a strong tendency towards the ingratiation bias (giving the answer which is most likely to please the researcher or project manager) when using attitude surveys in Southeast Asia. Before taking this lesson to heart, we kept gathering information of limited utility, since very few respondents were willing to express criticism. This appeared to be less a problem in Bali than in Java; but, even in Bali, it was easier to solicit candid opinions in group settings than through individual questionnaires or one-on-one interviews.

The failure of the validation team approach to module review and revision provided another lesson. Busy teachers, lecturers, and administrators just can't be depended on to do a reliable job of reviewing, even when they are paid to do so. And even if they did, their inputs would not be as valuable as those gathered from the learners themselves.

## 3. Reporting Strategies

All kinds of strategies were tried in order to get a reporting system in operation. Narrative reports seem to be the hardest to get flowing. Structured reports which have blanks to fill in, etc., are slightly easier, but still require constant pressure. This phenomenon is most likely related to the observation that Indonesia does not have a strong "literary tradition." Important communications are much more likely to be oral, that is, face to face. The lesson in this is that wherever possible reporting should be done in person. This means that it may be better for Solo management to plan more visits to and from Bali to discuss project progress and problems than to expect that an effective management information system can be put into place.

#### 4. Use of Short-Term Consultants

Nine different short-term consultants have been used in this project, some effectively and others not so effectively. Those who were effective carefully followed their terms of reference, were already familiar with the context of projects like Pamong, and left a written report behind when they departed. The most successful consultant got to know the staff members well in a short time, understood their needs and concerns, and drew upon their strengths for mutual problem solving. The least successful consultant set up a seminar without consulting with the staff about their needs and thus presented a lot of information which was more or less irrelevant to the day-to-day concerns of the project.

#### 5. Working Successfully in Javanese Culture

This requires a certain sensitivity to cultural norms. For example, confrontation and displays of impatience never bear fruit in Java. Harmony with staff members is a must. Care should be taken not to appear to be engaged in any form of self-aggrandizement. Points in discussion can be stated strongly, but in the end group solidarity should be affirmed. Decisions are always made by consensus.

#### 6. Working with Two (at least) Bureaucratic Systems

This can sometimes be confusing since the demands of one do not necessarily mesh with the demands of the other. It is important to remember that AID takes contractual documents seriously and that changes in agreements need to be made through formal contract amendments. The Indonesian bureaucracy is much more flexible than the U.S., but it is also less consistent and reliable. The thing to remember when working with the Indonesian bureaucracy is that follow-through is important. That is, just because someone says something will be done, does not

guarantee that it will be. It is always a good idea to keep checking on things until the desired end is attained. Also, a regulation invoked on one occasion may not be invoked on the next even though the circumstances are the same. Thus one has to be prepared for some surprises.

## 7. Participant Training

In the project, participant training was managed by the EHR office of ALU. In retrospect it seems that it would have been advisable for it to have been managed by IIR. This is because EHR is more accustomed to handling training programs for large groups of students. The four MA students of the project were too few for EHR to handle efficiently. IIR, with its office and contacts in the US and its Chief of Party at UNS, could have avoided some of the problems of communication that occurred and could have handled arrangements with more flexibility. It seems apparent that, in general, small participant training programs should be managed by contractors.

## F. RECOMMENDATIONS FOR FUTURE DEVELOPMENT

### 1. Patjar System

The Patjar system has already been accepted by the Directorate General of Primary and Secondary Education as one of the legitimate avenues for the attainment of primary school certification and, as such, enjoys a prominent place within the current compulsory education network. As the Ministry moves forward with the dissemination of the Patjar system with the assistance of BP3K and UNS, there will be a number of important questions which will need to be addressed. The following are questions which I believe should be addressed as well as some suggested answers and/or observations.

a. WHERE SHOULD PATJARS BE ESTABLISHED?

While it is true the PDM has stipulated that Patjars are to be disseminated as part of "kewajiban belajar," the Directorate has given virtually no guidelines as to where the system should be established. At this point it appears likely that Patjars will be set up in provinces or districts (kabupaten) which are extraordinarily development minded (e.g., East Java) or which have already had some exposure to Pamong (e.g., Bali and Central Java, particularly Karanganyar). It is precisely in the areas where the need for Patjars is the greatest, that is, where the school drop-out rates are the highest, that this kind of initiative to get Patjars established is lacking. In this respect, it is essential that PDM not only make general statements about the need to set up Patjar systems, but also develop a list of specific target areas where Patjar establishment is to be specifically encouraged.

UNS should be called upon to provide the Directorate with a list of high priority areas for Patjar establishment. Such a list should be based on the national statistics relating to school drop-outs. These statistics should be used with care, however. It is not so much the absolute number of drop-outs in an area which is important, but the proportion of drop-outs to school-age children. Where that proportion is especially high, the school system is obviously not fulfilling the needs of the primary school-aged youth. It should also be recognized that Patjars are not just needed in the rural areas, despite the fact they were originally designed for the disadvantaged in rural areas. Scores of school drop-outs have migrated to urban areas where they find work as marginal labor. More for them than for drop-outs in the country will having a primary school certificate make a difference in improving their live's chances.

b. WHAT IS THE APPROPRIATE TARGET GROUP FOR THE PATJAR SYSTEM?

This question has already been answered by PDM with the formulation of its policy that "kewajiban belajar" applies to youth in the 7- to 12-year-old bracket. In practice, however, in Bali the average Patjar student has been considerably older than that, i.e., around 15 years old. The fact is that students are dropping out at a lower rate than they were a few years ago. "Kewajiban belajar" is an ambiguous term. Literally "obligatory education," it could either mean that children are obliged to go to school or that the state is obliged to provide educational possibilities for all -- or both. The obligation of children to go to school clearly applies to the 7- to 12-year-olds, but does this mean that the state is not obligated to provide those over 12 a primary education if they have not yet had the chance to earn one? Patjar study should be available to those who have not yet had a chance to earn a primary degree no matter what their age. This position clearly calls for the elimination of government restrictions on the age of primary degree applicants, currently set at age 17. The spirit of Pamong has always been that learners have relative flexibility in their time for learning. It is hoped that PDM will make this possible by eliminating such age restrictions.

c. HOW LONG SHOULD PATJARS EXIST?

The obvious answer to that question is: as long as they are needed -- but how long is that? Some people feel that the Patjar is merely a temporary institution, established to service the backlog of school drop-outs who left school before "obligatory education" became a fact. Once this backlog is cleaned up, they assert, the Patjar system will no longer be needed, since current drop-outs will be minimal. Others feel

that the Patjar system provides an alternative to the conventional school which should be available as long as the economic situation makes it virtually impossible for a family to get by without their children's contributions to the family income. In planning for Patjar dissemination, these two alternatives should be discussed and a policy decision made, so that planning can be done with a particular time frame in mind.

d. WHAT VERSION OF THE PATJAR SYSTEM SHOULD BE ADOPTED?

Currently there are two versions of the Patjar system which have been recognized by PDM, one is the school-based model, which sets up Patjars as satellites to existing primary schools which do not themselves use Pamong materials or methods (also known as the PPKB system in Bali), and the other is the East Java model, which is a cluster of Patjars operated like a school with its own principal but with considerable support and direction from a community task force.

According to current interpretations of PDM's policy with respect to Pamong, different regions are free to choose the version which suits them best. This might be difficult to do in some areas, however, since no guidelines have been provided which would help educational managers in making the choice. UNS should be called upon to establish some guidelines. For example, it may be the case that the school-based version is appropriate where school management is rather strong in comparison to community management. The availability of teachers is also a consideration. The East Java model will presumably require a new set of teachers plus a principal for every cluster of Patjars. Some areas may not have extra teachers available and will have to use regular school teachers working on a part-time basis after regular school hours, to supervise their Patjars, i.e., a variant of the school-based model.

e. WHAT LEARNING MATERIALS SHOULD BE USED?

The answer to this question has also been left rather ambiguous by PDM, which has stated that regular textbooks should be used, supplemented with "textbook study guides" and/or modules if possible. So far no Patjars have been tried out using textbooks only as the learning materials. Since textbook study guides are not available yet, they have not been tried out either. Modules have proved to be effective in Patjars, but their numbers are such that they present a great expense to educational decision makers. Before rejecting the idea of using regular Pamong modules in Patjars, the use of textbooks and textbooks with study guides should be tried out with Patjar students. Ideally, all three materials alternatives should be tried out in the same area and the results with each compared. If the use of modules is clearly superior, the ways of making modules less bulky and more economical should be explored and new avenues of module financing should be investigated, for example, using funds from INPRES or foreign donors.

f. HOW SHOULD LEARNERS BE MOTIVATED TO ENTER AND REMAIN IN PATJARS?

This is one of the most frequently asked questions in Pamong. The most obvious source of answers to that question is model building which is going on in Bali now in the development of village level "kewajiban belajar" working groups. One of the tasks of such groups is to develop means of motivating learner participation. Other models should not be overlooked, however, such as the East Java Patjar "task force" model. In addition, economic incentives should be considered, including those contained in Doran Bernard's suggestions that Patjars be encouraged to market crafts produced by Patjar members or that Patjars have access to a PENMAS administered "learning fund."

h. WHAT KINDS OF IMPROVEMENTS OR FURTHER DEVELOPMENTS SHOULD BE MADE IN THE PATJAR SYSTEM?

This question has already been covered in depth by Doran Bernard in his section of this report, so I will only mention three additional topics:

- (1) The use of the results of the case studies which are now being conducted to provide some insight into problem areas (and solutions) which may have not been perceived before and to suggest new directions for Patjar development.
- (2) A re-examination of the need for and the ways of providing instruction in the subject matters which have not been modularized. At present student needs must be tested in these subject matters in their final exam. Recent discussions have indicated that perhaps a "crash course" would adequately prepare them to pass the test. But someone should prepare the crash course materials. This should probably be done by local teachers under the supervision of experienced UPT Pamong writers.
- (3) There needs to be a reappraisal of the concept of using community volunteers as tutors and skills trainers in Pamong. The assumption that volunteer assistance from community members is readily available has simply not been confirmed in practice. Good, reliable volunteers are extremely rare. Modest compensation for tutors and trainers would be one solution, but such might be seen as a violation of the spirit of Pamong or simply not feasible. In this case, other symbolic rewards or subsidies should be sought, such as release from other village duties or the granting of course credit or teacher training credit to teacher trainees.

## 2. Small Schools Systems

Small Schools are also considered by PDM to be an integral part of the "kewajiban belajar" network. As universalization of primary education pushes schooling into more and more remote areas, appropriate and economical school management systems will need to be developed. As an answer to that challenge, Small Schools development is now under way in three provinces in Indonesia. The expected output of this development effort is a basic Small Schools model elaborated in various ways in each region in response to local needs and conditions. The primary site for Small Schools development has been and will continue to be Central Kalimantan. Since the USAID-BP3K Project Agreement specifically refers to Central Kalimantan as the site for this aspect of the overall project, it is important that the major development effort continue to proceed there. However, it is recommended that technical assistance under this project also be made available as appropriate for the further development of the local variations in Sulawesi and Madura.

As Small Schools move towards maturity and as the government proceeds with widespread dissemination of the system, some important questions need to be addressed. The following are questions which I believe should be addressed as well as some suggested answers and/or observations:

### a. WHAT SHOULD BE UNS'S ROLE IN FUTURE SMALL SCHOOLS DEVELOPMENT

In recent months UNS has become increasingly active in providing technical assistance of various kinds to Small Schools developers. Covering areas of supplementary module development, formative evaluation and training materials development, the spirit of this technical assistance has been the development of local competence. UNS staff members should continue to perform these tasks by holding training

sessions both in the field and in Solo, using AID or UNICEF funds as appropriate (in most cases AID funds will only apply to UNS personnel costs).

In addition, UNS has provided one staff member as a generalist for Small Schools development in Central Kalimantan. Staff support of a similar nature for the other two areas has come from BP3K. It would be more efficient if all persons fulfilling such a role were to be posted at UNS, creating, as it were, a Kalimantan "desk," a Sulawesi "desk," and a Madura "desk."

b. HOW SHOULD FORMATIVE EVALUATION PROCEED?

A great deal of progress has been made during the past six months in the conduct of a systematic formative evaluation of the Small Schools projects. A considerable amount of data has been collected by local teams in the three sites using standardized instruments. These data are currently being analyzed by regional teams using guidelines which were prepared at UNS. Among other things these guidelines indicate how teams should use the data in developing recommendations for system change and improvement. I recommend that the next phase of formative evaluation be to monitor these changes, to see the extent to which they have been effectively implemented. Such monitoring could be done through the use of interviews or observations, using procedures much like those used in the first phase or, if time and resources don't permit that, at least using the meeting format, during which implementers give oral reports of their progress and problems.

Results of the data analyses and the accompanying recommendations should be aggregated at the national level and discussed with BP3K. A report should then be written which could be used by PDM in the further development of national policy relating to Small Schools development.

Monitoring of Learning Outcomes. One aspect of the recent data collection was to determine the extent to which schools were correctly recording progress in the study of modules. Experience in Bali has shown us that it generally takes a few rounds of monitoring before all schools are recording the data correctly. Thus it is expected that there will be some recommendations for improvement in this area. Once the recording system is operating as planned, however, it becomes a valuable device for individual and group evaluation. I recommend that every effort be made to make sure the system is operating correctly by the beginning of next academic year (1983-84). Then the system can be used to: (a) track the extent to which curricular targets are being met and (b) assess which subject matters (and within subjects, which modules) are difficult to learn in a self- or group-instructional manner. (For this, the score of the first test for the modules should be used.) This information is valuable for teachers in helping them design appropriate interventions and for materials developers in identifying which modules are not working well in each location.

Reporting Network. Finally, it should be emphasized that an effective reporting system should be established for the Small Schools network. The format for such reporting should be simple. Field assistant (ASLAP) should provide narrative reports of progress and problems at least once a month. These reports should be aggregated by the head of the Small Schools working group in each region, who then would send a report to the Small Schools project coordinator. Such a report should also be in narrative form and should contain, in addition to a review of the ASLAPS reports, narrative reports of project events and issues (much like the Bernard/Nielsen reports for Pamong).

c. WHAT ARE SOME OF THE DIRECTIONS THAT FURTHER MODEL BUILDING OF SMALL SCHOOLS SHOULD TAKE?

Most, if not all, teachers in Small Schools are required to manage instruction in two or more classes at the same time. Two basic systems have been developed which the teacher can use in doing this. The first, called "perangkapan kelas," is one in which the teacher divides his/her time between two classes, teaching one in the conventional style and the other through the use of self-instructional modules. The second, called "penggabungan kelas," is a system of ungraded teaching in which the teacher groups different grades together and gives them essentially the same lesson. The current formative evaluation will reveal the extent to which these two basic systems are being used, and the problems encountered with each. Beyond that, however, it is already clear that there are no specific guidelines to teachers concerning how they are to divide their time among groups. For example, when teachers are using conventional methods to teach in the lower grades, is it advisable that students in the upper grades study modules without supervision? If the teacher should provide some direction for those studying modules, how should they structure their conventional teaching so as to have time available for this? Does teaching in the lower grades really have to be conventional or could it be programmed in order to allow the teacher to both have more individual time with students and to supervise learning in another class? The same question applies to nonmodularized subjects in the upper grades. Shouldn't the Small Schools teacher be given more guidelines in how to manage this instruction?

One thing is clear with respect to the teacher's load in Small Schools: even though the teacher has to manage more than one classroom, the numbers of students per class are still so small that there is generally a lower student/teacher ratio than in conventional schools. This situation should allow teachers to devote more time to small groups

and individuals than they are able to in conventional schools. Education in Small Schools, as in "one-room" schools in America, should thus be superior in many ways to that available elsewhere.

Model building of this sort will require more detailed information concerning the way in which Small Schools teachers typically manage their days. (Case study or ethnographic research is called for here.) Project managers should also be given the chance to visit projects of a similar nature in other countries (IEL, Liberia; RIT, Thailand; InSPIRE, Malaysia) in order to see how structuring of the sort mentioned above has been accomplished in other projects. Experience from PAMONG in Bali should not be overlooked in this regard. Particularly valuable and relevant are the experiences in group learning and programmed teaching.

Armed with these new insights and resources, the Small Schools managers should be in a position to construct a full-scale instructional systems design along the lines of the design suggested by Dr. Morgan during his visit to the Pamong Project. This would involve breaking the curriculum down into specific curricular objectives and then deciding which of the many resources and techniques available in Small Schools would be appropriate for each. Since this is a rather ambitious undertaking, it would be advisable to have a relatively long-term advisor available, especially during the specification of learning objectives phase.

Finally, serious consideration should be given to the establishment of Patjars in conjunction with Small Schools. There is already a case in Sulawesi where an innovation in Patjar development is under way. This innovation should be watched carefully and, if successful, used as an example for Patjar development in the other locations. Patjar development in this context would be used not only to reach out to school drop-outs (as in Java and Bali), but to reach out to clusters of learners who are too isolated even to make it to the Small School.

d. WHAT LEARNING MATERIALS SHOULD BE USED IN SMALL SCHOOLS?

Prior to last year's decision letter from PDM regarding Pamong and Small Schools, it was assumed that modules would be an essential aspect of the Small Schools learning system. The decision letter made module use optional, dependent upon the availability of local funds for them. Version II modules (textbook study guides [PMBP]) were also mentioned as optional. Such modules may be more feasible because of their projected low cost, but before they are recommended for wide-scale use in Small Schools, they should be adapted for group use and tried out in a Small Schools setting.

e. HOW SHOULD SMALL SCHOOLS BE DISSEMINATED?

As in the case of Pamong, Small Schools was pronounced ready for dissemination by PDM, but no guidelines were given as to where they should be disseminated and no time table was provided. Once again, decisions about locations and timing were left to provincial planners. For 3 of Indonesia's 27 provinces, this was no problem: the provinces where Small Schools development is now taking place already have begun or are planning wider-scaled dissemination. There is very little known about planning in the other 24 provinces, however. I recommend that BP3K and UNS provide PDM with an analysis of areas in Indonesia where Small Schools are particularly appropriate and urgently needed. UNS could then provide an individual or team of individuals who would travel to each site in order to play the role of catalyst in getting Small Schools planning and development under way. One particularly interesting kind of location to keep in mind is transmigration communities. If the transmigration group included some teachers, a Small School might be designed even before the community moved to its new location.

### 3. Universal Primary Education Working Groups (KK Wajar)

One of the important innovations resulting from BP3K/UNS/Sekretariat Bali collaboration has been the prototype for village level universal primary education planning and community action, referred to as KK Wajar. Although this mechanism for identifying and classifying school-aged children and motivating them and their parents to take advantage of the appropriate educational opportunities is now operational in Gianyar, Bali, the mechanism needs further evaluation and refinement. In addition, it will need to be tried in other regions in Indonesia so that questions about whether or not it is tied to Balinese culture can be resolved. I feel that BP3K will need to take the lead in continuing the development of KK Wajar, assigning some of its strongest staff members to the problem. UNS could also be involved in a consultative role. Such a role is appropriate for UNS because of its past involvement in KK Wajar development and because Pamong and Small Schools are major components in the "kewajiban belajar" network. However, I think it would be a mistake for BP3K to make UNS responsible for KK Wajar development, since I fear that would drain too many resources away from UNS's major task of instructional systems development.

BP3K, in its development of this component should also work very closely with PDM so that village level mechanisms can be integrated with PDM's Province and District level mechanisms. BP3K should also seek out information concerning other models of village level KB planning, such as those developed in North Sumatra and East Java.

Finally, since this is a large and important undertaking, BP3K should consider separating it from the context of Pamong development, making it a project in itself. Technical assistance and financial support for this undertaking could be sought from donor agencies like AID, UNESCO, World Bank, UNICEF, or IDRC.

#### 4. The Pamong In-School Component (PKB)

The Pusat "kegiatan Belajar," the in-school component of Pamong has not been accepted by PDM for wide-scale dissemination at this particular time. The main reason for this is simple: disseminating PKB's would mean making drastic reforms in schools which are already operating. A further reason has to do with the expense of Pamong modules, seen as an add-on cost, since all primary schools are now provided with official textbooks. Arguments for Pamong based on its cost-effectiveness have not been taken seriously, partly because at this point the ministry appears chiefly concerned with the challenge of universalizing primary education (at whatever the cost), and because Pamong has not yet unequivocally demonstrated its cost-effectiveness.

The fate of Pamong's PKB system thus seems to rest with answers to two questions: (1) Will the ministry eventually become concerned with questions of educational quality and system economy? and (2) Will Pamong be able to demonstrate clearly and convincingly that it is more cost-effective than the regular school system? There are some indications that both questions will be answered positively. For example, some versions of the education section of the next five-year plan in Indonesia (1984-89) indicate that the ministry will emphasize educational quality. At the same time, diminishing oil-based government reserves may require an unanticipated need for fiscal austerity. Furthermore, most Pamong evaluations conducted so far indicate that Pamong learners do at least as well as learners in conventional schools using fewer professional resources, i.e., teachers. These findings are still equivocal, however, since few schools in Bali or Solo have stuck with plans for reduced staffing and the most recent test data, instead of showing an expected relative strength in Pamong scores, showed a relative weakness.

Given the above the main policy question with respect to the future of the PKB appears to be " Should the PKB system be sustained and further developed in anticipation of a more favorable "market" and stronger evidence of the system's cost effectiveness?"

In my opinion, given the large investment already made in the PKB, the continued enthusiasm over it by experts in instructional design, and the potential for further improvement, the answer to the above question is clearly "YES." The PKB system should be further developed and continuously evaluated. As this proceeds, the following questions should be addressed:

a. BASED ON CURRENT KNOWLEDGE AND UNDERSTANDING, WHAT CHANGES SHOULD BE MADE IN THE PKB SYSTEM?

- (1) One thing that is clear is that Grade Three students have difficulty learning with modules, especially in Math and Indonesian and especially in the first part of the school year. More effort needs to be devoted to the development of an appropriate system for transition to module learning. Doran Bernard's recommendations cover this topic in detail.
- (2) The process of remediation during group study of modules does not appear to be very effective. The general pattern for remediation now appears to be one in which students who miss test items learn the correct answers from students who answered correctly. This means a very high proportion of group members pass the module tests by the second testing, whether they understand the material or not.

Project staff feel that an effective solution to this problem would be the use of a second version of the module tests for use after remediation. The need to prepare for a new version would presumably cause learners to take the remediation process more seriously.

Alternative forms of all module tests have been written and checked for equivalency. Hopefully resources will be made available under the new UNS-BP3K contract for their printing. Of course, just having the tests doesn't insure their effective utilization. The group learning procedures will have to be modified in order to incorporate the use of the alternative form during retesting, and teachers, tutors, and students will have to be thoroughly trained in these new procedures. After that there must be monitoring and follow-up to insure the new procedures are actually implemented.

- (3) There is growing consensus among Pamong teachers and support staff that students in Pamong schools do not have sufficient opportunities to review important course material before the regular trimester achievement tests. Pamong teachers are now being asked to conduct "klasikal" review sessions covering course content and students are being urged to copy the main points from modules into their copy books so that they can review them at home. These practices are already being followed in a few schools. Efforts should be made to evaluate them and, if effective, to make them standard practice in PKB's.
- (4) Programmed Teaching. Recent evaluation results (report on Formative Evaluation II, forthcoming) indicate that both teachers and students (learners and tutors) are enthusiastic about programmed teaching. Furthermore, student grades under programmed teaching

are in the same range of grades as in regular schools. Problems encountered in programmed teaching include the following: instruction seems to go slower than in regular schools -- very few classes are able to cover all of the course objectives; some cross-age tutors (tutor Kakak) have fallen behind in their own course work and feel that they can't catch up; nearly half of the tutors indicate that they sometimes have difficulty explaining materials and answering questions. I recommend that lower grade teachers monitor the work of tutors more carefully. Programmed teaching should be speeded up or the material edited, so that the course objectives can be covered. Tutors should be trained in how to answer questions and how to record questions which they themselves cannot answer. Upper grade teachers should monitor the progress of tutor Kakak and those who are having difficulty keeping up should be given assistance or replaced.

- (5) The difficulties in learning the current "new math" curriculum through the use of the Pamong modules have been well documented. Nobody really knows why. It could be a problem with the modules, their vocabulary or structure or sequence; or it could be a problem inherent in the material, i.e., the material requires teacher explanations; or it may be some combination of these two. I recommend that a small task force be formed to examine this question during a trimester, reporting its results to the module writers (and project management), so that some corrective measures can be taken -- e.g., introducing more teacher-led reviews or revising modules or both.

b. WHAT SHOULD BE DONE ABOUT THE APPARENTLY POOR PERFORMANCE OF PAMONG STUDENTS ON TRIMESTER ACHIEVEMENT TESTS?

First of all the results of the THB analysis (Trimester 1, 1982-83) should be checked again to make sure that there are no computation errors. If that is done and Pamong schools are still significantly lower in a number of grades and subjects, then there are basically three different kinds of explanations: (a) the tests are biased, (b) there are differences in learning ability between Pamong and regular school students, or (c) Pamong students are not learning as well as regular school students.

There are at least two different kinds of test bias which might be operating: First, teachers might be reporting scores which are subjectively "adjusted" or, second, the test items might be slanted towards learning with conventional materials, e.g., textbooks. With respect to the first, special measures were taken during Trimester 1 to insure that the test scores were objectively reported. In fact, teachers did not even report test scores, but only the number of items right and wrong for each student. With respect to the second, there is some reason for concern since the tests are constructed by teachers, most of whom are conventional school teachers. It is possible, in fact, that some of the questions on the tests were taken directly from the conventional textbooks, giving regular school children a clear advantage.

It would be worthwhile for a content analysis of the THB's to be made so that we could ascertain whether or not the tests are biased towards the regular schools. If so, then there are two recourses for future evaluations of student achievement. One would be to insure that local tests were written by committees in which Pamong teachers and conventional school teachers were equally represented. Consultants from the Test Development Center of BP3K could be invited to assist the teachers in this so that test biases could be minimized. The second

would be to abandon the reliance on locally produced tests. It might be possible to use the old BP3K standardized tests again. Alternatively, the Test Development Center could be asked to construct new standardized tests.

The problem of unequal entry level ability (i.e., the possibility that Pamong students are, in general, not as high as regular school students in learning ability) was dealt with in the first summative evaluation in 1980-81, where pretest results showed no significant differences between Pamong and non-Pamong students. Since the matched classrooms in the current design are the same as those used in the pretest, there is no reason to believe that the two groups of students are any different now in terms of learning ability.

Finally is the possibility that in fact Pamong students are not learning as well as regular school students. This conclusion would come as a great surprise to teachers who, in a recent survey (Formative Evaluation II), generally expressed opinions that achievement in Pamong was better and to experts like Dr. Robert Morgan (FSU) who, upon observing Pamong in action, expressed surprise that Pamong achievement did not exceed that of regular school. If this is the finding, however, implementing the improvements in (a) above should lead to some (perhaps even dramatic) differences. In addition, other "fine tuning" of the system should be done, including the revision of modules which appear to be causing difficulty.

#### c. WHAT SHOULD BE DONE ABOUT PAMONG LEARNING MATERIALS?

The future of the Pamong modules is a controversial issue these days. Some people feel that there are too many modules and that the government will never bear the printing costs of this kind of material for widespread use. They have advocated the substitution of a new kind of module, one which gives guidelines to students for self- or group study of the regular textbooks. The predominant feeling now (one with

which I agree) is that both kinds of materials should be developed and made as economical as possible. The strengths and weaknesses of each should be determined and made known to potential users. These users would then be free to choose whichever seems most appropriate for them.

With respect to the current type of self-contained Pamong module, there are a number of revisions which can be made in order to reduce their numbers and bulk. Recommendations in this area are included in the paper by Dr. R. Morgan (February, 1983). In addition, there is a need for module revision based on student feedback. Plans have already been laid for this and funding is being requested under the new UNS-BP3K contract. According to the plan, not all modules will be revised, but only those which, according to scores from the first testing, are difficult for a high proportion of students (say 50% or more) to master on the first try. An item analysis should be run on the tests of these modules so that specific difficulties can be located. This may reveal problems with the test items or answer keys or the content of the text or the sequence of material, etc. Once a diagnosis is made the module should be revised and tried out with a small group of students whose test scores should be item analyzed and whose impressions and opinions should be sought. Such a process should make a significant difference in module quality and learning outcomes.

It is expected that textbook study guides will be produced with support from PDM. Prototypes for such materials have been reviewed and writing is under way. In order to avoid the weaknesses of the existing modules, these new materials should be reviewed by experts in learning systems design and, in addition, should be tried out and revised using learner feedback, following procedures like those described above. Furthermore, care should be taken to introduce into these new materials instructions or cues for use in a group learning situation.

J. HOW SHOULD THE PKB BE EVALUATED IN THE FUTURE?

Many aspects of the PKB inputs, processes, and outputs have already been evaluated and it makes little sense at this point to mount a big new data collection. At this point I recommend that the following evaluation activities be pursued:

- (1) The results of Formative Evaluation II should be disseminated and discussed so that appropriate revisions and follow-up action can be taken.
- (2) The results of the two PKB case studies should be distributed and discussed with the purpose of determining the discrepancy between what was actually observed in the field and what is expected. Appropriate measures should then be taken to reconcile any serious differences.
- (3) THB's and DKB's should continue to be analyzed in Solo. Efforts should be made to determine the extent to which the THB's are biased and to remove whatever biases which may exist. (See question 4b above.)
- (4) New supervision systems should be evaluated and revised as appropriate. (See Doran Bernard's report.)
- (5) Supervisors' reports (those using the new formats) should be aggregated by the Pamong Sekretariat and used by UNS and BP3K to assess project progress and problems.

(6) A routine reporting network should be set up, involving the flow of information from field sites to UPT Pamong and from UPT Pamong to BP3K, the Rektor of UNS, and Primary Education personnel at PDM. This should be supplemented by more fact-finding visits by UNS administrators to the field.

e. WHERE SHOULD CONTINUED PKB DEVELOPMENT TAKE PLACE?

This question could be rephrased as follows: Is it necessary for all 30 PKB's to continue operations during the current phase of development? Certainly all 30 should be carried through the current academic year. For the coming academic year, it is clear that there should be enough PKB's in operation in Bali for continued testing of methods of supervision and for support of Patjars. There should also be sites for the try-out of revised modules. The latter activity would probably best be carried out in Kebakkramat (near Solo), however, so that monitoring and evaluation by UPT Pamong could be carried out more conveniently.

In my opinion this means that the number of PKB's could be reduced in Gianyar. This would make the task of monitoring by the sekretariat easier. In addition, people need to begin to think about module attrition. Modules have been lost and destroyed. There are very few modules in reserve and no plans have been made for a new addition. The attrition of modules (already in their third year of use) may in fact force the issue -- declining numbers of usable modules may demand a reduced number of PKB's.

One fascinating way to reduce the numbers of PKB's, a way which also represents a very strong form of program evaluation, is to allow schools to decide whether to stay with the Pamong system or not. Those which decided to stay would continue to participate in model building. The others could go back to conventional methods. The system could have

no stronger endorsement than if a high proportion of schools decided to stay with Pamong.

##### 5. Pamong and National Educational Development

As Dr. Robert Morgan mentioned in his paper on Pamong (February 1983), the broad policy issue with respect to Pamong in the mid-1980's is not so much how the government can promote Pamong development and dissemination but how the government can use the lessons learned in Pamong to improve the overall delivery of primary education. This is not to underestimate the importance of Pamong systems (Patjars and Small Schools) in serving marginal groups and the need for finding cost-effective alternatives to the conventional school for rural primary education. However important these concerns are, it is clear that they will never be more than marginal concerns in an educational system which serves more than 25 million primary school children who are more and more likely to be living in urban areas.

Pamong has created some educational resources which have not been available to teachers and administrators before. These include programmed peer-group learning, cross-age tutoring, interactive supervision, and community participation schemes. Imaginatively introduced into the mainstream of primary education in various ways, such resources should add to the richness and variety of primary education without major disruption or expense.

Some examples already exist of such applications. In one primary school near the original Pamong pilot schools an enterprising teacher has, without prompting from above, adapted programmed teaching (cross-age tutoring) for use in her lower grade classroom. In addition, in a recent policy paper for the Directorate of Primary Education, Dr. Haris

Mudjiman, Vice-Director of the UNS Pamong Development Center, advocated the use of peer-group learning methods as a means of reducing school repeating and drop-out.

The fact is that the conduits for the introduction of Pamong technology into the mainstream already exist or are emerging. UNS has drawn up a contract with the Directorate of Primary Education to provide various services for the improvement of primary school instruction. This contract will probably mostly cover technical assistance in the dissemination of Patjars and Small Schools, but it need not be restricted to that, as witnessed by PDM's request for a paper from Pamong on ways to reduce primary school repeating and drop-out.

Furthermore, there is an emerging interest at the Curriculum Development Center of BP3K in making Pamong technologies available as part of Indonesia's next curriculum revision. The head of this Center has already expressed interest in examining both PPSP and Pamong methods for possible integration into the new curriculum. Besides that there are strong possibilities for Pamong's collaboration with the Curriculum Center on the improvement of primary school supervision systems, a problem which is now being attacked by both organizations simultaneously. I recommend that these ideas be followed up and closer ties between the Innovation Center (plus UNS) and the Curriculum Center be forged. With respect to such collaboration, a few miscellaneous comments are in order. First, it seems to me that the Innovation Center should pay much more attention to the development of collaborative relationships with other institutions and centers (both inside and outside of BP3K) than it has in the past. This could be done, for example, through the creation of a new position, that of Liaison Officer. Second, it is apparent to me that UPT Pamong at UNS is reaching a stage of maturity and, with a few additional inputs and developments during the next year or so, it should be allowed to act as a true national center for Pamong and Small Schools development, able to enter into contracts on its own and to operate with a minimum of

direct supervision by BP3K. Such a situation would give UPT Pamong more credibility and flexibility and it would also release BP3K from considerable administrative burden, freeing it to pursue more effectively other developments.

Finally, UNS should be extremely careful not to become overcommitted. There is a danger that PDM will ask UPT Pamong to do too much or to take assignments which are unrelated to Pamong/Small Schools development. UNS should learn how to diplomatically turn down an assignment if it looks like it is too time consuming or inconsistent with UNS's strengths and general directions.

#### 6. Future Technical Assistance to Pamong

Serious discussions are already under way concerning the provision of USAID financed technical assistance to Pamong as a continuation to that provided by Nielsen and Bernard through IIR. Assuming that both long-term and short-term advisors will be sought, the following considerations are offered:

Long-Term Advisor. This person, who presumably would be posted in Solo, should not be asked to cover too many aspects of Pamong/Small Schools development. If AID is successful in recruiting its current candidate for that post, Russell Dilts, he should be asked to concentrate his efforts in areas of his special capabilities, that is training development and organizational development (improving UPT Pamong management and building staff competence at UNS and at the field site).

Short-Term Advisors. With the recent positive changes in project leadership at UNS, it is clear that the UPT is ready to assimilate technical assistance in various areas, including the following:

- o instructional systems development, particularly learning materials evaluation;
- o management information systems (for system monitoring and routine reporting;
- o cost-effectiveness research.

In addition to these kinds of advisors, serious consideration should be given to ways in which the Bali Sekretariat could be supported and strengthened. This will not require a full-time resident advisor, but the Solo consultant should be encouraged to spend large chunks of time in Bali to support training and staff development efforts there. In addition, BP3K should provide consultants in achievement test construction so that Bali personnel are able to construct unbiased tests. If funds are not available for GOI sources, financial resources should be made available from AID funds to support the many important development functions carried out by the Sekretariat.

Finally, serious consideration should also be given to the proposal that an instructional systems consultant be made available for Small Schools development for a period of one to three months.

## II. REPORT BY DORAN BERNARD, BALI ADVISOR

This section is designed to serve two purposes: it is to act as a general summary of activities and accomplishments of the SD Pamong Project in Bali over the last three years and to record my thoughts on problems that remain and recommendations for future development of SD Pamong. This section is divided into three parts. The first part will provide a general background of the project development process. The second part will address issues relating to the in-school component of the program. The third part is an attached memorandum written earlier at the request of Dr. Matt Seymour which covers the out-of-school component of the project.

### A. BACKGROUND

By April 1980, an extensive survey had been conducted in Kabupaten Gianyar to identify primary school drop-outs, the potential clientele of the Patjar component of SD Pamong. Plans had been developed for the expansion of the in-school component of SD Pamong to 21 new SD throughout Kabupaten Gianyar (five experimental schools had been in operation in the village of Mas since 1977). Learning materials were being written and printed and evaluation plans and activities were to be formulated in Solo. Grades Five and Six in-school students were to begin study of self-instructional materials in all new PKB during the upcoming school year, July 1980 to June 1981. First through Fourth Grade students would begin study of new SD Pamong learning materials in July 1981. During this initial period it seemed that the emphasis of project development had been on the in-school component as activities were centered around PKB site preparation, planning, and materials

production. The Patjar in both experimental sites (Mas and Kebakkramat) had produced some graduates, but generally their current activities seemed somewhat stagnant. Although the initial data gathering had been completed, new Patjar sites were not yet identified and the management structures of the Patjar were still unclear. Through April to June 1980, we began to shift the emphasis of development activities to the Patjar component. An effort was made to develop and refine various aspects of the out-of-school component through a series of meetings and workshops involving BP3K, UPT Pamong Solo, Bali Sekretariat and Department P dan K staff in Kabupaten Gianyar.

Workshops were also held to train education supervisors (penilik), principals (Kasda), fifth and sixth grade SD Pamong teachers (PPL), and Patjar teachers (PP3) in SD Pamong systems and techniques. Other major efforts during this period included work on the project management guides (juklak) for use by field staff and preparations for the conduct of the initial summative evaluation pre-testing. In the Bali Sekretariat an effort was made to organize the staff, distribute responsibilities appropriately, and write job descriptions for each staff member. Learning materials distribution and record keeping systems were also developed.

As the new school year began in July 1980, the priority tasks became field implementation and further planning of field support activities. Work concentrated on distribution of learning materials, opening of new PKB and Patjar, and development and implementation of formative evaluation (monitoring) systems and instruments (primarily in Solo). In Bali, the emphasis continued on the out-of-school component. In September 1980, the consultancy of Dr. George Papagiannis focused on improving the Patjar component; and, in October and November, the Bali Sekretariat staff conducted a series of field interviews to identify aspects of the Patjar system that required improvement and to begin to develop motivation strategies for Patjar students.

In-school learning activities in the PKB at Fifth and Sixth Grade levels were somewhat hampered from January to June 1981 by delays in the production of learning materials which resulted in some materials not arriving at the PKB in accordance with study schedules. Yet exclusive of the problem (although it likely exacerbated the situation), it became apparent that there were certain weaknesses in programmed learning being conducted in PKB that would soon have to be remedied. These weaknesses were suspected early on by the project consultants and other staff members, but solid evidence of the extent of these inadequacies was required. With the consultancy of Dr. Loganathan of Project InSPIRE, Malaysia, and the results of formative evaluation in April and field observations by the Bali Sekretariat and Solo staff as well as evidence from module completion rates in PKB, the required information was gained in regard to the seriousness of the problems of pacing (low module completion rates of many students) and learning environment (dull, uninteresting learning situations resulting from completely individualized study). The emphasis of project development now began to shift back to the in-school component. This shift of focus was also a natural result of the readiness of other planned activities. In February 1981, First and Second Grade teachers were trained to begin the experimentation with programmed teaching in the five Mas PKB. Grade One through Four learning materials were being written and produced in Solo and in July 1981 training was conducted for Penilik, Kasda, Third and Fourth Grade teachers (PP2), and First and Second Grade teachers (PP4) from all the PKB in preparation for full-scale implementation of programmed teaching and expansion of programmed learning to Grades Three and Four. Thus SD Pamong learning activities at all grade levels, with the exception of Grade One which was to start in November, was initiated in Bali in July 1981.

In October and November 1981, two important activities took place which were designed to lead to major modifications of the project. In an effort to increase motivation and community support for the out-of-

school component of the project, the KK Wajar development effort began (see Part III) and continued through the rest of the 1981/82 and 1982/83 school years. In an effort to help clarify and resolve the difficulties being encountered with learning in the in-school component, a major in-service training and development workshop (Penlok 4) was held with all Penilik, Kasda, PPl, PP2, and PP4 in November. From the results of this workshop, development efforts in Solo and Bali and the consultancy of Daryl Nichols of the Institute for International Research, three new alternative teaching/learning systems were prepared for try-out in January 1982. Based upon the results of this try-out, a new teaching/learning process (proses belajar/mengajar or PBM) was identified for use in Grades Three through Six. This new PBM shifted learning from completely self-instructional learning to group-based, programmed learning in an effort to assist slower learners in completing module study targets and make learning more exciting for all students.

Training for this new PBM was conducted in March 1982 and implementation begin in April at the start of the third term of the 1981/82 school year. Because of its unfamiliarity for teachers and relative complexity, implementation of the new PBM in all PKB was inconsistent. In addition, supporting management and reporting systems were still being developed. Since the results of this first period of implementation of the new PBM were still unsatisfactory, as soon as the new management and reporting systems were completed, the Bali Sekretariat staff conducted in-service training in all PKB throughout August, the first month of the new school year, to introduce these new systems and reinforce the implementation of the new PBM.

The attention of the project staff now turned to supervision of in-school activities in response to a desire by BP3K to delegate more responsibility for supervision to the regular educational structure and staff, further institutionalize the project, and relieve the Bali Sekretariat staff of a portion of its supervisory workload. In October and November 1982, a new supervisory system and instruments for use by

Penilik TK/SD in the PKB based upon but refining the existing system was developed, tried out, and implemented. Work also began on development of out-of-school supervision and in-school supervision systems for use by Kasda.

In November 1982 out-of-school activities gained momentum as the KK Wajar effort finally began to yield its results. New Patjar began operations throughout Kabupaten Gianyar after a period of decreased activity. Closer coordination began between PENMAS out-of-school activities and SD Pamong and dissemination planning of the Patjar component of SD Pamong began for other areas of Bali as part of the kewajiban belajar implementation effort.

## B. THE IN-SCHOOL COMPONENT OF SD PAMONG

As the major events of the development process for the in-school or PKB component of the SD Pamong Project in Bali have already been reviewed, in this section I will simply provide more detail concerning three major aspects of PKB activities: staff training; site operations, i.e., the teaching/learning process in Grades One and Two and Three through Six, programmed teaching, and programmed learning respectively; and management, evaluation, and supervision systems. Recommendations for further development of the in-school component of the Project will be presented at the end.

### 1. Staff Training

Pre-service training was conducted June 30 to July 9, 1980, for Penilik SD, Kasda, and PP from all 26 PKB to provide initial orientation and training prior to the beginning of learning activities in Grades Five and Six. July 13 to 16, 1981, PP2, and PP4 received their initial training in programmed teaching and programmed learning for Grades One

to Four. March 1 to 16, 1982, all Penilik, Kasda, PPl, and PP2 received further training in preparation for the implementation of the new teaching/learning process (PBM) in Grades Three through Six of the PKB. In-service training was conducted February 23 to 28, 1981, for Kakancam, Penilik, Kasda, PPl and PP3 to discuss difficulties being encountered, new monitoring, and students motivation systems and to prepare plans for upcoming activities. On November 13 and 14, 1981, all Penilik, Kasda, PPl, PP2, and PP4 again attended a workshop to discuss problems being encountered and their potential solutions; to review the results of formative evaluation from the first year of implementation; and to improve staff morale. August 2 through 30, 1982, in-service training for all PKB field staff was conducted by the Bali Sekretariat to reinforce implementation of the new PBM and present new management and reporting systems. October 11 through 13 and 20 through 23, 1982, Kakancam and Penilik TK/SD received training for the large-scale try-out of the new PKB supervisory system and instruments. (For further details on training activities, see "Report of SD Pamong Project Implementation Status 1980 - 1982" by H. Dean Nielsen, Doran Bernard, and Haris Mudjiman, May 5, 1982.)

The formats for these training sessions and workshops have generally been briefing and lecture for the pre-service training. For in-service training activities, we have been trying to encourage open small group discussion and the use of more innovative training techniques to better obtain feedback from the field staff as well as to encourage them to fulfill their important role in the project development process as resource persons and project monitors. I do not feel we are as yet completely successful in encouraging the use of less traditional training approaches, some training staff members do not yet understand the value of such techniques and how they can be used effectively. Progress has been made, but much more work needs to be

done in this regard as training of various field staffs will become a priority over the next ten months. The short-term training consultant arriving in December has a very important role to play.

2. Site Operations: Programmed Teaching and Programmed Learning

Soon after implementation of programmed learning in Grades Five and Six, significant weaknesses were detected in the teaching/learning process. The initial concept of self-instruction (the SD Pamong Project is still called the "Self-Instructional Learning Project" by AID) seemed to be taken literally by project planners resulting in a classroom situation characterized by students individually reading modules to themselves through the day with little interaction between students and teachers or other students. This was not only dull and unstimulating for learners but also contributed to a more serious problem of slower learners getting further and further behind because no effective mechanisms were in place to provide them with help and remediation. The few fast learners with good reading skills were able to complete module study targets, but the majority of students had difficulty completing targets by the end of the second term of the 1981/82 school year. They, therefore, did not receive exposure to much of the curriculum as evidenced by their test scores.

As mentioned, upon obtaining solid evidence of these programmatic weaknesses, a major effort was conducted in 1981 and 1982 to develop, try out, refine, and implement a new teaching/learning process in Grades Three through Six based upon group rather than individual programmed learning where students have an important role in providing help and remediation to their peers. (The results of this try-out and development process can be found in the appendix of the "Micro Studies Report" UPT Pamong, February 1982.) The first term of the present school year, 1982/83, is really the first near adequate implementation

of this new teaching/learning process. Evaluation results from this first term (Cawu) will provide important information on how well the new system is working. This information is presently ready for analysis.

The implementation of the new teaching/learning process (PBM) is still weak in at least 5 to 8 of the 26 PKB and further assistance and in-service training by Penilik TK/SD and Sekretariat staff is required. Other aspects of programmed learning requiring improvement are in the transition of Grade Three students to modularized instruction, in the learning of the "new" mathematics through modularized materials and in the content of some of the modules themselves to make it more accurate and relevant. The former problem is being carefully discussed and I believe will be solved in the long term especially as programmed teaching is refined, but the latter problems are more perplexing. We have tried to improve the learning of mathematics (and IPA) through a system of "klasikal" instruction conducted by the teacher to the class as a whole a few periods per week. A teaching guide/index was developed for the first term to assist teachers in this effort, but time and resources for continued development of these guides have not yet become available. Thus, a satisfactory solution for improving learning of mathematics has not yet been found. It is possible that, because of its theoretical complexity and unfamiliarity for students and their parents, the new mathematics may not easily lend itself to modularized self-instructional learning. (For the record, I believe the new mathematics may be totally inappropriate for rural elementary education and serious consideration should be given to the "old" system with a concentration on the conveying of relevant mathematics skills.) A careful study of this problem would likely be very useful. The success of the new PBM in enhancing learning in Grades Three through Six is still to be proven. THB and DKB data analysis results will provide important information in this regard. These results should not, however, be the only criteria used to judge the value of the new PBM. Views of teachers, community

members, and the students themselves are also important indicators as well as attitudinal changes and non-quantifiable academic skills.

Programmed teaching in Grades One and Two was tested in the five Mas PKB during the last term of the 1980/81 school year and introduced in all PKB during the 1981/82 school year. Programmed teaching is presently conducted in two subjects, Bahasa Indonesia and Mathematics, beginning the first term in Grade Two and the second term of the school year in Grade One. Grade Five students teach in Grade One and Grade Six students teach in Grade Two; these "cross-age" tutors are called tutor kakak. The workload of the PP4, Grade One and Two teacher, is heavier than that of the PPI or PP2 as traditional instruction is still required from the teacher in the other subjects. This heavier workload likely requires one teacher in each of the grades, One and Two, rather than one teacher for both grades as conceived in the original SD Pamong model. But because there is no shortage of teachers in Kabupaten Gianyar (again a reality in opposition to the original concept), this potential problem has never materialized.

Programmed teaching seems to be well conducted in most PKB; learning appears exciting for students; students receive more individual practice, feedback, and help from the tutor kakak than they would with the traditional system; the regular teachers and tutor kakak seem to like the programmed teaching system; and evaluation results seem generally good. Yet, a few weaknesses remain. A clear effective system for training the tutor kakak has yet to be developed but this does not appear a serious problem as many PP seem to have developed effective systems on their own. This training of tutor kakak does, however, need to be formalized based upon assessment of effective training systems presently in use by PP. A better system for the management of the learning of tutor kakak in their own grades has been identified but needs to be implemented. Improvement is required in techniques for identifying learning weaknesses of individual students. Providing effective remediation to help slower learners after their problems are

identified is likely the highest priority at this time as it appears that not all students are able to complete the study targets. (We should have better information on how important this problem is as the results of the analysis of Grade One and Two DKB scores become available and the case study of programmed teaching is carried out.) A system for enhancing the transition of Grade Three students beginning in Grade Two should also be explored. In general, however, programmed teaching seems a very effective and exciting aspect of learning in SD Pamong schools.

### 3. Evaluation, Management, and Supervision

Formative evaluation or "monitoring" has been the primary responsibility of the UPT Pamong Solo staff and much progress has been made in the capacity of the Solo staff to develop effective evaluation systems. The role of the Bali Sekretariat in this regard has been and continues to be assisting with evaluation system implementation and data gathering and in providing some feedback for refining and improving the project operations. The Sekretariat has developed monthly reporting formats to be used by PKB and Patjar teachers and has developed methods of monitoring the information in those reports. However, an effective system of communicating important information to UPT Pamong Solo is still lacking.

Summative evaluation pre- and post-testing for the 1980/81 and 1981/82 school years was conducted by BP3K with the assistance of the Sekretariat and Solo staff. No major summative evaluation data gathering efforts are planned for the 1982/83 school year, but this gap has been partially filled by the UPT Pamong Solo planned efforts to gather and analyze DKB and THB (end of term) test results from the PKB and THB results from 21 control SD in Kabupaten Gianyar. As far as I know, no summative evaluations of Patjar activities are planned. Ethnographic case studies in PKB and Patjar should yield further important information, but the need for additional "summative type"

information should be discussed by PDM, BP3K, UPT Pamong and Sekretariat staff in the near future.

One of the most useful recent developments in the in-school component of SD Pamong has been the linkage of the new teaching/learning management and reporting systems with a supervisory system and instruments for use in PKB by Penilik TK/SD. This new supervisory system is presently in wide-scale try-out and initial results are encouraging. Plans are under way for the development of supervisory systems for use by Kasda in their PKB and for the supervision of out-of-school operations by Penilik TK/SD, Penilik PENMAS, and Kasda. These are important efforts that should continue to receive priority. They should also receive careful monitoring, and more formal systems for evaluation of this supervision development process need to be identified. For this and for all development efforts, field staff and the Bali Sekretariat should continue to be drawn upon as important resources. It is my view that, upon preparation of SD Pamong training systems and materials, the best overall evaluative test of the Project at this stage in its development would be a full-scale implementation of the SD Pamong combined PKB/Patjar system in a new Kabupaten.

#### 4. Recommendations for Future Development of the In-School Component of SD Pamong

I have already mentioned a number of my views and recommendations for future development of the Project, but will summarize and elaborate the more important of them here:

a. Priority should continue to be given to the development of effective supervisory systems to be used by Penilik and Kasda. This should be done carefully and systematically building upon what is already being conducted successfully in schools. Care should be taken to develop systems that are realistic (not too complex and/or formal),

that take into account the true environment of the schools, and that do not oppose existing structures and supervisory systems. Because of this, experienced field staff should always be consulted as much as possible and incorporated into the development process.

b. Formative evaluation of the supervisory systems presently being developed seems as yet undefined and should be discussed, designed, and implemented as quickly as possible. Presently planned "monitoring" efforts may provide required information (admittedly, at this point, I am not familiar enough with Solo's planning in this regard); but, from what information I have gained, I feel this area is still lacking clarification and depth.

c. The formative/summative data gathering from THB and DKB is an important effort that should be continued. Analysis by school and grade level could be linked with implementation information from the field to provide important insights. The THB and DKB information is at present the only summative measure of students achievement under the new PBM that will be available unless some new effort is planned. This may or may not be adequate and additional data gathering in this regard should be discussed with other interested parties, i.e., PDM, PENMAS, etc. Case studies information will also be of use and should be linked with the results of the above analyses where possible to explain and enlighten them. Linkage of ethnographic and quantitative analyses often provides excellent evaluations.

d. As mentioned, I believe the best evaluative test of the present SD Pamong systems and most productive step in the development process would be a full-scale implementation of PKB and Patjar in a new Kabupaten in an appropriate area of Indonesia under the guidance of UPT Pamong Solo and BP3K. This should be done upon completion of new training packages and systems to help provide a realistic try-out for

these materials as well. This effort would, of course, be dependent upon available funding and support at the highest levels and should be conducted in close coordination with PDM.

e. Training for tutor kakak and better remediation for Grades One and Two students have been identified as areas requiring improvement in regard to programmed teaching. Scheduling and targeting of learning of the pedoman belajar also needs to be improved. Discussions are planned in this regard and should be encouraged, again drawing upon the experience of field staff to the extent possible.

f. The most pressing problem in regard to learning in the PKB at present is the transition of Grade Three students to module study. As yet, a satisfactory system for this transition has not been developed, although there have been some recent improvements. Last week we in the Sekretariat discussed a new concept that might prove a useful way to improve the transition process if it could be fully developed. Up to this time we have considered transition systems for Grade Three students beginning in Grade Three only, but what if the transition were to begin in Grade Two during the last term of the school year. The basic structure already exists in Grade Two to conduct this transition, set learning groups with a tutor kakak in place to guide and monitor each group. If the learning materials were modified somewhat for Cawu III so that the process of learning in one subject, say Bahasa Indonesia, became similar to the teaching/learning process in Grades Three to Six, a basic transition to the PBM and modules could begin in Grade Two. The PBM group learning steps could be introduced little by little under the guidance of the tutor kakak in a modularized format with the students taking turns acting as tutors. This would take place during regular PT periods in Cawu III. The essential ingredients required are modified Grade Two learning materials for Cawu III in Bahasa Indonesia and the development of systems to be used by tutor

kakak to orient the children in their groups to the new PBM. A system of training for the tutor kakak in these transition activities and for monitoring their performance would also be required.

g. The present PMBP (Versi II) materials development process might lead to more effective learning for in-school students if it is done carefully, building upon and incorporating successful teaching/learning processes presently in place. I still have some reservations about the practicality of using the PMBP materials with out-of-school students (although I have not yet seen these prototypes) and believe careful consideration and testing of the system in realistic Patjar settings is essential. I fully support Pak Subronto's call for a parallel development of PMBP materials and improvements to the present SD Pamong modules. The modules still require work to remove certain inaccuracies, confusing terminology and concepts, and irrelevant examples. In addition, wasted space could be eliminated to condense the modules into fewer total numbers. When this module revision process is conducted, it should include classroom teachers who are most familiar with the learning difficulties of students and not rely only upon review by university students, faculty, or content specialists.

h. If the PMBP materials are ready to be tried out this school year on a broader scale, I strongly suggest they not be tested in Kabupaten Gianyar. There are too many other important development efforts planned at the present time that require careful monitoring and accurate feedback information. These include the new PBM, supervision and management systems in PKB and the test diagnostic and KK Wajar in the Patjar. It could be a mistake to introduce such a basic change as PMBP at this stage and might possibly alienate the field staff.

i. For more effective learning of mathematics (and IPA) in Grades Three to Six, the "program pengayaan" and the system of "klasikal" instruction needs to be further refined and more effectively implemented. The system presently calls for at least two periods per week of "klasikal" instruction, at least one of these periods for mathematics. In some PKB this is being done with good results, but in most PKB better implementation is required. Some PKB appear to rely on too much "klasikal" instruction to the detriment of group instruction (resulting in not enough time being available for students to study the modules), and this should be guarded against.

Even with proper implementation of this system, it remains difficult for PP to identify all the problems students have with the content, i.e., the material that is most important to reinforce during these "klasikal" instruction periods. For this purpose, it continues to be important to develop the "Pedoman/Index Matematika" started by the Sekretariat staff to help PP identify areas that might be causing difficulty and provide them with suggestions on how to teach this material. These draft "Pedoman" for the first term have been prepared, but the Sekretariat has not had the necessary time to complete the process. Elementary school teachers who are subject specialists or content specialists who have experience as primary school teachers should be hired to take over this effort as they are most familiar with the problems encountered by students. This effort should be supported by UPT Pamong Solo and should begin as soon as possible. If it does not yield the desired results, consideration may have to be given to complete revision of the mathematics modules.

j. When the training materials consultant arrives, in addition to his already defined tasks, he should be asked to provide ideas and an orientation on materials and techniques for enhancing learning, i.e., making learning more exciting and interesting, as part of the effort to improve the program pengayaan for both in-school and

out-of-school students. A number of innovative techniques used for staff training can also be used as models for the development of learning enhancement materials for students. Both PKB and Patjar learning could be improved by the development of such learning support materials and the "Pedoman/Index" for math and IPA mentioned above.

C. THE OUT-OF-SCHOOL COMPONENT OF SD PAMONG (FROM A REPORT PREPARED NOVEMBER 20, 1982 FOR DR. MATT SEYMOUR)

1. Background

Shortly after my arrival in April 1980, a series of meetings was held between BP3K, UPT Pamong and Bali Sekretariat staff to complete the conceptualization of the teaching/learning process and management structure of the Patjar component of SD Pamong. In May 1980, workshops were held with Penilik SD and Penilik PENMAS\* to provide them with a basic orientation on the needs of out-of-school children and how the Patjar might realistically fill these needs as well as to begin the identification (mapping) of potential Patjar sites. Upon identification of these sites, training was conducted for Kasda and PP3. The new PKB and Patjar sites began operation in July 1980. Initially 144 Patjar sites with a potential clientele of approximately 1500 Grade Five and Six students were identified; Grade Three and Four learning materials were not yet available (see Attachment 1). The majority of these Patjars, 130, were in operation throughout the 1980/81 school year (see

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\* Even at this early date the necessity was recognized of coordinating the Patjar component with PENMAS out-of-school activities.

Attachment 2) and by its end, 227 Grade Six Patjar students successfully passed the Ujian Persamaan examination, and 244 Grade Five and Six students remained in the Patjar program (see Attachments 3 and 4). Approximately 47 Patjar remained active and carried over into the next school year, 1981/82, but a few became inactive before its close.

In October 1980, the Bali Sekretariat conducted a series of interviews with PP3, parents, community leaders, and Patjar students (both active and inactive) to determine the primary factors contributing to the success or failure of the Patjar and the reasons for problems being encountered. (See Attachment 5, Report to the Bupati Gianyar dated 12 February 1981.) Of the important factors identified as influential from this field study and from formative evaluation information, community support and influence of local village leaders and organizations in support of the program was pinpointed as a primary asset that could be improved through a systematic strategy of coordination with local government officials. Kewajiban Belajar was an ideally suited vehicle for use in developing this strategy and work began on this effort through the auspices of BP3K. By November 1981, the KK Wajar workplan, juklak (implementation manual), and data gathering effort were well under way (see Attachment 6, "Briefing Paper," and the KK Wajar Juklak for a more detailed description). These activities are just now reaching fruition.

Because of the KK Wajar development and the objective of systematically linking Patjar implementation with the training, data gathering, and motivation activities of community leaders and organizations -- an objective that (due to its complexity, newness, and other factors) took longer than initially planned -- there were not a large number of Patjar that became operational in the 1981/82 school year. The primary reason for this was the unwillingness of Kasda and PP3 to initiate new Patjar sites before Kelian and Kepala Desa had completed data gathering and motivational efforts in their communities. A number of activities were conducted between December 1981 and May 1982 to encourage (speed up) the

Patjar development process. The most extensive of these was a series of new Patjar site mapping meetings in each Kecamatan attended by Camat, Kakancam, Penilik, Kasda, PP3, Kepala Desa, and secretaries of KK Wajar Desa teams (usually LKMD education officers). From these meetings 160 "potential" Patjar sites were identified based upon the incomplete data on drop-outs that was available at the time -- likely an overly enthusiastic estimate. However, throughout the 1981/82 school year, only about 25 new and reactivated Patjar actually began operation. From these Patjar and the Patjar carried over from the previous year, 180 more Grade Six Patjar students passed the EBTA examination (see Attachment 7) and approximately 500 Grade Three to Six Patjar students passed the Ujian Persamaan examination. (This latter figure is a rough estimate based upon data from four Kecamatan - 319 students passing - and a projection for the other three Kecamatan.)

A new problem also became apparent during the 1981/82 school year. Third and Fourth Grade modules were now available, and it was hoped that a number of new Patjar students would enter at these grade levels. This did not happen to the extent desired; and, although the reasons are complex, I believe a major factor may be realistic decisions on the part of these potential Patjar students to opt for the quicker, but possibly less desirable, route of obtaining only an Ujian Persamaan degree through other available methods primarily the Kejar PD program (see Attachment, Memo of June 18, 1982).

To help remedy this situation and improve the motivation of Patjar students at lower grade levels, we have reinforced the effort to work more closely with the PENMAS Kejar PD program and to develop a system whereby lower grade Patjar students can start at higher levels and/or finish the program more quickly if they can demonstrate mastery of the curriculum material through the "tes diagnostik."

## 2. Present Status of SD Pamong Patjar

The KK Wajar baseline data gathering effort is completed (see Attachment 9), workplans have been developed by PP3 and Penilik for implementing new Patjar through coordination with Kepala Desa and many Kepala Desa, Kelian, and community organizations are already actively participating. A workshop has just been completed attended by PP3, Kasda of PKB and PPKB, Penilik TK/SD and PENMAS and Kakancam to begin implementation of new Patjar, introduce the "tes diagnostik" and begin development of Patjar supervisory systems. The DINAS P dan K at the Provincial and Kabupaten levels are now providing excellent support to the Patjar system and are encouraging others (INPRES SD staff) to assist Patjar activities. DINAS P dan K and Kanwil P dan K have also begun planning of the dissemination of the Patjar system to three new Kabupaten in Bali -- Badung, Tabanan, and Jembrana -- for Kewajiban Belajar implementation. The Bupati of Gianyar continues to encourage the project as does the Governor of Bali as demonstrated through financial support for equipment in PKB and PPKB for their Patjar. In addition, the Patjar component of SD Pamong (PPKB/Patjar and East Java models) has been sanctioned by PDM for dissemination throughout Indonesia as a Kewajiban Belajar implementation system.

In Kabupaten Gianyar, 22 new Patjar with approximately 360 students will begin operation within the next few weeks (see Attachment 10). A number of other areas where planning is further behind are likely to add additional Patjar. The most recent data prepared for the DINAS P dan K Gianyar shows 86 active Patjar with 866 students, but the Kecamatan Tampaksiring portion of the data does not appear to be accurate (see Attachment 11).

### 3. Areas for Further Development and Recommendations

All these developments are encouraging, but a number of aspects of the Patjar component of SD Pamong are as yet unrefined and need further development. Among the more important of these are:

a. An age limitation regulation appearing in the "Pedoman Pelaksanaan Pamong" prepared by PDM on students taking EBTA examinations must be eliminated or raised or it will seriously damage Patjar student motivation and hamper Patjar dissemination (see Weekly Report #109 of November 17, 1982);

b. Dissemination plans for the Patjar program in Bali need to be clarified through close coordination between DINAS P dan K, Kanwil P dan K, BP3K, PDM, and UPT Pamong Solo. The staff training strategies for dissemination of the Patjar program in Bali (and elsewhere) must be integrated with and supported by the UPT Pamong training materials development plans and the role of the SD Pamong Sekretariat and Gianyar field staff in these activities should be identified. These people are an excellent source of expertise and experience that must be drawn upon as much as possible;

c. The working relationships between SD Pamong Patjar and PENMAS Kejar PD must be further developed and implemented especially in regard to the smooth transition of Kejar PD students to Patjar if they desire, the possible establishment of Kejar Usaha in Patjar to encourage skill training and motivation of students, and the joint management of learning sites and sharing of facilities and staff. This should be done under the auspices of KK Wajar. Much progress has been made in this regard. The key parties have been trained and are talking with each other. The relationships in regard to transition have been conceived (see Attachment 12);

d. Development of effective supervisory systems for the Patjar should continue as planned and remain a priority. Joint supervision activities by Penilik TK/SD and Penilik PENMAS might be a very productive avenue to encourage cooperation and understanding and should be investigated;

e. For some time media motivation and information efforts have been conducted by Pak Parmadi of the Bali Sekretariat. These efforts should be supported and expanded. Joint media development activities with TKPK and other organizations should be encouraged both for motivation and for making learning more interesting and effective. Avenues of media in-service teacher training should be explored;

f. KK Wajar activities should receive continued support and close monitoring by BP3K especially in efforts to motivate drop-outs and establish effective reporting and evaluation systems which are now the priority;

g. A careful study should be made of the strengths and weaknesses of the various Patjar management structures in use, i.e., PKB/Patjar, PPKB/Patjar East Java and Karanganyar, if a new structure is developed. This effort should begin in Bali with the case studies planned for January and February;

h. UPT Pamong Solo and the Bali Sekretariat should continue to refine implementation of the "tes diagnostik" and teaching/learning systems for the Patjar especially in regard to non-modularized learning. Effective evaluation and monitoring to support these efforts should quickly be developed. This learning systems development should be done with care as not to damage effective systems presently in place. Development of PMBP materials should be examined with special care based upon study of the true learning methods and environments of Patjar

students. It must be remembered in all Patjar development that the primary motivation for students to enter the Patjar and the thing that differentiates the Patjar system from other out-of-school programs, its real strength, is the conceived legitimacy of the program as "real" primary education combined with a flexible and practical delivery system;

i. Closer coordination should be encouraged between BP3K, PDM, PLSPO, and UPT Pamong Solo to establish Kewajiban Belajar implementation policy in response to true realities of the field. Careful realistic assessment of educational environments and clientele in all areas of Indonesia with their great diversity should take place and delivery of appropriate educational systems should be contingent upon these assessments.