CANADA

Teaching yourself in primary school

Report of a seminar
on self-instructional programs

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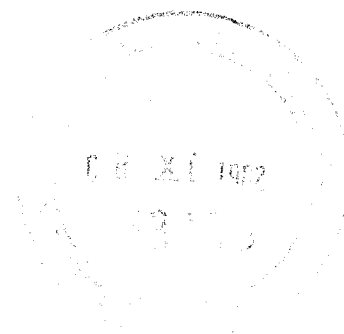
Report of a seminar on self-instructional programs held in Quebec, Canada, 12-15 May 1981

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Dissemination and Utilization of Education Research: the Impact-type Projects

The informal chain of Impact-type projects linking several developing countries illustrates educational research dissemination and utilization. The phrase "dissemination and utilization" is used broadly in this paper to refer to the processes that operated in the national and cross-national promotion and adaptation of ideas and products related to this particular educational innovation. This paper highlights some examples of these processes to show how they contributed to the acceptance and spread of the innovation and its technology. These examples illustrate features of at least three models in research dissemination and utilization — problem solving; social interaction; and research, development, and diffusion.

Relating examples with models is an indirect way of suggesting some approaches to research on dissemination and utilization such as case studies or the application of one or a combination of standard models that look more deeply into events and interactions in the transfer and adaptation of ideas, experiences, and products.

OUTSIDERS AND INSIDERS IN PROBLEM-SOLVING

In the case study I did on the Philippine Impact Project (Flores 1981) I found that outsiders (consultants and donor representatives) played a pronounced role, especially during the stages of project identification and research design development. This role, which was primarily one of consultation and collaboration rather than decision-making was also apparent in the other original pilot site in Indonesia.

Searching for solutions or alternatives to the problems of cost and quality of primary education, Southeast Asian and Western educators met several times, in the early 1970s, and discussed the feasibility of adapting a range of educational concepts and technology that were popular at that time. For example, ideas characteristic of deschooling, community schools, nonformal education, and modular technology were presented and debated during the meetings. The conveyors of these educational innovations were mostly Western educators connected in one way or another with international funding agencies. Although these outsiders continued to participate in several stages of project develop-

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ment, their role in decision-making did not largely determine the direction of the project. The client–users (Filipinos and Indonesians) were active in the discussions, and they made most of the decisions about the choice of experimental sites, administrative structure and arrangements, development and implementation of self-instructional and programed teaching technology.

The events and decisions before field experimentation corresponded to features of a problem-solving model of research dissemination and utilization. Basically, this model is seen as a "patterned sequence of activities beginning with a *need*. . ., translated into a *problem* statement and *diagnosis*" (Havelock 1971:86–87). From this, the process moves to a search and retrieval of ideas and information resulting in the selection and adaptation of an innovation. An outsider role is recognized as important in this model, but, for the innovation to succeed, that role should be consultative or collaborative. Furthermore, full use of existing internal resources is also recognized as important in the success of problem-solving (Havelock 1971).

Consultation and collaboration in problem-solving may be validly extended to the dissemination of the Impact/Pamong innovation in other developing countries. In a real sense, the exposure through visits to field sites in the Philippines and Indonesia of educators from Malaysia, Liberia, and Jamaica was dissemination. Although these observation visits were financed by donor agencies (one example of donor roles in dissemination), the decisions to embark on similar experiments and to adapt the technology had been taken mainly by the people in these so-called Third World countries. Moreover, the freedom for local educators to plan their project, design the research, and develop the technology (e.g., modules, programed teaching, peer group and self-teaching methods) challenged their innovative talents. The result was rich, flexible variations in methods and technology of teaching and learning.

Another dimension of consultation and collaboration in research dissemination may be seen in the sharing of expertise and products from the original sites to other countries. Short-term consultants, for example, were requested by the Malaysians to train module writers for Project Inspire. Progress reports and sample modules were sent to Jamaica, and periodic meetings were held between the Philippine and Indonesian research teams to exchange information and share experiences. All these were valuable activities that not only contributed to the positive progress of the experiment but also enhanced the research skills of native educators.

SOCIAL INTERACTION MODEL

Many events in the planning, implementation, and replication of the Impact-type technology, both nationally and cross-nationally, reflect the characteristics of the social interaction model in research dissemination and utilization. According to this model, five principles characterize successful diffusion of innovation. These are that the adopter belongs to a network of social relations that largely influences her or his adoption behaviour; that her or his place of centrality, peripherality,

or isolation in the network determines her or his behaviour in accepting new ideas; that informal personal contact vitally influences adoption; that group membership and reference group identifications are major factors in adoption behaviour; and that diffusion begins slowly but accelerates to a rapid rate (Havelock 1971).

In the Philippine, Indonesian, Malaysian, and Jamaican projects, one key to the relatively easy country acceptance of the innovation was that important decision-makers in the education ministries were brought into the project management structure. For example, the Philippine Deputy Minister Albarracin was the country's representative to the governing board of the project-administering agency, Innotech, and Regional Director Tiro (in whose region Impact Naga belongs) was an Innotech fellow at the time. The inclusion in the national steering committee of Elementary Education Director Soriano and Philippine Nornul College President Sibayan helped secure easy acceptance at the start of the experiment. In Indonesia, the influential Pusponegoro was Secretary-General of SEAMES (Southeast Asian Ministers of Education Secretariat) at the time. There was also a direct link between Innotech and BP3K (the research and development arm of the education ministry — Badan Penelitian dan Pengembangan Pendidikan dan Kebudayaan) through a special Innotech unit in BP3K itself.

The importance of the network of social relations is also shown in the solving of critical problems during implementation. The first one of many examples in Impact was an absentee instructional methods expert in the Philippine project.

The continuity of the network of social relations in innovation acceptance is further illustrated in the Jamaica project. The events leading to the initial decision to start the experiment in Jamaica began with the visit to the Philippine sites of a powerful group, including among others the Minister of Education himself and the president of the national teachers' union. While this group remained in their positions, the planning of the experiment went smoothly. Unfortunately, before firm decisions were completed to implement the project, a change in education minister occurred. A somewhat different network of social relations resulting from the change meant some delay in moving the project to implementation.

The Malaysian Project Inspire, unlike the Philippine, Indonesian, and Jamaican experiments, is based in a provincial state university. But the direct participation of key officials from various levels of the Ministry of Education was ensured even during the project development discussions and has been maintained throughout. In fact, in the Malaysian case, this network of social relations has recently influenced several significant developments — for example, an eagerness on the part of the Ministry's Curriculum Development Centre to use the Inspire technology in implementing (starting in 1983) of the "back to the basics" national policy for primary education. Another encouraging development is the adoption of the Inspire programed teaching guides in Sabah and the recent substantial financial appropriation of the government to pursue further the experiment.

The Philippine and Indonesian projects provide additional examples of success in channeling research results or products into the system

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through social interactions. In the Philippine case, an important research and development unit of the education ministry, EDPITAF, was isolated during the entire 5 years of experimentation. This fact played a significant part in preventing the Impact technology from entering the wider system despite evidence of its being more economical and effective pedagogically than was the conventional system. However, through a combination of informal personal contacts, wide publicity, and Impact's timely appearance (e.g., the need for a viable alternative delivery system to implement a national decentralization policy), EDPITAF came forward and took active interest in the expanded tryout of Impact. EDPITAF now sees Impact's potential to interlock with the various components of the primary education system.

In Indonesia, the explicit appearance of Pamong in the current 5-year development plan provides another example of the importance of social relationships. Aside from the merits of the technology itself, the decision to include Pamong in the plan was largely due to the harmonious relationships between key officials with BP3K (e.g., the BP3K director and the head of the unit responsible for the Pamong experiment) and between BP3K's director and other ministry officials including the minister at that time. Seeing the possible role for Pamong in stemming Indonesia's high dropout rate and in improving access to primary education, two international donor agencies responded with support for the experiment's expansion to two islands outside Java.

RESEARCH, DEVELOPMENT, AND DIFFUSION MODEL

Although a research, development, and diffusion model is generally applied in space and defence industries and in agriculture, some of its components seem to be operational in the dissemination and utilization of the Impact-type technology. The sequence includes research, development, and packaging before mass dissemination; planning for large-scale implementation over a long time; division and coordination of labour to go with planning; rational acceptance or adoption by the consumer; and willingness among the proponents to accept high initial development costs on the expectation of long-term benefits in efficiency and quality and for mass dissemination (Havelock 1971).

Several countries involved in introducing the Impact-type technology are showing promise as contributors to the research, development, and diffusion model. One that is closest to this model is the IEL project of Liberia. IEL has been committed since the very beginning to developing a system that can be packaged for national implementation.

Although the motivation behind it was different from IEL, Indonesia's Pamong may be said to possess the potential also to develop into a model. Indications of this possibility include: the inclusion of Pamong as a policy option in the 5-year development plan; the planning of a national survey to determine geographic areas where Pamong fits; further development, refinement, and research about the efficiency of the Pamong technology; and tryouts of Pamong in a variety of intracultural settings (e.g., Bali) and school situations (e.g., small schools in Kalimantan).

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Impact Philippines is now officially incorporated in the PRODED (program for decentralized educational development) scheme and with financial support from the World Bank, further adaptation, refinement, and expansion of the technology could move Impact further into a model of dissemination.

It may be too early to tell in the case of the Malaysian Inspire, but this, too, may be rapidly transformed into national-scale dissemination. This possibility, of course, assumes that Inspire's technology can demonstrate its efficacy in terms of superior pupil learning performance.

DISCUSSION

Various links have operated in the dissemination and utilization of the ideas, methods, and products of the Impact-type innovation and technology. Although I have emphasized the relationships between events in the various country projects and features of existing models in research dissemination and utilization, other factors should not be overlooked or naively taken for granted. Success of educational experiments involving human beings cannot be easily attributed to the application of standard models. Somehow, there will always be extraneous human or nonhuman factors that can affect success or failure. Research on dissemination strategies — whether they are case studies or applications of known models — will be confronted with the complexity of human behaviour.

The initial success of the Philippine and Indonesian projects and the encouraging progress of the younger ones in Malaysia, Jamaica, and Liberia indicate the important role of dissemination and utilization in the early as well as in the final stages of the educational research and innovation. There will always be advocates for more research about education, especially in developing countries. And there will probably be donors, local and foreign, who will respond sympathetically to these researchers or their institutions, more so when proposals are argued in the name of "development." The cry of development-relevant educational research may overshadow the equally important concern of what happens after the research is done and the report printed. Until dissemination and utilization of research results and products are attended to seriously, much valuable research will remain unassembled parts or pieces that are bound to gather dust and rust.