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9. ABSTRACT

Delineates the process and problems of setting up a network in educational policy and planning. Net working is a process of moving information "whose time has come." The need for an effective distribution mechanism is created by (1) a great degree of isolation among specialists--both geographically and as a result of the division of labor and (2) a tendency for information flow to be inconsistent. Network development in the education field up to the present has been concerned with end-result systems, e.g., publications, papers, proceedings, findings, etc. Prior to the end-result publication stage there exists a whole series of stages, from conception to pre-publication completion. Information about these stages is rarely, if ever, disseminated. These are the stages focused upon in this network model. UNESCO is in a unique position to develop such an approach to networking in an international context. No single national institution, nation, or block of nations can compete with a multilateral organization, simply because of partisan considerations. Major sections of this report include: Network Context and Network Properties; Process and Problems of Setting Up a Network; and Lines of Development of Networking by UNESCO.

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ORGANIZING AN INTERNATIONAL INFORMATION
NETWORK IN EDUCATION: PROCESS AND PROBLEMS

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I INTRODUCTION *

In this paper we shall delineate the process and problems of setting up a network in educational policy and planning. To do so, and to highlight the innovative features of our approach, which we believe to be unique, we shall first survey the general context in which a network has to operate and then present properties that we believe important or essential if the network is to have impact and be successful. Finally, we shall summarize some recommendations that can be made on the basis of our analysis for the consideration of the members of this symposium and of the Unesco secretariat.

Networking is a process of moving information whose time has come. There are several reasons for this, all well-known, of which we can mention three. First, the division of labor has created a great degree of isolation among specialists. Whatever the individual country or region, field or topic, mechanisms that distribute information among those specialists are a necessity. Second, in the international context, geographical isolation, in addition to division of labor, between one expert and another - what one of our network members has called "the loneliness of the far-distant runner" - creates an additional reason for an effective distribution mechanism. Third, and cross-cutting these two reasons, is the fact that, when information does flow, it can flow inconsistently - not arrive where needed - yet in such profusion when it does flow that the reader is drowned in a sea of paper and rhetoric, unfocused and often misleading. In many fields now, publications have been developed to

*I want to thank Professor Guy Benveniste of the University of California, Berkeley, for his seminal contributions to the development of our networking approach, and to thank him and Professor Isabel Pritchard of the University of Texas, Austin, for constructive critiques of the first draft of this paper.

cover and condense the wide range of material available. A successful network has to connect isolated experts, offer a reliable flow of solid information that really can be used and thereby create and maintain a community of active participants.

Network development in the education field up to the present time has essentially been development of end-result systems. End-results are the publications, papers, proceedings, findings, etc. of projects, programs, experiments, etc. These end-result systems are almost always library-based. Relatively recent innovations include development of computer-based annotated storage/retrieval systems, extension to unpublished as well as published work, elimination of duplication of holdings in a group of libraries, etc. The library remains the main repository of information and users send their requests, via various media, to the point of storage and retrieve what is stored under the terms described. For example, the International Bureau of Education runs an International Educational Reporting Service (IERS) to supply information on educational innovations at a cost of \$600,000 per annum. Its services are: a bi-monthly newsletter alternating with a bi-monthly computer-based bibliography, a series of occasional short monographs and an answer service for specific requests.

Prior to the end-result publication stage of research, implementation, training, etc. there exist a whole series of stages - from conception to pre-publication completion. Information about these various stages is rarely, if ever, disseminated; if it is disseminated, it is often merely in the form of announcements.

To create a community among relatively isolated experts around the

world, it is essential to set end-result dissemination to one side, de-emphasize the creation of a repository, and focus on circulating information about the pre-publication stages we have mentioned. The circulated information must be straightforward and freely available. A newsletter run by a small secretariat is the best medium for this purpose. We have developed in our Program a simple model in a limited area of educational policy and planning for networking information in this fashion. It can, we suggest, form an innovative center for a more far-reaching networking operation on the part of Unesco in education, or, for that matter, in any other field.

Unesco is in a unique position to develop such an approach to networking in an international context. No single national institution, nation or block of nations can compete with a multilateral organization, simply because of partisan considerations.

In order to be successful, however, a Unesco networking system will have to develop all or most of the properties we are going to describe. If this is not done, the quality of the networking operation will suffer in varying degrees and network members around the world will not be properly served. If this is done, our experience shows that the approach is highly cost-effective in comparison with end-result systems.

Our own network, reaching at a minimum 1000 persons, costs about \$20,000 per annum to run. It can be run in association with the traditional end-result network service (as we do as part of our \$20,000* per annum budget), or separately if the latter service is being offered independently. It is also highly flexible and can be developed in several directions, some of which we shall address later in this paper.

*These figures do not include the cost of books purchased or the salary of the librarian for other related duties. If these are included, the budget is raised to about \$30,000.

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As far as we know, this is the first presentation of this type of analysis of network context, properties and strategies for maximizing effectiveness. At any rate, usable published literature has not come to our attention in the field of education. Therefore, it seems that we are dealing with an innovatory approach to networking whose time has come. Those who develop this approach will be in the vanguard.

II NETWORK CONTEXT AND NETWORK PROPERTIES

1. Network Context

(a) International vs. national

Examination of national patterns of information flow reveals wide divergences. National political systems, the organization of school and university systems in the political contexts, the role of central and decentralized bureaucracies in the running of public and private educational systems, the interaction of research, training and decision-making processes, are some of the institutional variables to consider. The size, population and stage of development of each country also have autonomous roles to play.

In this paper, we confine ourselves to the international flow of information in educational policy and planning by means of networking. It is, we have found, possible to set up an international network that has an interface with national systems but does not depend on them in a problematic way that demands country-by-country analysis. The idea of creating and maintaining a community of relatively-isolated experts requires only that they be able to be active in the network; it makes no particular demands about their institutional setting and political background,

except to ensure worldwide coverage and inclusion of various types of institutions.

(b) Potential membership

Who needs the network and who will contribute to it? The relatively isolated specialists - researchers, trainers and teachers, policy-makers, decision-implementers - in the member countries of Unesco do have channels of information now. Journals, reports, conferences, organized and distributed by various institutions - governments, universities, private foundations, international and regional organizations - provide this service. But the channels are incomplete and in any case provide no systematic contemporaneous mechanism through which to express a community of interest. This is true whatever the stage of development or whatever the political system of a particular country.

Apart from this, the body of knowledge and beliefs in the field changes rather rapidly, in both technical, strategic and political respects. Educational systems and institutions themselves are subject to sudden and deep changes and to moves made in the arena of international power politics. Furthermore, talented individuals are in great demand and can undergo rapid promotion and movement into and out of national and international planning and research institutions, changing field if necessary. We have experienced a turnover in our network of about 12% per annum for all these reasons,* although there is also a constant core. For such reasons a network exhibiting continuity, regularity, dependability and, of course, circulating good quality material, is peculiarly appropriate.

*Figures used in this paper about our network's characteristics and effectiveness are based on the first forty percent of returns of a questionnaire sent in March, 1977 to all our members. A full analysis of the fifty percent finally returned will be available August, 1977.

Potential members who need and can contribute to the network information flow are, of course, in general terms, those engaged in research - theoretical and practical - training, and implementation at policy, planning and project levels, in the field of knowledge/beliefs covered by the network. What this means in terms of individual countries varies greatly, depending on the political and bureaucratic conditions, development stage, size, and other variables mentioned above. The point for the international network specialist to grasp and implement is that there is no prescription about how to identify individuals and institutions a priori; identification must be grounded in the realities of individual countries. However, the individuals or institutions involved must be active in the field for the duration of their membership and make way for others when they cease their activity. This is, of course, a problematic matter and will be discussed at greater length in a later section (pp.18-20).

(c) Boundaries

What are the processes of producing usable information in a particular field? What in those processes should the network pick up and distribute? What shall the content or field be, in any case?

Irrespective of the content or field, a series of processes take place which a network has to address. That is, new ideas are thought out, new knowledge produced, new approaches suggested; older ideas, knowledge and approaches are remembered, recalled, found more appropriate. Ideas, knowledge and approaches come not only in the stereotyped pattern of fallout from research but also from implementers, planners, people on the interface of, in our case, teaching, who engage in the actual activity and hopefully still have some say about it - not just traditional

"teachers" but "students". From whatever sources they come, ideas, knowledge and approaches are tried out and disseminated, evaluated, put into more general use, found wanting, retired from service.

This whole complicated multi-dimensional and multi-directional set of processes tends to be shaped in the modern world around research activity and implementation activities and I think that a network has to recognize this, while at the same time being open to all sources without discrimination. Such openness is particularly necessary because of the proven tendency of universities in particular to be overinterested in theory and of bureaucracies to be out of touch with grassroots needs. Further, since recognition has to be given to the great variation in member countries and their needs and ability to contribute, a single modern research-implementation model is far too narrow. In an international network, a broad-banded conception of the processes going on and the appropriate boundaries is necessary.

Picking up elements of this process for transmission in the network is not as complicated as this description may make it appear. For there are "cutting points" at which formalization takes place and transmission can occur. I refer to such formalities as proposals, plans, reports (interim, annual or final), other documentation, reviews and evaluations.

In the traditional form, there can be a time lag of five to ten years between first proposal and final publication of end results of the experience, as a book, article or other formal presentation. Presentation at a conference often cuts the time lag down but is shared only by those with access to the proceedings. The major purpose of our proposed network must be to capture and transmit information at the earlier

cutting points, including the proposal stage. This is the best way to resolve the tension between traditional research/planning-publication lags and the needs of relatively isolated individuals and institutions in a fast changing situation, where so many resources can be saved and so much greater effectiveness be achieved by sharing information at an early stage. Thus, we propose not only to move back in time from sharing formal publication (books, articles) to sharing less formal publication (reports, papers, documentation) as does the International Bureau of Education's IERS, but to continue back through the other stages, even to the stage of formation and first stages of ideas, projects and approaches, at which cooperation, feedback and support can also take place.

We are suggesting, in a word, that an information network perform a news function for members - spreading information that it is important for various reasons, for members to know about, at the time they need to know about it - no later. Such an orientation quickly suggests a format.

The focus is a newsletter and coverage is given, at a minimum, to (a) important activities in research, implementation and training at all stages of the process; (b) controversies in the field about approaches, ideas, methods, technology, politics, etc., with a view to throwing light on them by airing them; (c) occasions, such as informal publication or conferences, at which early dissemination takes place; and possibly (d) end-results in the form of publications, etc.

In addition, and because of the different situations in which members find themselves, the network can perform an assistance function, at the level of information or personal support. This will be discussed at greater

length subsequently (pp.23, 32-3).

As far as content of the network is concerned, it is, of course, relatively independent of the networking needs derived from general processes going on around the world, which are comparable in most fields of endeavor. The focus of this symposium is on educational policy and planning. Where this is problematic is at the margin, where decisions have to be made on what to include and what to exclude. Such decisions are also dependent on the amount of funding available for networking, which may limit coverage, as well as on the internal bureaucratic divisions of the networking institution. Our own network is relatively narrow in focus: by concentrating on finance, cost and efficiency-effectiveness issues without arbitrarily excluding others, it limits range and focuses on more technical and non-ideological issues. A networking effort over the broad range will have to be seriously thought out from the points of view of coverage, size of network, subdivisions and related complicating variables.

2. Major Network Properties

(a) People base vs. information base

We have already contrasted end-result and work-in-process networks as if they were information-based. There is, however, a prior issue: shall the system be people-based or information-based? Simply put, the first system moves the people who have or need knowledge, while the second moves the information itself.

There are several examples of people-based, or at least people-focused networks in our field. In one perspective, teaching itself can be seen as

a knowledge-networking activity, usually directed from teacher to students but also capable of being exchanged among a relatively equal membership. Thus, the work of IIEP, which focuses on training, with research, backed up by various forms of documentation, including an IIEP-centered newsletter, represents a network of this type. More clearly networking activities based on people are those of the technical expert, the consultant, the joint project or technical cooperation, in which knowledge is spread - usually from one side on a technical basis and from the other side on the basis of knowledge of local conditions - mainly by personal contacts and assistance, with documentary backup. The APEID network operating out of UNESCO's Regional Office for Education in Asia is a good example of this, being particularly sensitive to considerations we shall examine throughout this paper. The INTEC/ILC network operating out of Oslo, Norway is another example well worth looking at. Conferences, seminars and other relatively formal gatherings also represent a type of knowledge networking, in which people with something new to say can present it personally to a gathering or audience for critical examination and discussion.

Since it is much more expensive to move people than information, cost considerations really militate against a people-based network which has comprehensive spread and general availability. The activities of IIEP, in face of the world-wide demand, are constrained to a very great extent indeed. The activities of technical missions, experts, etc. are important on occasion, but similarly constrained. Conferences are helpful but expensive too. Although training, consultation and conferences have a place, budgetary restrictions and considerations of cost-effectiveness are very likely to demand an information-based network, in which

the information, rather than the people, is moved to the place it is needed.

Such a network is appropriate, under present historical circumstances, for additional reasons. Many countries have reached or are reaching a position in which they have experts who can hold their own with experts from other countries. Their need, therefore, is for information about new developments rather than for direct assistance. Unesco membership reflects great variation in this respect, but an information network available to all members needs to recognize this fact, unless a policy decision is made to divide membership on the basis of such differences. We have found it unnecessary to do so. However, as we shall suggest later (p.23), there is a place for various secondary person-based network activities, particularly in the form of consultation services.

In the limited writing on networking, we have found it is frequently asserted that people-based networking activities are the only worthwhile ones. There are two main lines of argument put forward. The first is that communication only works, or works best, when it is direct, especially face-to-face: these are the conditions under which interchange of ideas can really take place. The second is that information-based systems do not work because people do not read what they do not solicit: they are overwhelmed with information and find it difficult or impossible to wade through it.

Clearly, if the relatively low cost of an information-based network is to be made effective, it must be given as many properties associated with interpersonal relationships as possible. In particular, it should be made to connect individuals rather than institutions, and it should

be informal and decentralized. It should offer status, collegueship, a sensitive secretariat that provides personal support and encouragement, as well as ease of contact and valuable information. We shall discuss these properties next.

Let us anticipate, however, some of the details of Part III of this paper by briefly indicating how we have met the objections raised against information-based networks. Two specific strategies can be mentioned, based on the properties set out above. First, to get people to pay attention to what they do not solicit, we have adopted the panel model for networking. That is, rather than sending out information somewhat blindly to any and all people whose names we come across, we deliberately restrict our networking activities, at the chosen level, to a specially-invited panel of experts, all of whom must be active in the field. The simple fact that as many as one half of our membership voluntarily contributed to our evaluation questionnaire and were unanimously in favor of the network is testimony to its impact: such a return rate is exceptionally high and such unambiguous support is unusual.

Our second strategy is to make it as easy as possible for members to get in direct contact with each other, thereby avoiding the constraints of centralization. Specifically, we insist on sending with each newsletter a current, updated list of members with their addresses and we give with every piece of information in the newsletter the source from which further information can be obtained. Our evaluation gives evidence of extensive further contact between members. Not only does each member regularly read the newsletter, but almost three fifths have made independent contact with one or more other members after reading an item in one of our first six newsletters and over half of these have continued with

further contacts. Without knowledge of the whereabouts of members, such crucial decentralized network contacts cannot take place.

(b) Informality vs. formality

The present system of research/implementation and publication stands as the current formal system for spreading information. Conferences provide formality too. Less formal are papers, reports, seminars, symposia and some newsletters. Potential members are used to these formalities and there are routine ways of preparing for them and standard ways of distributing them. Libraries are their repositories; books, articles, papers, proceedings, etc. are the main media. Both universities, policy-based institutions and governments have developed formal systems for their collection and dissemination.

Connected with the issue of the time-lag between initiation and publication of an activity, mentioned earlier, which demands a service in terms of a news-oriented information medium, is the issue of the degree of formality such a medium should take on. If our claim for the necessity of giving the networking activity the properties of interpersonal relationships is accepted, it follows that the approach should be as informal as possible under the circumstances. Whether or not members accept a formal invitation, informality in communication, format, presentation, printing, etc. must be aimed for, so long as the demands of clarity are met. The secretariat must take responsibility for encouraging and giving positive feedback to the membership, above and beyond ensuring that the content of the information collected is of a high standard.

Informality must be accommodated to clarity. The sheer quantity and rhetoric found in publications and conferences, as already mentioned, plus the associated rituals, cause the hard-pressed worker, in whatever

capacity, to long for an informal, honest and straightforward flow of information about what is going on in the field.

Network morale always remains an issue for people who hardly know each other. This is one of several reasons for making personal contact a supporting part of the network, as we indicate later (p.30).

(c) Individuals vs. institutions

For the reasons given above, it is much better to construct a network of individuals than one of institutions. The latter type of network is appropriate for communicating information of the formal system, such as library accessions lists, computer-based information systems, conference proceedings, etc. But, for the reasons set out, such formal networks simply do not have the power and immediacy of personal networks in which formalities are cut through and information is shared as news by people who can both contribute and respond.

If it is not possible to construct an individual basis for membership, it is essential that institutional members nominate an individual active in the field to coordinate information flow from the institution to the network and to spread to relevant individuals in the institution information from the network. In our network, which is entirely inter-individual (although members can always send materials received to their library), we have found that about two fifths do not share their newsletters with anyone; but that the readership for the three fifths who pass their copy around to colleagues, etc. is about 5.75 persons per copy per issue - extremely high for such a publication. In our core network of 200 persons, then, there is a known readership of some 800 persons, prior to any library availability. Some of our members, therefore, are in fact acting

as coordinators in their institutions, usually on an informal basis. Such coordination, in turn, means greatly reduced costs for the network in printing, in distribution and in the effort to seek out information from a network of effectively quadruple size.

(d) Centralization vs. decentralization

When a network receives and distributes information, while making it difficult or impossible for those sending and receiving the information to communicate with each other, it necessarily centralizes the networking system. We recommend against such a system. Apart from gratuitously increasing the power of central bureaucrats through control of the information, such centralization increases formalization and counteracts the interpersonal thrust. In effect, the net achieved is one of a wheel with spokes and no rim rather than a true network whose connections are made across the web as well as through the center. The former system is appropriate when a newsletter is basically giving information about the issuing institution, as does IIEP's Bulletin. But, in a network such as ours, every member is offering information to every other potentially interested member. In a context in which the essential purpose is to maximize the free flow of information among the membership, every means available must be used. Independent contacts between members are an essential element. Network morale depends on an information flow encouraged, put out and shared in a collective enterprise, just as it does in face to face contacts between colleagues. Such a collective enterprise, being unusual or absent in the normal formal publication system, is something that has to be continually cherished and buttressed. Since members are not used to the idea of sharing current information as news routinely and informally

through a paper network, everything must be done to show them that it is worth their time and effort to do so. Thus, the organizing institution should be more secretariat than editorial board, more a booster of morale than severe judge of contributions made, and certainly more a facilitator than a repository of information. If the network members are pre-screened, problems of quality do not loom too large; those that do can be dealt with, as we shall show later (pp.18-20, 25).

III PROCESS AND PROBLEMS OF SETTING UP A NETWORK

Let us now present an analytic description of the process and problems of setting up an international network. To do this, we shall draw on our experiences in setting up and running such a network, based in the School of Education at the University of California, Berkeley, and funded by the United States Government's Department of State, in the field of educational costs, finance, efficiency and planning. Our network offers a simple model, both overall and with respect to its main innovatory features, mainly because of budgetary restrictions. With a larger budget available, a much broader range of services could usefully be built up as we shall describe more systematically in the last section (pp.31-4). Organizationally, we see these as subsidiary services that may already be in existence or that could be performed by other divisions of the networking institution.

We offer a newsletter, focused on work in progress, which is shared by a core group of some 200 experts in the field, and a library accessions list/bibliographic service distributed to a larger group of some 300 interested individuals and institutions; we also distribute our Program's publications and receive and work with visiting experts. The budget

devoted to the first two activities (some \$20,000 - \$30,000 per annum*) represents about 10-15% of our total Program budget.

Our experiences can be generalized in terms of issues and problems that any network organizer can expect to encounter and we can suggest strategies for attaining success. The first part of this paper has already delineated the properties needed to maximize the quality of membership, information and secretariat. Members must be found and motivated to contribute information; the information must be of high quality; the secretariat must circulate information in a reliable, timely, clear and attractively-presented fashion, thereby demonstrating to the relatively isolated network members that a really useful service is being performed that can lead to new linkages between members on the basis of common interests and projects.

We propose to review in more detail issues to be considered and problems often encountered in (a) recruiting members, (b) developing coverage, (c) determining media and transmission, and (d) coordinating the network and maintaining network morale. Our focus is upon the particular, innovative service we offer, namely the newsletter service. But, we believe, considerations that apply to it also apply to other possible services, including traditional ones. For example, our librarian, Ron Heckart, now regularly includes in the library accessions list a companion list of names and addresses of the publishers of every accession received. Here, again, is a simple and inexpensive device for putting interested members of our broader network in direct contact with the source of information. More generally, attention to network properties, strategies, tactics, issues and problems presented here will be highly suggestive for a

*See note, p.3.

more complex effort.

1. Recruiting members

By adoption of the panel method of recruiting (p.12), certain conditions are set up that will enhance success. The invitation to a panel of experts, especially when offered by an independently prestigious institution, confers a status on the membership that no general circulation centralized network can confer. Such an invitation provides a mechanism, beyond the mere need to share information, for involving good contributors on a regular basis. The need to receive information is usually felt more strongly than the need to send it out. The inertia in this respect has to be overcome by as many incentives as possible.

One other possible incentive is an honorarium for some or all items submitted that are included in a newsletter or otherwise used. Such a financial incentive for our international network was rejected by us for budgetary and administrative reasons, but it is a viable option if the secretariat's institution is able to organize it. In the absence of financial incentive, status and the basic need to share information informally about work and projects in progress must form the underpinning of network activities. We have found that these are sufficient.

If a panel method of recruitment is adopted, the issue of invitation procedures is a delicate one. Who shall be and who shall not be invited? Once the field of content coverage of the network is defined, the task is relatively easy. In our case, we began by inviting all individuals to our network who had a known capacity and were currently working in the field. In a standard letter of introduction, we explained our affiliation, our purposes in networking and offered both an invitation, a request for

a curriculum vitae, and a request for the submission of further names for consideration. Once beyond the circle of well-known persons, we modified the letter to indicate that the person's name had been suggested and that we would like to invite that person provided that (s)he was currently working in the field.

In order to develop the broad-banded network envisaged, we wanted (a) to make room for both the well-known people and the newer entrants in the field, (b) to maintain a balance between universities, governments, international/regional organizations and private foundations, and (c) to achieve as broad a geographical spread as possible, given such constraints as the national location of the secretariat (USA) and the source of funding (USAID). These goals started to direct and eventually dictate choices about individuals to invite. A further constraint was an upper limit of some 200 persons, for reasons of budget and maintenance of membership status. It became, on occasion, necessary to follow up an initial invitation with a further special invitation, either to those well-known, those in key positions or those in countries with null or poor representation.*

The difficulties encountered in such an approach are relatively few, provided that the secretariat makes it its business to get to know the international map of educational policy and planning endeavors and the important individuals in the field. Some individuals will suggest names of their personal friends and their colleagues. To counteract this, as well as for budget reasons, it is important to insist and explain that almost no institution needs more than one or two individuals to represent

*We presently have 207 members in about 60 countries and about 15 international and regional organizations.

it and act as coordinator(s). The important strategic issue is to ensure that only active individuals are included by making it very clear that only such individuals should be nominated.

It does occur, however, that inappropriate individuals may nevertheless become members. To deal both with this problem and the separate issue of relatively rapid movement into and out of activity in the field, we have developed the following approach. Insofar as a member is inactive over a year's (or other defined) period, in every way, or even through failure to contribute to the newsletter, we send a letter pointing out that the basis of membership is active contribution, enquiring whether the person is still active, and saying that the person will not be continued after a certain date unless (s)he contacts us, hopefully with a contribution. So, apart from the initial screening mechanism, which does fail from time to time, and because of the turnover of membership, a second-stage screening mechanism is necessary. As a consequence of this, continuous recruitment is necessary, both of new individuals in new institutions and countries as they are discovered or develop capacities in the field, and to replace lapsed members. Whereas others may measure success by expansion of the network, we measure it by the quality of its interchange. To maximize this, our sources of information must be active and good and motivated to contribute; for this, continuous recruitment is necessary. There does exist, however, a reliable core of members with a longer-term involvement in the field. Apart from a 24% turnover in 2 years, our remaining members have been in their current affiliation on average for about six years (including some long-serving academics).

A set of related problems derives from the political image of the sponsoring institution of the network. In the case of our own network,

a university base is, as such, an asset. But we have found that our unilateral sponsorship - in contrast to the multilateral sponsorship of Unesco - has caused us to fail to recruit, or recruit incompletely, members from particular countries or with certain political viewpoints, mainly because they do not wish any association on principle. It is political imagery which is at work here, because our sponsoring institutions have left us scrupulously alone to pursue an editorial policy of our choice.

The best policy, for this and other reasons already mentioned, for any organization is to maximize the flow of information, debate and controversy through the available media. In setting up a network with an information function, one must be seen, as much as possible, by potential and actual members to have no particular political biases and no interest, either, in controlling the flow of that information, for bureaucratic or other reasons. Thus, available and submitted information determines, to the greatest extent possible, what is circulated in the newsletter; and thereby flow is maximized.

2. Developing coverage

Our own newsletter, linking some 200 individuals in a relatively limited field in education, has experienced a steady flow of valuable information. Eight newsletters so far published, at about 16 pages each and on a quarterly basis, have, apart from other types of information, presented over 120 projects and programs in the field at various stages of their development.

Although the majority of contributions have been made on the sole initiative of the person submitting the information, under certain cir-

circumstances we have solicited information. The main occasions for doing so are a) when it is important to encourage the less self-confident who are doing good work; b) when busy and influential people in the field, who in many ways do not need the network because they are in positions where they have all they need, are encouraged to contribute; c) when there are issues that tend to be neglected and individuals working on the issues need to be solicited to send in information or present a point of view for debate. Generally speaking, however, those engaged in projects find it relatively easy to send in summary information on work in progress.

The focus on work in progress means presentation, on the one hand, of information to other members and, on the other, of positions or points of view about controversial issues. The former, being straightforward and factual, naturally arrive in a copious flow; the latter must, on the whole, be solicited and may particularly be worth offering an honorarium for. They entail much more work and do not get the kind of feedback that the discovery of a number of others working on or interested in the same problem can generate. Even so, a point of view section should be encouraged: an important characteristic of a rapidly-changing field is its controversies and, to the extent possible in an informal print medium, they should be aired. No doubt, symposia, with proceedings, are better for this purpose, and thus should be considered as an auxiliary network service, if a budget can be made available.

Whereas the core of the newsletter is work in progress - of whatever kind - for the central purpose of making news about such work as immediately available as possible and thereby creating a community of interest that bypasses rigidities of time-lag and formal presentation, attention must

also be paid to work about to be formulated and, of course, to dissemination of work in advance of full or formal publication.

With respect to formulation, we have tried to develop a "Request for Assistance" section, but it has been relatively unsuccessful. Naturally, individuals must feel somewhat reticent about sharing their doubts and formative ideas through the medium of print. Consequently, it seems worth developing a less public system, through the secretariat, in which ideas and problems are sent in on a private basis. The secretariat then makes discreet enquiries of experts or likely collaborators, or itself runs a more formal consultation service as a separate entity. Models for this already exist and experience is available for constructing such a service. Here, the information sharing service shades into a personal assistance service, which it may be more appropriate to centralize than to keep decentralized by means of a simple notice in the newsletter.

Dissemination of work, in advance of end-result publication, can be achieved in several ways. One of these is by offering a comprehensive section on upcoming conferences in the field, where to get information about them, and, if appropriate, some summary of work presented. Usually conferences are known to limited circles and their proceedings have limited circulation. A newsletter can provide valuable services, not only by announcing but by casting a critical eye on such events.

Interestingly, we have experienced great difficulty in developing regular channels for getting news of conferences. We attribute this partly to the very fact of our informality, but, more importantly, to the fact that no general system for setting up conferences exists so that they happen on a relatively haphazard basis. Whereas individuals have an incentive to tell us about their own or colleagues' work, they have little

incentive to tell us about conferences, except in the unlikely event that they are the organizers. It may be that Unesco is in a better position to provide such a service.

A second way to get access to dissemination of work is to develop a section for announcements. This section contains everything that does not fit elsewhere and often gives information about dissemination stages: network members wish to publicize their work.

Probably the most useful way to cover dissemination, apart from the end-result library accessions list, is to develop a section in the newsletter for follow up on projects already presented at an earlier stage. We are doing this now by requesting follow up information to the time of the last stages of a project already presented, sending a personal letter if necessary.

Other newsletters we have seen tend to focus on the activities of individuals, chronicling their rise, transfers and publications. We have chosen not to present such material, first because of space limitations, second because it is surely the substantive information that is of prior importance. In fact, we have discovered that there is really no demand from our members for a membership roster, which further confirms our editorial position.

Because we have chosen a decentralized or collective approach to networking information, our newsletter does not give a lot of material about our own institution or about what we think is important for our readers to think or do, as many other newsletters choose to do. Beside freeing communication channels by adopting a non-elitist, collegial position, the budget needed for the secretariat is considerably reduced because no effort is put into amassing and controlling information.

On the other hand, because of the screening process for membership, we have had relatively few problems with quality. Only one or two out of some two hundred contributions have been rejected; several have been improved by requests for further information; some have been severely edited; but most have arrived in usable form, except that a number have required translation. The editor's work load, then, is considerably reduced in comparison with the typical news-gathering operation. It is thoroughgoing only in the cases where contributions have to be solicited and material received put into the normal newsletter format.

It is important to repeat here that the network coverage, and specifically newsletter organization, are relatively independent of the actual content determined for the network, that is, the actual topics or fields covered. An analytic description such as the one above could be applied to many fields of Unesco's endeavors.

3. Determining media and transmission

Media and transmission, with particular reference to presentation, language, design, clarity, layout, size, frequency and speed of distribution, should be determined in broad outline in the early stages. A broad-banded group scattered around the world requires at its core, we believe, the most widely-available medium - print - and the most widely-available distribution system - the postal service. Print provides a wide range of formats, from the formal to informal, the latter being lowest in cost. The international postal service provides, whatever its faults, a comparatively cheap and reliable distribution system, especially when air mail is used. The innovative networking activity we have des-

cribed demands, as a central focus, a newsletter, backed up by individual correspondence and supplemented, on the one hand, by a more formal end-result library-based network and, on the other hand, by various forms of personal contact, such as conferences, expert consultation etc.

All printed materials must have maximum clarity in order to be informative, so great attention needs to be given to design, layout, presentation, language and size. Because of budgetary constraints, we have been forced to publish a single-language English edition - a severe constraint in the international context. Unesco should certainly receive communications and publish in as many languages as possible. This will permit a relaxation from our own rather austere single-language format. Graphic designers familiar with cultural differences should be consulted in order to assure attractiveness of presentation without loss of clarity and simplicity. Normal journalistic rules about headlining, paragraphing, subparagraphing, etc. should be employed to maximise readability.

A standard format for presentation of projects, programs, follow-up, etc., assists contributors and readers alike, if sectioned and broken up on the page for ease of reading. Our own network evaluation has brought out that almost two thirds of our members first skim the newsletter and then settle down to items of particular interest; about one fifth read the whole newsletter quickly; the rest read it all carefully. That is, not only does an apparently homogeneous group have divergent interests in reading the material but, for the majority, time-saving design features are extremely important. It is also important to offer more than an annotated reference: there should be enough information about organization,

theory, level of effort, methods, dates, etc. (as appropriate) to allow readers to assess worthwhileness of further contact without the extra effort usually required when news items are short. Finally, of course, the name and address of a person to contact must be included. In all this, the guiding principle is to increase information flow by maximising clarity, readability and ease of contact. The same principles apply to end-result formal networking activities, where formats are more standardized already and there is therefore better understanding of how to use the medium.

Size and frequency of, in our case, the printed newsletter are also related to readers' needs. Size, i.e., length, has to be tailored to what a busy person can reasonably deal with in a short time. Some flexibility in length is possible. But if flow is increasing, unless some items are reduced or dropped, frequency will have to be increased. From the editorial side, regularity of frequency is essential to demonstrate that the newsletter is reliable. Deadlines for each issue should also be established to stress the time-value of the information.

In order to produce the newsletter quickly, we use an IBM Mag Card/A typewriter, which allows easy editing. Editing can also be done with some computer programming systems with visual display and this can be convenient if the editor is travelling and has access to a terminal.

Printing is done on regular stock by offset or another cheap printing method. Here again, because informality - working information - is being emphasized, there is no need for high-quality print on heavy stock with a glossy look.

Both because of weaknesses in the international postal system and in order to deliver the information in a timely fashion, we have chosen

to use air mail for our newsletter and surface mail for our library accessions list. We find that 7 out of 10 of our overseas members consider air mail essential. We have experienced few problems with air mail distribution: only 3 1/2% of our membership have failed to receive all issues sent out so far. Surface mail distribution, however, has generated several complaints and we would like to abandon it in the case of certain regions.

4. Coordinating the Network

It is likely that Unesco already has access to a large pool of names of institutions and individuals. Applying the same logic of membership recruitment as ourselves, the process to be followed will be different from our own. It is more likely to be one of deciding criteria for exclusion or inclusion in networking activities than one of simply reaching out. The existence of a pool of names, however, means that news transmission activities can be started up fairly quickly, once criteria for inclusion are established and active individuals are contacted.

The size of the secretariat set up for this networking system naturally depends on the complexity and diversity of services offered, areas covered and levels of experts addressed. However, journalistic experience is certainly needed to set up a system that will avoid the less attractive features of publications associated with bureaucracies. Expertise is also needed to organize the production-distribution process in a timely fashion. The secretariat must also have the capacity to develop and maintain individual contacts in writing, whether or not personal visits are included in the budget. It may also prove attractive, in a larger system, to employ regional information collection/dissemination editors or

coordinators in order to increase the comprehensiveness of the news service. Such individuals must be both active in the field and in a particularly good position to find out about work in process in the region and transmit it, and to discover new active members for the network.

Since Unesco covers the whole field of educational policy and planning, it may prove appropriate to expand networking activities, and thus the secretariat, by developing sub-networks. Different content/topic areas do demand differences of emphasis in networking approach. For example, our own content area - educational finance and planning - is an established area with a typically system-wide application. Non-formal education or educational technology, by contrast, are relatively new content areas and basic information may need to be circulated, in the first instance, from a central repository, while particular projects may be much more localized and decentralized. Thus a broader network may be required under these circumstances with many more cases of practical application offered.

Apart from this content/topic variation, the continual arrival of newcomers into the field may suggest, beyond the necessity for training schemes, the development of basic information services. These imply a central repository and some already exist. They would constitute a separate network service for a particular audience - new members rather than old colleagues.

The development of such services, apart from a core service of news dissemination, is a matter for discussion. Great flexibility exists in the size and application of networking activity. The budget can range from, at the simplest level, \$20,000 to several million dollars.

Whatever the level of complexity, however, the challenge for the secretariat in a paper-based network is that of maintaining morale, that is, of making the members feel the service is worth their while contributing to, so that the information circulates and contacts are made and cemented. Support by means of personal letters of thanks, encouragement and enquiry must be continually offered to as many members as possible. It is extremely valuable for the secretariat to travel and visit, as well as receive visitors, in order to make personal ties. It would surely be useful, although expensive, to put on conferences from time to time, although it might be a delicate matter to limit invitations. Apart from these forms of personal contact, a general atmosphere of interest, respect and concern must be shown to exist on the part of the secretariat, as well as efficiency and effectiveness in getting information out.

One important aspect of maintaining morale is the sensitive matter of removing those who are no longer active in the field. In contrast to those projects which measure effectiveness by mere expansion of the network, irrespective of the dilution of participation inherent in such expansion, we have chosen to maintain our network at a certain size by removing those not contributing and replacing them with those who can contribute, as explained above (pp. 19-20). By publishing a regular membership list, we demonstrate to our network that quality is being maintained: only the active experts are included.

Good network morale, in summary, is really the product of a system devised to include as many as possible of the properties and strategies suggested above. We have, by our own efforts, demonstrated that, with great cost-effectiveness, network morale can be very high. With greater

resources and with the assistance of experiences like our own, Unesco can build even greater satisfaction.

IV LINES OF DEVELOPMENT OF NETWORKING BY UNESCO

Several suggestions are scattered through this paper concerning development of networking by Unesco. Let us attempt a summary here, while recognizing that, in the final analysis, great attention has to be paid to the needs and requirements of member countries, availability of networking services from other divisions of Unesco and budget considerations.

We are arguing that a key innovative area for networking activities is that of work in progress and we have delineated the properties that have made our own network of maximum usefulness to our members - panel membership, individual basis, informality, decentralization, etc. Even if these properties cannot be achieved in themselves, they should be accommodated as far as possible in a more formal structure. If a networking operation is to be developed in the end-result area as well, such properties will also be extremely helpful in maximizing true participation.

In any case, given the flood of information and rhetoric normally available, direct and honest presentation of real information, transmitted in a timely fashion, will independently make networking activities valuable to members. Isolation and specialization both require a service of straightforward information.

Budget considerations recommended, as a core, a print-based mail-distributed network, demonstrating, however, as many inter-personal collegial properties as possible. Such a network can be articulated into a complex of several print-based services and can be expanded into

a number of people-based services as well.

Some candidates for expansion include: a) various sub-fields in educational policy and planning that may prove to have different informational and membership requirements (see p.29), b) changes in Unesco policy towards member countries that may suggest a shift in emphasis or direction in the field, c) developments in the field that may require new information-sharing networks, d) developments, in either Unesco policy or the field, that may require closing down or redeveloping and redirecting then-existing network activity. Thus the complexity or variety of the knowledge to be communicated may prove to require a complex organization and distribution system. This system will have to be flexible enough in the light of changes in the future to permit dropping some networking activities and developing others, in somewhat the same way as the membership itself will change.

People-based services, that could be organized by the secretariat, already have a model in the expert-consultant or advisor roles developed in an international context. Such roles are relatively well understood and have been written about. The focus of people-based networking needs to be, on the one hand, on the formulation stage of projects - research, implementation or training - in which diplomacy and personal contact are particularly appropriate and, on the other hand, on the more ceremonial occasions, such as conferences, at which colleagues gather to share controversies, conclusions and results. Whereas conferences have known organizational problems, careful attention does need to be paid to the possibilities for formulation-stage services. The availability of such services has to be made known, but the initiative has basically to come from those

who will receive the expert advice if the service is to be effective.

In addition, given the continual development of countries and the continual arrival of new members into a network, there is always a demand for another type of service, that of provision of more basic information and assistance. Clearly, this is a point where end-result print-based networks have an important role to play as well, whether as a simple bibliographic service or a more sophisticated computer-assisted annotated bibliographic service. However, it has been precisely in the operation of such services that inter-personal contact has been particularly recommended in the literature: the bibliographic service is particularly impersonal.

Finally, there is no doubt but that the reception of visitors by the secretariat and, more effectively, strategic visits by it to the individual members or to gatherings such as conferences buttresses the network in a way no paper-based communication can. Such contacts, therefore, should be an integral part of the network or networks developed in educational policy and planning.

It will have been noticed that most of our suggestions and warnings about developing a network are relatively independent of the subject-matter covered. This, then, suggests a concluding thought: the development of a network with innovative features in educational policy and planning entails the development of a model that could probably be applied in any other field or sub-field of Unesco's activities. A network organizer would, therefore, be in a position to advise other divisions of Unesco on setting up and developing their own networks.

Whether or not this is done, it is certainly true that the cost-

effectiveness of organizing networking activity along the lines we have described is so self-evident and the need for such services so well demonstrated that every entry by Unesco, on a systematic basis, into such activity and services cannot but improve greatly educational policy and planning efforts around the world.

- END -