Evaluation of the role of teacher characteristics in the implementation of a multi-school health education project in Victorian primary schools

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Teacher training reforms: what is at stake
The three studies reported here were located within a primary school health promotion initiative, the Primary School Community Health and Fitness (Health in Primary Schools; HIPS) Project. The aim of the first study was to evaluate project implementation in three of the project schools, and to compare these processes with a matched sample of non-project schools, using both quantitative and qualitative techniques. The specific objectives were:

- to identify specific characteristics among teachers which would make them more likely to implement health promotion activities in their classrooms;
- to identify the types of health promotion activities carried out;
- to identify specific characteristics of schools which are associated with the implementation of community-wide health promotion activities;
- to identify specific characteristics of communities which lead to collaboration with primary schools to carry out health promotion activities.

The second and third studies were process evaluations using qualitative methods of the ways in which the project was implement in groups of schools. In the first study, a comparative evaluation was undertaken of 6 different state primary schools in the first, 'lighthouse' phase of the project. Since three of those schools also participated in the questionnaire study, there is some discussion of the relationship between questionnaire findings and the ethnographic study. The third study was an evaluation of the role of a 'site' in facilitating the second, 'pilot' phase of the project in a group of schools linked through the activities of the site. All teachers in the five sites in this phase of the project were also asked to fill in a modified version of the questionnaire at the beginning of the year, and again at the end. The results of this study have yet to be analysed.

Introduction

Health promotion is concerned with population strategies to reduce the risks of the causes of mortality and morbidity. It involves not only individuals, but the risk-exposing environment. Targeting children in schools is considered an efficient approach to maintaining and improving the health of children. Of the many studies of school health education, however, only one theoretical approach to health behaviour gives attention to the influence of significant others, such as parents and teachers, and their potential influence on and in health education.

This project was funded by the Victorian Health Promotion Foundation and was carried out jointly by Monash University (Faculty of Education) and Victoria College. Additional funds for the third stage of research were provided by the School of Education, La Trobe University. We wish to acknowledge this support with thanks, and our gratitude to Sophie McLaughlin for her excellent research assistance in 1991. While the data has not been used in this paper, we also wish to thank Nick Robinson for doing a superb job coding the data from the third stage.
The Primary School Community Health and Fitness Project (HIPS) is a prevention-oriented health initiative. It has been funded by the Victorian Health Promotion Foundation (VHPF) for three years. It is assisting project schools and communities to link their resources for fitness and nutrition programs. In the first phase, a small project team worked directly with 14 schools. In the second phase, five 'sites' were chosen. The team focus was on assisting each site to work with 5-7 schools.

HIPS is concerned with the development of health education and promotion in schools. It does not specifically see its work as intervention, except insofar as schools which have already been identified as active in the health education field are being assisted to develop this work further under the auspices of the HIPS project.

The stated aim of HIPS is to identify how school communities develop sustainable healthy practices in young children. The objectives on which the HIPS project were developed, are:

**General:**
- to improve the health of Victorian primary school children; and
- to establish the basis for a longitudinal study of the relationships between educational programs, lifestyles and health and fitness.

**Specific:**
- to promote healthy and sustainable lifestyles which will continue into adult life;
- to develop a program of health related fitness which incorporates both regular exercise and related studies in human biology and nutrition; and
- to develop an integrated approach to improving lifestyles encompassing all aspects of the school’s educational program.¹

**Research Approaches**

The present studies focused on teachers. A questionnaire was developed and trialed which surveyed their knowledge, beliefs about children’s health and the role of health education, their efficacy as teachers, health locus-of-control and a range of health education approaches and activities. It was administered to all teachers in six schools, three within the HIPS project and three matched for locality and socio-demographic features which were not part of the project (one of these did become part of the second, pilot phase), in the fourth and final term of 1990 towards the end of the formal part of the project in those schools. In the second year, all teachers in the pilot phase were surveyed, using a modified version of the questionnaire, in the first term of 1991 and again towards the end of the 4th term, in order to see if participation in the project brought about a change in individuals in their attitudes to and engagement in school health education.

In discussions with the Project Team it was decided to focus on state schools for the comparative evaluation, and to attempt to sample the range of types of state school in the lighthouse phase. The schools selected also included some special features, for
example the very high non-English-speaking background (NESB) and low socio-economic status of the inner city school population, the very large number of integration children in the suburban school, a very mixed community in the rural district, and the fact that two of the schools had made a joint submission and were cooperating in their HIPS program.

Ethnographic data from the schools was used to interpret the process of implementation of the HIPS project. Site visits, participation in school events, in one case teaching a group of children over 5 weeks, and interviews were used to gather material for analysis. One researcher sought to be present for at least one of each of the following:

- a fitness testing session (5 out of 6 schools)
- a meeting of the HIPS committee (of the 4 which had one, this was only possible in 3 of them)
- a general staff meeting (4 out of the 6)

In addition to the schools, one researcher also had at least one meeting with each of the single school evaluators for the six schools, a total of 15 contacts. The purpose of these discussions was to check out impressions of what was happening in each of the schools, with a focus on the process of how HIPS was being perceived and implemented. It was also helpful in those cases where we had differential access to the schools and were thus able to put together information and interpretations. Being able to check these with the project team, especially the consultant, Margaret Sheehan, who is now a partner in the research, was invaluable. Some community visits and interviews also took place.

**Study 1: Results and Discussion**

Schools are complex organisations. In the state of Victoria, the number of teachers is determined by a formula based on the number of pupils. How teachers are deployed, such as in teaching physical education across a number of grades, is a school-level decision. Each school also decides on single or composite grades, the school program, grade-level and class-level timetables, and the manner in which the curriculum is organised. The decision to integrate the subjects around themes (known as an integrated curriculum) or to remain largely within the conventional subject areas or the current Learning Frameworks may be made at class or grade levels. This complexity and heterogeneity needs to be taken into account in research which attempts to reach valid generalisations. It poses particular challenges in the framing of questions which have validity across different schools, or which might reliably access the same information.

As a researcher who must make demands on teachers' time and energy, it is also difficult to work with schools. They are not laboratories, and rapport has to be developed in order to gain co-operation and the necessary access for research. Once system, regional and school level permission has been granted. Schools cannot legally allow teachers out of the classroom for interviews, for example, unless a registered teacher replaces them. In some schools with small staffs and highly developed division of labour, meetings take up several lunch hours and up to three after-school sessions each week. This drastically affects their ability to participate in research, especially if it is not seen to be useful to
them. In the present study, an additional difficulty arose during the first two months of the research period. Industrial work-to-rules action was being taken, to different degrees in each school, which affected their participation in the HIPS project and any outsider's access to them.

It is argued that these considerations are an essential part of the research-framing and interpretation process. They also provide a severe limitation on the number of schools that one researcher could work in. A further restriction on the interpretation of findings was the varying, and in one school very low, rate of return or questionnaires. It was not possible to include more schools or to spend a period of participant observation in the three non-HIPS schools.

The following summarises the findings, especially as they bear on classroom implementation:

* Efficacy as a teacher: 8 statements were given, with respondents required to indicate on a five point scale the extent to which they agreed or disagreed with each:

  - 'When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment': teachers in HIPS schools disagreed with this more strongly than those in non-HIPS schools;

  - 'My work in health education can bring about positive changes in children's health status': HIPS/non-HIPS differences were very small except for the largest HIPS school, which agreed more strongly than the others;

  - 'If I really try hard, I can get through to even the most difficult or unmotivated students': stronger agreement from all the HIPS schools than any of the non-HIPS ones;

  - 'Students tend to ignore what I teach them in physical education sessions': stronger agreement in two of the non-HIPS schools than two of the HIPS schools; one matched pair agreed more strongly than all the others, the HIPS school more than the non-HIPS one - there is no obvious explanation for this finding except that there was an emphasis in the HIPS school on activity and sport rather than physical education;

  - 'The family really determines children's attitudes to health': the HIPS schools all disagreed more strongly than any of the control schools;

  - 'Even though the roles of the media and peer group are strong, I expect students to learn skills for better health from me': one non-HIPS school was more confident about this than any of the HIPS schools, all of which were then more confident than the other non-HIPS schools;

  - 'I am often discouraged by the children's attitudes to physical fitness': the HIPS

* More technical details of the statistical analysis are given in Appendix 1.
schools disagreed with this much more strongly than the non-HIPS schools;

- 'I like to work together with my students to develop interesting health and fitness activities': much stronger agreement with this from all the HIPS schools than any of the control schools.

While the tentativeness of findings must be emphasised, it appears as if the teachers who responded in the HIPS schools are more confident of having an effect on children and more child-centred in their approaches to the task. There may be some school-culture factors, for example one control school appeared to be consistently lower on child orientation in all the questions so far analysed; the age and experience of the teachers has to be taken into account, and we do not know from this if HIPS has assisted the teachers to gain what appears to be more confidence about teaching effective health and fitness lessons with their children, or if they became a lighthouse school because the teachers were already strongly oriented in this way. It raises interesting questions regarding the development of teacher efficacy in these areas and the possible usefulness of a project like HIPS in providing the stimulus, support and learning experiences to foster this.

* Facilitation of health and physical education programs in schools: a list of twenty things which might help teachers with their classroom health and fitness programs. They were asked to rate the importance of each on a five point scale. There was wide variation between schools, the only general agreement in all the HIPS schools being the importance of support from colleagues. The importance given to the responses from the children also sharply differentiated the HIPS and non-HIPS schools: children's reactions are more important to HIPS schools!

There are some apparently puzzling findings. Despite higher value being given by HIPS schools to the availability of consultants and other 'outsiders', in-service, being part of a project, special events and parental support, these factors were rated less important in those schools than collegial support, the availability of expertise on the staff, the principal's support, their own confidence in teaching a topic and perhaps more predictably, time, facilities and resources. It seems as if the existence of outside help becomes part of the process of development of internal resources in a school so that those resources are seen as more important to teachers; the non-HIPS schools did not have the outside involvement and considered that it would help. There may also be a school morale factor, which is backed up by spontaneous comments about the value of participation in HIPS in developing cooperation and morale within a school. On a different issue, at least one HIPS school placed low value on community facilities and support. It is a large school, with an ill-defined 'community': in fact, on a first visit was noted as part of the great suburban wilderness.

Overall, self-efficacy was significantly related to willingness to undertake new, especially co-operative health promotion involving extra organisation, change to the individual's program and commitment to whole-school activities. Perceptions of the importance to children, and potential danger from certain health practices also facilitated health education. Age, years of teaching experience, position in the school, health knowledge and health locus-of-control did not have a significant impact on the teachers'
health education.

The support of the principal, parents and community resource people affected different schools depending on their socio-demographic and geographic locations. The process of involvement of and with the community for health promotion is difficult for schools, and is mostly conceived as 'how they can help us?' or vice versa. Only one school achieved a reciprocal approach within the study period.

This study has implications for the professional development of teachers and shows the need to assist schools and communities to link for health promotion. Schools can do this, but ways are needed to sustain it.

Study 2: Comparative evaluation of six project schools

The HIPS evaluation strategy outlines seven key points to be considered. The part of the evaluation reported here was addressed primarily to one of these, namely:

- understanding the process of change as participants gain in understanding and confidence.

Further, since it was comparative study of six of the school communities, the focus was on commonalities, on understanding differences, and on generalisations illustrated by case material rather than portrayal of details of single schools. As a comparativist, one author considers that the relationship between HIPS and the context, both of the school itself and its community, is an important one in considering the way priorities are selected, the working possibilities, and the interactions with the community. The context shapes, both in a limiting and in a challenging sense, and its relevance to a project such as HIPS is to caution the way in which findings are generalised. How something is done, given certain conditions, is useful to know; evaluating how important those conditions are in enabling something to happen, so that we do not expect the same thing in a different context, is also useful. When we find commonalities despite the different contexts then we have uncovered some very important factors in the process of implementing a community-oriented health and fitness project in primary schools.

The following points attempt to summarise where things were at the end of the third term.

1. Participation in HIPS has provided a focal point for schools to do things that have in a number of cases been mooted but would have taken a lot longer without the stimulus of participation and the contract.

2. High profile events such as the 'launch', makes this concrete, keeping people moving and also giving an opportunity to involve the community and to make their work known in the community. Publicity has been important, especially in the absence of any formal acknowledgment of HIPS schools by the Ministry of Education or its regional offices.

3. A sense of ownership is very important for continuity, especially with the coming and going of staff, and with the scaling down of outside attention after this year. This sense can be fostered by such things as:
- the commitment of all the staff to the basic values of HIPS, which in turn arises through a variety of ways, but the support of the school council and parents, the commitment of the principal to time for teachers to work on HIPS, and seeing results help;
- involvement of staff e.g. in special events, in policy-making, in relevant professional development activities at least at the school level, in planning of HIPS in the classroom;
- curriculum development and change: it could be argued that this can only take place with ownership, but those schools with a regular review process in place, to which HIPS/personal development has been attached, and made the focus of current or planned reviews processes, seem more confident of continuation.

4. Concrete, achievable aims: people like to see things happen, and to be challenged without being overwhelmed or without it being so reliant on one or two people that it becomes too onerous. All schools have pointed to things like equipment/policies/activities as sustainable and giving a sense of achievement.

5. Professional development: this has been 'fantastic' (HIPS in-services) and has led to within-school commitments which are as important both for assisting with programs and for giving an opportunity to disseminate knowledge from the HIPS co-ordinator/committee to the whole staff, and where possible, parents. Although we were initially concerned that there was little deliberate flow-on from those at the inter-school in-services, there has been reporting to staff meetings, informal discussion, and the flow-on of knowledge and resources.

6. Support: from outside. This has also been 'fantastic': comments included 'even a phone call to say hello once a term has been a boost, an acknowledgement'; the assistance of Marg and Sally has been invaluable. It is recognised as being especially important for the principal/HIPS co-ordinator to keep going, and most say they'll miss it and have some anxiety about keeping up without it next year. Some feel something more than continuation of the evaluation process is important. Support of the principal and other staff is seen as vital; school council endorsement is necessary but none mentioned that a high level of support for HIPS was relevant; parental support helps; 'increased awareness through events' is the community response anticipated.

7. Community involvement: this needs further thinking and testing.
- a number of schools either don't know where to begin, or what to expect, or how to do more than take kids out (which costs money) or bring speakers in;
- it is new, it is a lot of work, and usually falls on one person who finds it hard to make contact/be contacted during school hours, to follow up, or how to deal with an 'invasion' from interested outside organisations;
- they seem not so much helped by outsiders' offers, but would rather be helped to identify appropriate resources when they are ready/see the need; some have resented what they see as commercial sporting groups seizing an opportunity to make money out of schools; Community Health Centre contacts seem to have been much more useful;
- seeing a school role in the community emerged relatively late in the year for all but one school;
- experiences with Ministry of Education community liaison officers, where they existed, were at best mixed.
8. Most think the fitness of the children has improved and regular timetable changes to accommodate daily activities seem to be sustainable, together with help to staff to construct such programs. Developing a commitment to this, an achievable program and heightened awareness among children and parents all contribute to the success of this.

9. Getting a new canteen policy, equipment (in some cases), and children involved in preparing food, all seem to be sustainable and arise out of either individual/staff concern about what was in the canteen, or the logic of what they have been doing in nutrition as a result of HIPS. Several schools emphasised that real change that might make a lasting effect on the children’s nutrition would be slow; it was helped by things like the dental van finding the children had above-average levels of tooth decay. Change needs reinforcement e.g. through the food prepared on special days, in the staffroom, on camps.

10. Accountability to HIPS seems important: it is seen not as punitive but as a stimulus. In some cases it was seen as a way to legitimate activities - they were doing it because of the contractual commitment to HIPS. How this related to the schools engaging in evaluation of their HIPS work other than ticking off submission items fulfilled and monies spent, is less clear. There was little discussion with me of this; it was assumed that it was the role of the single-school evaluators and whatever mechanism he or she set up to involve the school in this.

11. The lack of interest from some of the School Support Centres, and the Regional Offices ignoring it, is contrasted with those places where acknowledgment of what the schools are doing has been given in the area, including the principals’ network. Publicity in the media has been another valuable form of acknowledgment of achievement.

12. Several commented that there is indeed heightened awareness of health, but have attitudes changed? How can this happen in a year? What about habits? (in some cases one cannot help being glad that they are not effective e.g. approach to NESB communities?) Very few are beyond looking at individual behavioural change.

13. Five of the six schools have offered support to the community, and this increased as the year wore on. There is still a strong perception that the community is a resource for them to use. The whole area of the role of the community in education/schooling is unclear.

14. The fitness testing has been expensive and time consuming. Only one school is using the results in programs specifically designed for the children as a result (should they do this?). It happened too late, results were too slow, were unclear or unusable, and a number doubt the value of re-testing, though all appreciate the way John Birchall carried it out including the parent and teacher in-service.

Combining Evaluation and Research

Three questionnaires were developed and used both to assist with the comparative evaluation, and as part of a separate research project funded by the Victorian Health Promotion Foundation in the form of a public health scholarship. These were the brief
survey of HIPS activities in all the schools; an interview pro-forma used with the HIPS coordinators in the six schools in the comparative study; and three linked questionnaires to look at the relationship between teachers' health beliefs and practices, health knowledge, self-efficacy as a teacher and health education programs.

1. The brief questionnaire was distributed to all individuals at the June in-service. Respondents were asked what they thought were the most important aspects of HIPS for their school, and as something happening in schools in Victoria, and what were the main activities that they were doing and planning as part of their involvement in HIPS. This was used as background to get some idea how the six schools related to any overall patterns emerging in HIPS. The responses were enormously varied, indicating the diversity not only of interpretations of HIPS but of opportunities, perceptions and orientations.

This generated a huge number of items, indicating the diversity of HIPS, and revealed little in the way of patterns except that there was a very strong emphasis at that stage on special events rather than school policy or curriculum review and development. There was greater agreement on the importance of HIPS than on what it was all about. What it emphasised more than anything was the diversity of HIPS and the relationship between what was going on in a particular school, and the characteristics of that school, both its staff and the community, especially the child and parent community. Some frequently used phrases concerning the importance of HIPS were:

* raising awareness of health/nutrition/fitness
* providing opportunities for participation in...
* enabling the school to ... [do something different]
* it has involved parents/the community in...
* it stimulates...

Listing of HIPS activities centred around:

* the themes of fitness, nutrition, health;
* the involvement of the community, parents, teachers, children;
* the work of organising and the reality of support;
* taking account of the personal development frameworks; the curriculum generally, special events as well as programs and policy.

2. The interview schedule was developed to systematise background data and material on key factors which were emerging regarding personnel and resources, and to check on the emphases from the June questionnaire. The key person or persons in five of the six schools was interviewed using this schedule at the end of Term 3; while a discussion was held with the sixth person, the actual formal interview did not take place until December.

While diversity was apparent in the findings, some common threads were also apparent, including:

* the need for school council support, especially in the three schools with program budgeting, and the importance of communication and reporting in order to gain and maintain that support:
* the relatively unimportant valuation of the role of the parents' council or related group except to provide general support and practical help;

* the importance of a time allocation for HIPS work; this has been discussed elsewhere; the point can be repeated here that it enabled outside things to be organised and it was also seen as a measure of the school commitment to HIPS;

* the importance of a HIPS committee, to assist with the load since it became a group responsibility, and despite one comment from one school (where there was no HIPS committee) that they already each had too high a committee burden because of the method of management and the small staff size, it was not considered a burden to have a HIPS committee; only one had effective regular participation from a person other than teachers;

* the need to be able to point to events and achievements to keep a sense of purpose during the times when either there was exhaustion following hectic events, or when nothing much seemed to be happening;

* the usefulness of the HIPS team and the inter-school in-service for resources, general support and networking;

* the irrelevance of the Ministry services and resources in most cases, except where someone from a School Support Centre was the evaluator;

* the importance of publicity, as much for giving a sense of recognition as for any more practical use that might be made of it;

* the usefulness of a curriculum policy in moving from HIPS events to personal development, health education and fitness curricula.

3. The teacher characteristics and health education schedules were developed from information gathered from the brief questionnaire, discussions, and from health behaviour models. This is reported under Study 1, above.

**Study 3: Evaluation of phase 2 - site-school interaction**

The central issue investigated in this research/evaluation phase, focusing on one HIPS site-schools interaction in 1991, is that HIPS is an educational innovation which unfolds in much the same way as innovations in other aspects of school curriculum and organisation. Alternative ways of looking at the project define it as either community development, or health promotion. While it has elements of both of these, to be discussed in the conclusion, it is maintained here that it is interpreted in particular by the key participants as an educational innovation. It has a particular legitimacy as a health project, both within a school and within the two major sorts of 'community' that the HIPS Project has sought to encourage as the context within which health activities are to be carried out. These are the 'school community', which in most cases has meant at least the parents of the children in the school, and at most, the entire local community within which the school is located, and the 'health community', namely those groups, organisations and services which the school became involved with, mostly as a 'user', in developing and
implementing its health education program. There are also some special potentials and limitations because it is a health project. These can be found in the values, attitudes and health behaviours of the teachers, on whom implementation of particular programs or any classroom level activity at all, is dependent, and of the families of the children, the children themselves and the peer cultures and sub-cultures of which they are members. Thus, 'being concerned' about health can be considered a positive and highly valued concern; what you do about that, and in particular, the relationships between personal beliefs and behaviours, the programs that are being run in schools, and how appropriate the school is considered to be as a source of a health program aimed at health enhancement, can be expected to vary between groups. One set of important issues about school-health community relationships and expectations, those of the sick-care providers. Other pertinent examples could be drawn from ethnic and class sub-cultures, which would present a range of views on health, the responsibility for health, and the relative importance of different practices for gaining and maintaining health.  

If HIPS is an educational innovation in the eyes of most of the teachers involved, it is certainly seen increasingly by the management and sponsors as a health promotion initiative. It fits the Victorian Health Promotion Foundation integrated approach to health promotion, or health 'grid', 1 perhaps was one of the sources for the development of the framework, in outline and in practice. It also exemplifies 'health-promoting schools' with their triple emphasis on developing supportive environments, increase people's capabilities for self-reliant action, and a basis in a holistic concept of health. 2 And while it does not address issues of equity and change in health promotion, it implicitly rather than explicitly has raised other issues about the origins of 'good' health and the allocation of resources to different aspects of health enhancement and maintenance as well as sick care. Thus, it fits as a concept within the 'new' public health, 3 though this was not clearly articulated to participating schools who were, rather, groping towards some framework, in a number of instances clearly within a health education rather than a health promotion approach. In some instances, articulation and explanation would have been helpful, even if this might raise concerns about intervention in local definitions of concerns and appropriate action. The question of the ideas available to teachers can be seen within the whole issue of resources and routes to self-reliance: it is one thing to take an exciting concept and develop it within a local context, and another to have a framework of ideas about health to supplement as well as the excellent curriculum and general resources and assistance provided by the Project Consultant, Margaret Sheehan. Perhaps the wider issues of health promotion and its relationship to school health education should be raised elsewhere. 4 However, the overall evaluation of HIPS can usefully address such questions not just from the point of view of what schools did, but to enhance the prospects and alleviate some limiting problems for schools in general in the task of becoming health-promoting.  

The Site  

The H School Support Centre is situated in a former Girls High School, in a light industrial area a block away from La Trobe University. On the occasions when visited, it was quiet, in fact so quiet it was difficult even to attract the attention of the front office to find where to go! Apart from staff scurrying down the corridor, several parents and children were usually to be seen waiting anxiously. The large curriculum consultants' open-plan office seemed to be more of a staging place than an office, where people
dropped in to collect phone messages, grab a box of resources, and perhaps catch up on the newest meetings. Things were a bit more relaxed and 'mutey' in the kitchen, though the absence of chairs discouraged long conversations. Visits to the SSC were brief: in addition to discussions with the PD and Remedial Consultants, one researcher attended one meeting which was called by the PD Consultant and included the three School Community Development Officers (SCDOs).

The following major issues emerged:

- By the third term, it was considered that the problems which arose in the course of HIPS were being dealt with at the school or site levels, and that the problems had been mainly 'logistic'.

- Very little had gone beyond the site; there had been a report at one Principal's meeting and one SSC newsletter notice. This lack of interest in the wider education community was a common theme in the Lighthouse Phase, too: its implications are twofold: it made some schools feel that the work they were doing was not recognised or in some cases even known by the hierarchies in the Ministry; the 'fortress' mentality which can develop in a school is reinforced by such neglect, which may promote better school-community relations but does not help develop links within the education framework.

- The SCDO links are complex, e.g. from parent groups to the SSC; between specialist and welfare staff, schools and parents. There is a division of labour which may not include curriculum as a dimension of school-community links, though one officer in particular in the HIPS project had a strong curriculum orientation.

- An 'events' rather than a 'curriculum' orientation in a project such as HIPS, using SCDOs as a major source of assistance to schools, could be favoured.

- HIPS has had the following noticeable effects on the schools involved:

* Being in the HIPS project has changed two aspects of the focus in the schools:
  (i) 'health' has been highlighted far more than previously and notably more than in adjacent non-HIPS schools;
  (ii) there has been a change in all the HIPS schools in the orientation of the PE programs, especially towards a greater emphasis on skills which incorporate a 'health aspect';
  (iii) HIPS has meant that health has become more a classroom responsibility, not just somehow linked with tagged PE positions; further, where the HIPS co-ordinator has been a PE specialist in one school, there have been greater difficulties in involving classroom teachers in new programs;
  (iv) links and feedback are important in various ways, including from the site to 'Monash' (i.e. the Project Team, with the researcher/evaluator seen as one of the two links, the other being the Project Consultant), more problematically from the community to schools;
  (v) HIPS seems to be about change, and one of those changes, school-community links, can be threatening since it is outside the traditional roles of schools.
Further, the pilot schools at least in this group were selected by the SCDOs because of their links with them. Therefore, a number of questions arise about how 'high-flying' such a project can and should be, especially in moving out from the essentially selected group that is implied in being part of a named project.

The Schools

Contact with the six schools varied considerably, from very early consultation by the private girls' school which originally wanted to do their own 'before-and-after' testing of the children, to participation in special events in three of the schools, to staff-room discussion in the other two. It petered out at the beginning of term 3, partly because there was no longer any attempt at group activities either by the site or the schools, and partly because the schools did nothing to maintain contact with the evaluator. This fact does not reflect negatively on any of the parties, but rather on three factors:

1. While each school in the group established clear goals, attainable programs (for the most), and the clearer and more specific the goal, the greater the achievement and sense of satisfaction, they did not have more than occasional contact with other project schools: each school acted out its own program according to its own timetable.

2. While the Project Consultant was involved with the schools in the group, to differing degrees, the sense that was very evident at the end of 1990 that there was no clear idea of what being involved in HIPS meant, or required of the schools, persisted, in particular giving the schools very little sense of what the project might mean to them or what impact they might have on it.

3. While the researcher/evaluator met with the schools in different contexts, there was not even the sense of 'they gave us the money, then they told us we'd have an evaluator' (1990 comment): there was no active support from the Project Manager for evaluation, no sense that it was really vital, and no guidelines to schools, so in the course of a busy year, evaluation simply didn't seem to be in their calculations. This sense also came across to the researcher/evaluator, and given the lack of any major initiatives from the site, it was not possible to pursue the many and diverse contacts between the schools and the SCDOs, or with the PD consultant (as an embodiment of the site and what it could offer).

There is therefore some hesitancy about summarising the work of the schools. It should be recorded elsewhere. In line with the argument, that HIPS is usefully considered as an educational innovation, for this group at least the project ran its own course in each school according to the needs, opportunities, resources and limitations at that level.

Common features

Some common features of the ways in which HIPS was acted upon in the pilot schools include:

- Using the project and a relatively limited plan to spend the small grant, each school became involved at least to some extent in curriculum development. In some cases this involved a pre-planned overhaul of the PD area, in others it was developing a series of health themes or PE programs.
- With some prompting from HIPS, most attempted to change the canteen or to introduce
[more] healthy food options for fundraising, school celebrations, special days and community events. The difficulties and need to keep active and vigilant about this was emphasised.

- Within their particular resources, the schools did involve the community although in every case, it was what we have referred to as ‘level 1’ involvement: ‘what can the community do for us?’ although the changed food options for social events had a ‘level 2: what can we do for the community?’ element. There seemed to be little elaboration or change in attitudes to the community in the course of the year, though perhaps more confidence in involving parents and working across the whole school.

- While this was rarely explicit, the sense of ownership by the whole staff was evident in four of the schools: admittedly there was only a staff of 3 in one so it may have been hard to be otherwise there! and the staff size was small in all but the private school. Whether produced by working on the project, especially moving from events to curriculum, or whether pre-existing factors fostered this for any task the schools took on, it is not possible to say, except that the one school where it did not seem to become generally owned was also the one which did not undertake extensive curriculum development.

- The State schools all used their SCDO, but it was not possible to tell what role HIPS had in this. Prior experiences with the particular individuals was probably more important, HIPS adding particular demands through requests for speakers and related resources, and for some help with curriculum development.

- In no case was another aspect of the site mentioned as a facilitator or even particularly relevant in either HIPS work specifically, or PD in general.

- Except where requested by HIPS, there was not attempt at ‘testing’ lighthouse insights. One school puzzled about why this had been vaguely mentioned in the beginning but no specific charge grew out of it; it was simply not an issue for the others.

- Except in one school which focussed on a motor skills program, fitness had a much lower profile in the activities than in the lighthouse phase.

- All but one school held an official, high-profile, special-event launch; the three ‘cluster’ schools combined which, given their distance apart, proved a rather ambitious event whose worth was subsequently questioned.

- Despite an official approach to Community Health Centres, and follow-up by the Researcher/evaluator with one, involvement was limited, in part because changes to CHC funding is leading to increasing need by them to charge for services such as educational activities in schools.

**Study 3: Conclusions**

Little can be said about the school-site interactions in the conduct of the HIPS project in this group of schools in 1991. School Community Development Officers were actively involved in consultation and resource-location with the State schools; the schools
chose a limited role for inter-school activities, wanted information about the HIPS project in other schools but saw no place for school-to-school in-servicing with themselves as the resources. Nor did they use or expect much extra from the site; whether this was based on prior experience, personalities, or on the shrinking resources and role of the site during 1991, cannot be distinguished, though it could be said that the era of School-based Curriculum Development in Victorian schools has created largely self-contained units for whom additional resources are a pleasant but unreliable bonus. Program funding reinforces this within-school approach to development and innovation. This creates a certain level of competition between schools, which is enhanced by the competition for school enrolments especially in primary schools; participation in a project such as HIPS is seen as one way of giving a school an 'edge' which does not detract from the very real work and achievements produced but may explain as much as a commitment to the substantive issues why a school may take up health when a project is in the offering. There have been a number of projects in various curriculum areas, both across the state and in selected schools. While there was evidence in 1990 that the nature of the contract with HIPS made unique and very attractive to schools, this did not apply as strongly in 1991 and it can be assumed that schools combine opportunism regarding the chance to obtain some extras resources and advantages, with commitment to health as an important issue, though that commitment seems to have been made to health prior to involvement with HIPS.

Despite the very considerably reduced resources, the pilot schools were able to design and implement health and fitness programs with some community involvement on a scale not dissimilar to that of the much more richly resourced lighthouse schools. There was more emphasis on general health curriculum and nutrition than on fitness. Given the use that the lighthouse schools made of the Project Consultant, of fitness activities for community involvement of the project for substantial changes in the equipment and facilities for PE and sport, and of the fitness testing for changes to fitness programs, it seems that money is more of a key element in improving school fitness programs than in other health fields.

The timeline of the project did not facilitate continuity between the lighthouse and pilot phases, for example the pilot schools had to be brought in before the evaluation of the lighthouse phase was complete, and 'learnings' to be tested played a weak role, if any, at least in the Heidelberg area. Actual 'products' from that phase were available and tested in one of the schools. In addition, the larger number of schools and lower resourcing especially given the important role in project initiation, advice and school-level in-service in 1990 of the Project Consultant, did not enhance continuities, and while it probably forced the schools to be more resourceful and self-reliant, it is difficult to discern 'system advice' from this except to demonstrate that schools can survive, and indeed flourish, in conditions of neglect!

Characteristics of particular schools played a strong part in the nature of the programs undertaken and the interactions with other schools and with the community in this group, for example the percentage of working parents, the isolation of the school and pre-existing community contacts. School 'culture' also played a role in the approach to innovation, especially the ability to absorb a relatively new method, community involvement, with a fairly undeveloped subject, health, into existing styles and
approaches.

Finally, on the basis of this school group, it has to be concluded that the site did not play a significant role in sustainable health education development. The extent to which the schools used the involvement in the project to re-write or develop policy in this area, rather than the links with outside, seem to point to the sustainability of a fitness and nutrition orientation in primary schools. Being part of a wider project gave a boost to the activities, and perhaps sustained some of them during a year when outside services for schools were being rapidly undermined. That project was on the whole not well understood and impinged on the schools mostly through their commitment to acting under the HIPS label. They are the sorts of schools that will apply that commitment to the next project; on the evidence of some contact with three of the six schools for which Robin Burns was the comparative evaluator in 1990, it is school and teacher characteristics, with some input from the community, which are the key determinants in the ways in which innovative ideas are adopted, adapted and maintained or changed within a school.

The importance of looking at teacher characteristics in determining educational outcomes is borne out by the findings from Study 1. Teachers in HIPS are more frequently involved in some types of health education activities and in a particular emphasis in the way they go about those activities. Self-efficacy as a teacher in the field of health and beliefs about the importance of children’s health and of health education are also important. Having a responsibility for some aspect of personal development in a school, and attending in-service on it, are also important contributors to the implementation of health education. Sex, age, years of teaching experience, health locus of control, importance of one’s own health, and health knowledge, are not. In fact, it could almost be said that ignorance is no barrier to teaching about health! The fact that even the teachers with recent physical education training could not name all three characteristics of aerobic activity, yet at least all the HIPS schools claimed to be doing that, raises questions about the efficacy of the programs being implemented which are beyond the scope of the present study but point to issues for further research. The small numbers on the different school committees (a measure of involvement in and commitment to the school), and the different grades when composite classes are taken into account, did not enable any meaningful comparisons to be made. Nor was it possible to see if there was a school effect in the importance of different types of support for health education.

Putting the results of the three studies together, it seems that even a health education project is usefully considered as an educational innovation, which is affected by the beliefs about health of the teachers, their own sense of health efficacy, and elements of the school context which determine the ways in which they act and change. There is room for further research on the role of teacher characteristics in this process in general, as well as in relation to specific curriculum issues, and for action to enhance those aspects which will facilitate desired change.

References


Appendix 1

THE QUESTIONNAIRE FINDINGS

The questionnaire analysis yielded several outcome measures that were factorable, which enabled some useful summarising of variables. The fact that neither topics (TOP) nor activities tried (ACTS) yielded sub-scales when factor analysed, is not surprising. The topics were based on separate themes identified in the Personal Development (PD) Framework, and the activities were derived from a huge list of things associated with HIPS schools in the first instance, and were chosen to represent a range of possible activities.

The 10 items in each of the three sub-scales for the things tried (TRIED) and extra things done (EXTRA) questions factored. The consequent sub-scales could be interpreted and labelled on the basis of the items of which each was composed. This reduced the three main outcome questions to a manageable number of variables. In addition, all but one of the independent variables was factorable, albeit with a reduced number of items in the factor analysis. The exception was teacher efficacy, and since the eight items were designed to assess different aspects of efficacy, a single score (TEFFSC) was computed for use in the subsequent analyses.

The two independent variables with the strongest relationship with the three dependent variables, ACTS, TRIED and EXTRA, are HIPS and TEFFSC. This suggests that both the school and individual teacher effects are important in determining health education activities. The single sets of determinants suggested in the relationships outlined in Table 3.2 (Section 3.3.1.1) are too simplistic to explain the implementation of different types and amounts of health education by the teachers surveyed.

Activities

Of the individual items on ACTS, the correlations are positive and significant with a range of fitness activities including an outside speaker, a broad range of class PE activities and inviting parents to a fitness activity. They are negative with self esteem activities, shopping for food with children, and using community sporting facilities. The latter two were in fact major activities in School C which had only two respondents, and were not undertaken in the other two HIPS schools.

There is a strong and expected significant relationship between teacher self-efficacy and 19 of the activities. All but one of the non-significant correlations were in the expected direction. Shopping for food with students was the exception. Predictably, HEIMSC 1 (importance of health education item) was significantly related to fitness activities. HEIMSC 2 was related to three sport and fitness items, and one nutrition activity; all involved either new activities or ones involving parents. HEIMSC 3 included two activities that were only undertaken in HIPS schools and three that involved an increased range of activities and resources. HEIMSC 4 covers fitness, new co-operative activities and biology. The first two HEIMSC factors indicated that health and fitness, and a healthy lifestyle were seen as important aspects of health education. The activities which the higher scorers on those sub-scales more frequently undertook targeted fitness rather than lifestyle, and involved parents but did not involve use of community resources. There is some tendency for teachers to value fitness more than other aspects of health education.
and for the more efficacious teachers to be involved in trying new activities, involving outsiders as speakers and classroom participants, but mainly staying within their own school-based resources. The cost of taking children out to use other facilities, and the extra organisation involved - from gaining parental permission to collecting money and arranging transport - has not been considered in the emphasis in the HIPS project on linking schools and communities!

The first KIMP sub-scale (popular ideas about health) correlated with trying cross-age activities, and targeting girls’ fitness. Both of these are important aspects for sustaining health practices in adolescence. KIMP 1 is weakly but significantly related to HIPS, which may indicate that one of the messages of HIPS, about developing sustainable health enhancement, is being put into practice in HIPS classrooms. Those who thought it was less important to reduce dietary salt and fat were more involved in a range of fitness programs at school. Co-operative games, and using community sporting facilities were related to valuing aerobic fitness (KIMP 3). The relationship between the first danger to children (KDMG) sub-scale and any activities is ambiguous (two fitness activities were significantly related in the expected direction and one was negative and significant). KDMG 2, which is a sub-scale of items about diet, was significantly correlated with five typical HIPS activities in fitness, nutrition and biology. The third sub-scale, alcohol and smoking, was negatively related to physical activities and use of the Community Health Centre.

These findings indicate that aspects of the Health Belief Model concerning perceived importance and perceived danger of certain health items for children are related to a number of classroom activities that teachers carry out. They also indicate that HIPS ideas represent some popular current notions about health and lifestyle, and teachers are implementing school health education programs which are related to teaching children knowledge, attitudes, skills and behaviours intended to reduce the risks perceived in certain practices. They do so largely within the ambit of the school, which may include inviting speakers in, but has very little to do with linking to other programs in the community. The factors most associated with seeking more outside resources were having a responsibility in the school in the personal development field (PDJ), and attending in-service in personal development (INSEvR), which was more frequently associated with being in a HIPS school than a non-HIPS one.

**Trying new things**

Being a HIPS school was associated with learning to use a bigger range of PE equipment, using community resources for program preparation, trying to change the canteen menu and trying to bring about healthy changes to one’s own diet. This sums up one dimension of HIPS concern: finding and using new ideas and resources, changing the environment to enhance ‘healthy’ decision-making, changing one’s health education program and getting parents in to help with the program. It did not relate to changing one’s own health behaviour. The extent to which teachers were aware of the importance of health role models is difficult to assess: in School A, staff wore similar white shorts and T-shirts on sports occasions as did the children. The shorts were an innovation in 1990 to enable the girls, formerly in a short sports skirt, to be freer for activities. However, they had very ‘unhealthy’ food on most special occasions, and were quite defensive about ‘keeping a perspective’. In School B, changes had been made to shared
food among the staff (sweet biscuits were banned, and wholemeal bread was introduced as an option when they prepared food for special occasions). They commented that they thought there were fewer staff absences especially in the winter months, than in earlier years, because they were more aware of taking care of themselves (one staff member challenged this, saying it was only because they had got used to the four-term year). The staff in School D had also changed the practices around staff shared food, banning snacks every day except Friday (when a feast of unhealthy food was provided!).

Learning to use a bigger range of physical education (PE) equipment was also related to efficacy, the importance of health and fitness education, having a PD job, going to PD in-service and the danger of certain foods items. The partial correlation with this and HIPS remained significant and positive after holding efficacy constant. Using community resources for program preparation was significantly related to being in a HIPS school and the aerobic fitness sub-scale on KIMP; it was negatively related to the general dietary KIMP sub-scale and the general lifestyle KDANG sub-scale. HIPS was related to the TRIED sub-scale 1, changing myself and my teaching, which is also consistent with its emphasis. That sub-scale is also related to two of the HEIMSC sub-scales, having a PD job and the KDANG sub-scale, drugs and alcohol. The TRIED sub-scale that was significantly and negatively associated with teacher efficacy was trying new resources; this was also related negatively to the ‘eat less’ KIMP sub-scale and positively to the aerobic fitness sub-scale of KIMP.

It perhaps not surprising that half the TRIED items are associated with being in a HIPS school. Using new resources (TRIED sub-scale 3) was the only sub-scale that was significantly related to being in a HIPS school. Changing myself and my health teaching was significantly related to teacher efficacy. The fitness sub-scales of HEIMSC were also related to changing myself, as was having a PD job. The partial correlations showed that when teacher efficacy was held constant, there was a change in the positive direction for a HIPS effect on all three TRIED sub-scales.

Doing extra health and fitness things
The first two EXTRA sub-scales, organising and collaborating, are related to teacher efficacy. None of the EXTRA sub-scales is significantly related to being in a HIPS school. All sub-scales are significantly correlated with the aerobic fitness KIMP variable, the direction being negative for the collaborative sub-scale! The first two HEIMSC sub-scales are related to the EXTRA variable ‘involving others’, and participating in a PD in-service is related to the organising and doing things with others sub-scales of EXTRAS. The partial correlations holding teacher efficacy constant led to a change in the HIPS effect to weak positive for all three EXTRA sub-scales.

Regression Analyses
Backwards stepwise regressions were performed and showed that HIPS was related to the two TRIED sub-scales involving implementing change and the second EXTRA sub-scale (collaboration). Having a Personal Development job (PDJ) was also related to changing the school environment TRIED sub-scale. Teacher efficacy was related to changing oneself and one’s health education, as was participation in PD in-service. Organising things was related to in-service, teacher experience and having a PD job.
Doing things with others rather than collaborating with others for specific teaching was related to in-service.

The second set of regressions included all of the importance for children (KIMP) and one danger to children (KDANG) sub-scales. HIPS was no longer significantly related to the first TRIED sub-scale (personal and curriculum change). However, the third KIMP sub-scale, regular vigorous activity, which was a feature of the HIPS schools, was significantly related to the second and third TRIED sub-scales (changing the context and using new resources), and to collaborative EXTRA as. The second KIMP sub-scale, eating less fat and salt, was significantly related to using new resources, while the general lifestyle KDANG sub-scale was related to all the EXTRA sub-scales. Considering smoking and drinking a danger to children as related to organising extra things (EXTRA 1).

Taken in conjunction with the effect on the relationship between HIPS and all six sub-scales of holding teacher efficacy constant, and also holding KIMP and KDANG constant, it can be seen that being in a HIPS school was associated with a range of health education activities. These included attempts to change the canteen menu to changing one's personal health and fitness activities and working collaboratively with others in health and fitness programs. Having a special role in the school with respect to personal development and participating during the year in in-service related to personal development was also relevant to the health education outcomes. As the Health Belief Model would predict, perceiving certain behaviours as important for children or a danger to them was also associated with active engagement in trying new and extra health education activities. HIPS may have alerted teachers to the importance and danger of the activities; whether a school became a HIPS school because of the perceived relevance of certain health behaviours cannot be evaluated from this data. What can be said is that teachers' beliefs are related to their health education efforts.