Paper Presented at the AARE Annual Conference, Newcastle, 1994
Australian Association for Research in Education

DEVELOPING AND DISSEMINATING A HEALTH CURRICULUMINNOVATION

A PAPER PRESENTED TO THE 1994 ANNUAL CONFERENCE OF THE

AUSTRALIAN ASSOCIATION FOR RESEARCH IN EDUCATION

THE UNIVERSITY OF NEWCASTLE, NOVEMBER 1994ƒ

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BACKGROUND

Introduction

This paper describes the development and dissemination of a health curriculum innovation in a high risk, disadvantaged area. The innovation, which has come to be known as the Coalfields Healthy Heartbeat Schools Project (CHHSP), was developed by a community coalition of health and education professionals from the broader community in response to demand from schools. Following the successful pilot project in one primary school, the dissemination was planned in collaboration with the region's other schools. It was based on seven strategies, resulting in fifteen schools taking up the innovation. This represents 159 teachers (115 full©time and 44 part©time) implementing a program tailored to a "target population" of approximately 3,000 children aged 5 to 13 years. Early indications are that the innovation has been well received by the school communities and it is likely to become institutionalised over the next year or two as part of the New South Wales' Personal Development/Health/Physical Education (PD/H/PE) K©6 syllabus.

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The Community

The Coalfields District of the Hunter Valley of New South Wales is situated approximately 50 kilometres south©west of Newcastle. It comprises a large portion of the Cessnock local Government area which has a population of 45,000 people. The majority of the population is located in an urban belt between the major centres of Cessnock and Kurri Kurri. Interestingly, nearly 92% of the population were born in Australia compared to 75% for the rest of the State. Many villages exist in the district, developed adjacent to coal mining "pits" which are isolated, both physically and socially. Compounding this isolation is the relative

affordability of land which attracts young families and low income earners. There is a higher proportion of social security beneficiaries in the District than elsewhere in the Hunter Valley.

The district is a socio©economically depressed area. Levels of unemployment (19%) are higher than those for the Hunter Valley (15.6%) and New South Wales average(11.6%). Income levels are lower than State averages with 55.3% of individual incomes below $16,000 Higher proportions of people are wage and salary earners and less are self©employed or employers compared to the State average.

Three large public high schools with eighteen feeder primary schools serve the district's education needs. There is also a smaller Catholic school system in the district. However, school retention rates are poor compared with State averages (45.4% year 7 © year 12 in the Hunter; 56.3% in NSW). Many Coalfields schools are part of the Commonwealth funded Disadvantaged Schools Program. The Disadvantaged Schools Program was established to support school communities with the greatest degree of socioeconomic disadvantage. The emphasis of the program is on the development and implementation of whole school and community programs.

Numerous reports and studies indicate that the District has high relative rates of morbidity and mortality, particularly among males. Most prevalent are heart and circulatory diseases, lung and airways diseases, digestive diseases and accidents. The district has a significantly higher death rate from cardiovascular

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disease for both sexes compared to the State and National averages. Public concern about "opportunities for children" in the region and growing awareness of the adult heart disease problem by school principals lead to the development of a coordinated school©based response.

The original need was expressed by parents at a Parents and Citizens meeting at one primary school in the area. The school responded by seeking advice from community health organisations and the University of Newcastle.

Recent Influences on Health Promotion inSchools.

There is evidence that the development of heart disease begins in childhood and that it is reasonable to adopt effective primary prevention strategies at a relatively young age through the school system. Three recent reports of school heart health programs review past attempts and propose comprehensive approaches which take into account socio©economic, environmental and behavioural factors.

Education and health authorities in Australia have responded to the need to improve school health promotion efforts by adopting policies which reflect this broad approach which focus on the behaviours of children and, importantly, the environments which shape their behaviour.

This concept has gained recognition as the 'Health Promoting School' which claims a wide range of health benefits to children if able to be implemented. The concept has been defined by the World Health Organisation (WHO) as
"Health promoting schools are schools which display, in everything they say and do, support for and commitment to enhancing the emotional, social, physical and moral well©being of all members of the school community".

The key elements of a health promoting school have been identified by the National Health Strategy as:

. a comprehensive school health curriculum for all children
. pre©service preparation and in©service teacher training
. increased community participation
. close parental co©operation and support
. a focus on the schools physical environment
. increased student participation in decision making and policies
. the development of the school as a caring community

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. integration of the physical, social, mental and environmental aspects of health
. empowering children to think critically and analytically about social and health issues

In New South Wales, the Board of Studies has developed a new Personal Development, Health and Physical Education syllabus based on this concept which takes into account a broad range of health determinants.

This syllabus has been trialled in many New South Wales schools and all schools are required to implement the syllabus in 1995.

Needs and interest assessment of local teachersƒ

The support of teachers is vital to the success of curriculum change. Any attempts to alter school curricula ultimately rest with classroom teachers. A questionnaire was distributed to 32 teachers at one school. Twenty questions sought teacher knowledge and attitudes to a health and physical activity program in the school in order to gauge "readiness" for a program.

The results showed that

teachers perceived major health issues which needed addressing were nutrition, fitness and drug education (legal and illegal drugs). Teachers also confirmed that there were little educational experiences provided for students in the areas of nutrition and physical activity compared to more traditional areas of the curriculum.

Healthy lifestyle, healthy living, physical activity, heart health, nutrition, motor skills, self esteem and dignity, responsible choices and realising one's own potential were the most frequent responses of staff to learning outcomes which they feel are particularly important for their students.

In general, the teachers felt enthusiastic and interested towards the CHHSP, but a strong need was expressed for staff development and in©service before successfully implementing new programs. The major issue nominated by the teaching staff was a lack of knowledge and consequent lack of confidence teaching health and in particular, heart health.

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Teachers indicated that, in order for the project to be successful, it would be best to:
 . provide a series of structured, sequenced lessons which address nutrition and physical activity;
 . ensure that the teaching resource was compatible with the new integrated syllabus;
 . provide new ideas and variations to maintain teacher interest in daily fitness;
 . help larger schools timetable daily physical activity for all its classes;
 . conduct in©service training for all teachers;
 . encourage adults and the wider community to be included in programs where possible.

Curriculum Implementation

The initial stage of adoption of the CHHSP by schools was considered to be primarily a curriculum implementation exercise. Curriculum implementation is the "the process of putting into practice an idea, program or set of activities and structures new to the people expected to change". The set of activities making up the CHHSP meant that schools had to make some changes to current curriculum practice which included those activities designed to enhance student learning which are controlled, to a large extent, by the school. This meant classroom activities as well as school policies related to the school environment and efforts to involve parents.

A review of all Australian research studies on curriculum implementation between 1973 and 1983 generated the following conclusions:

implementation is complex;
teachers will not automatically implement according to the intentions of the developer;
teacher attitudes are important and they need to be involved, co©operative and understanding in implementation decisions.

This indicated to the CHHSP that the process would be long (more that two years), that it was important to involve teachers (through in©service training) and that each school is likely to implement in different ways.

AIMS

The project set out to:

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. Stimulate interest
. Promote adoption
. Support implementation, and
. Encourage institutionalisation of the Coalfields Healthy Heartbeat Schools Project in the primary schools of the Coalfields region.

Subsequently, the aims were to achieve in students an:

. Increase in knowledge
. Improvement in attitudes and self©reported behaviour, and
. An increase in health related fitness in relation to heart health risk factors.

Planning for the dissemination process followed. The planning framework for dissemination was drawn from the work of Marsh, Fullan, Elder and Goodman and involved seven major strategies. These were:

1. Provide access to a quality innovation based on need.
2. Recruit schools through support of administration and active leadership of Principals.
3. Conduct in©service training for teachers.
4. Advocacy and interaction by credible external agents and agencies.
5. Provide feedback, support and follow©up.
6. Support and involve parents.
7. Support and involve the community.

The dissemination phase involving fifteen schools occurred over a period of eighteen months (from June 1993 to December 1994). This time period is consistent with past Australian research on curriculum implementation which suggests that sufficient time needs to be allowed for teachers to gain favourable attitudes to the innovation and to adjust their current teaching programs to accommodate the innovation.

7 STRATEGIES FOR DISSEMINATION

Strategy 1: Provide Access to a Quality Curriculum Innovationƒ

It appears that curriculum innovations are more readily adopted if they are:
(i) perceived to have a relative advantage over what is presently occurring or over other innovations;

(ii) compatible with the existing values, ethos and

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requirements of the school, (the classroom lessons of the HHP were designed to be compatible with the new PD/H/PE syllabus);

(iii) easily understood, not complex and are practical for teachers to use;

(iv) able to be trialled or tested before a decision to adopt is made; and

(v) able to make an observable difference in what occurs.

The CHHSP was considered to be an innovation in curriculum for the schools in the area because it was perceived as new by principals and teachers. It brought together traditional classroom lessons with a program of daily physical activity, a plan to involve parents, and strategies to address school canteens. Whilst schools had addressed these components at various times, they had never been implemented in a co™ordinated way. The three components of the innovation were:

Classroom lessons

Ten lessons (one per week for one term) were developed for grade levels 3 © 6 on nutrition. The lessons were sequential and covered a wide range of personal, cultural, familial, social, food marketing and preparation aspects of nutrition.

They were designed to complement the Draft NSW PD/H/PE Syllabus and developed from a range of existing primary school resources including the National Heart Foundation's "Heart Health Manual" and "Food Smart" Kits.

Daily Physical Activity

Many of the schools were already conducting daily physical activity (DPA). These practices were discussed and strengthened by interaction with the HHP. Suggestions on how DPA could be improved focussed on variety by programming circuits, aerobics, dancing, walk/run on a rotating basis.

Healthy School Canteen

The provision of a "Health Canteen" as part of the schools role in

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establishing an environment conducive to
health is consistent with health promotion theory and with the purpose of primary schools. Many schools had
already begun to address this aspect of their environment by working with Parents and Citizens groups and
the Hunter Region School Canteen Committee. The committee advised schools on managing a health canteen
and conducted two in©service courses for canteen managers in the Coalfields.

Strategy 2: Recruit schools through support by central administration and effective leadership by
school principals.

Active recruitment of schools was fundamental to the success of the dissemination. The aims of the
recruitment strategy were to achieve central administration advocacy for the program; to gain enthusiastic
leadership from principals; to demonstrate the significant health needs of the area and an appropriate, high
quality response and to establish credibility as an external agent/agency. Recruitment of schools to the
CHHSP followed three steps:

a) Contact with the District Director of Schools.

The District Director was seen as a potential advocate for the CHHSP within the cluster. After a meeting
with members of the CHHSP, the Director showed enthusiastic interest in the project and a subsequent
meeting with the principals of the district's primary schools was arranged.

b) Meeting with school principals.

A time was scheduled at a District Principal's meeting to introduce the project and invite comment, interest
and participation. The background epidemiological evidence was

presented, the characteristics of the
innovation discussed and the potential benefits were outlined. Principals, on behalf of their schools, were
invited to participate. Nearly all Principals indicated a willingness and a commitment to a "district" response.

c) Follow©up mechanism established.

Principals were asked to participate in collaborative decision making in order to provide a sense of

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ownership and control over decisions affecting their schools. The strategies which emerged from the discussion to move the project forward were:

(i) a formal letter from the CHHSP team to each school Principal providing the background, rationale and proposed program;

(ii) an undertaking by Principals to consult with their school communities in their decision to adopt the CHHSP.

(iii) the provision of resources for teacher use;

(iv) members of the CHHSP team be available as advisers to schools;

(v) the establishment of a community awareness campaign to help gain support from parents; and

(vi) the development of a communication network through a project newsletter.

Strategy 3: Conduct in©service training for teachers

Teacher in©service development and support is essential when staff are implementing new programs outside their particular area of expertise. The National Health Strategy stresses that comprehensive pre©service and in©service training for health educators to develop a skilled and caring workforce is vital.

In©service training was offered to schools in two ways. For small schools, in©service sessions were held at a central location where staff from a number of schools gathered. For large schools (staff numbers greater than ten) in©service training was held at their schools and involved all staff. The interactive sessions were approximately two hours duration. Topics covered included the background epidemiological need, history of the development of the CHHSP, examination of the classroom lessons, debate about the opportunities and barriers to daily physical activity and the community resources available to support the school.

Strategy 4: Advocacy and interaction by credible external agents and agencies.

The importance of this factor is prominent in many other studies. For example, Tynan provided evidence

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that personal contact and interaction play a major role. He concluded that social interaction was the main

determining factor in the diffusion of innovatory ideas and that change agents must be encouraged to become
closely involved in an interactive way with teachers and schools. Owen showed that external
"disseminators" must be "person intensive, interactive and continuous". These factors were confirmed by
Goodman who reported that the adoption decision making
process was influenced by the degree of
"engagedness" of a "linking agent" within the district.

A co©ordinating committee was established to help teachers and schools implement the program and to
continue the momentum which had been gained through the in©service workshops. The committee consists of
representatives from
the University of Newcastle, National Heart Foundation, Coalfields Healthy Heartbeat
Schools Project, Department of School Education (Hunter Region), Hunter Area Health Service and a
Principal and teacher from the area.

Strategy 5: Continued feedback, support and follow©up.

A number of strategies were implemented to provide support and impetus to schools.

i. Newsletter*f*

. A newsletter was established to share ideas and
developments. It is sent to schools on an
average of once per term.

ii. Meetings with Principals. *f*

The Co©ordinator of the project kept
the Principals informed of developments
by attending their meetings. Information relayed to the Principals at these meetings included epidemiological
trends, evaluation results, plans for future events and for the institutionalisation of the project.

iii. Advanced Skills Teacher. *f*

One senior teacher from the
District was allocated time through the District
Director (1 day per week) to liaise with teachers from other schools to

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help develop and focus the program.

iv. University Student involvement. *f*

Students of Nutrition and Dietetics became involved with many of the schools for their major health related projects. This involved interaction with Principals, teachers and students.

v. Visits to Participating Schools. *f*

Members of the co©ordinating committee liaised with individual schools. The liaison included attending staff meetings, telephone conversations with teachers and talking with Parents and Citizens groups.

vi. National Nutrition Education Program. *f*

The CHHSP is playing an important role in this project in two ways. One school is helping to trial classroom lessons for the project. As well, the District is being featured as a case study in promotional material.

Strategy 6: Support and involvement of parents. *f*

It is clear that nutritional patterns in adulthood contributing to obesity and cardiovascular disease are partially determined by food intake patterns in childhood. Thus, involvement of parents with young children are vital for engendering primary prevention of cardiovascular and other life©style related diseases. One important aim of the CHHSP was to engage parents and the wider community in school heart health education activities, and to promote healthy lifestyle behaviour. The strategy employed was to offer adult health education courses which complemented the schools activities.

In order to gain an indication of support for this idea a questionnaire was distributed to parents of Year 6 students at one large school during a Parent/Teacher meeting.The questionnaire listed a number of possible programs and requested parents to indicate their interest in attending and their program preferences. The response was encouraging (80% response rate from 85 parents) and, based on the feedback, several meetings

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were convened at the school to establish a coordinating committee with strong parent representation.
However, these meetings were poorly attended by parents. One parent volunteered to be a liaison person
between the parent body and project team. Planning commenced by establishing contact with key people in
the community who were already running health related programs. A register was compiled of existing programs (type, cost
venue) and this was made available to parents via the school newsletter.

Programs on stress management, low fat cooking and weight management were offered to parents based on
the results of the questionnaire. However, attendance was poor with the stress program having no
registrations, low fat cooking classes attracted 10 parents and the weight management course eight
participants.A number of parents joined a local aerobic group offered through Alcan, a large local
workplace. A few parents reported they were walking regularly with their sons/daughters.

Due to poor response of parents to programs in which they had previously indicated an interest, a follow up
questionnaire was distributed via the school network in an attempt to understand the reasons for the low
participation rate and to gauge any change which parents may have made as a result of the school program.
This questionnaire elicited a low response rate, possibly due to the distribution of the questionnaire too close
to the end of the school year. Of those who responded, most said that

they were aware of the program, a
number of respondents said they had changed their eating habits with regard to reducing fat in their diet and
a few respondents said they were attempting to engage in more exercise, particularly walking. Parents
indicated that the barriers to being involved in the program were more pressing commitments eg work and
home duties (child care) and a lack of motivation.

A new strategy to engage parents is currently being trialled. It involves a number of "take home" projects
designed to be interactive and to be an extension of the classroom lessons which necessitate input from a
parent or other adult family member.

Strategy 7: Support and involvement of the community.

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During meetings and in©service sessions, Principals and teachers expressed a strong need for their schools to
be seen by the community as pro©active agents for change for the benefit of the students. They saw their
schools as an integral part of the community and were striving for greater community and parental
involvement in all their activities. They believed there was an even greater need for the CHHSP to be seen
as a response to a wider community issue and that their schools were playing an active part in overcoming
the problem. They suggested a "community awareness campaign" to achieve these goals. A number of
strategies were employed by the co©ordinating committee to create awareness in the local community.

i. ƒEngagement of Local Workplaces. ƒ

The major local
employer, Alcan Aluminium, became strongly
associated with the CHHSP through the Community Liaison Manager and the Occupational Health Nurse.
These links included:
.offering workplace based programs for their employees, many of whom are parents of children
participating in the schools project
.conducting poster competitions for local schools on heart health during heart week. This competition
attracted 600 entries from 12 schools in 1994 and $500 was distributed to young artists and schools
in the district.
. providing financial support to the schools project to enable then to print teacher resources.

Alcan was awarded the National Heart Foundation's award for Best Workplace Heart Health Program in
Heart Week for 1994. Support for the project has also been forthcoming from the Joint Coal Board.

ii. Attracting a Local Identity to be Patron
of the Project. ƒ

A notable rugby league player with the
Newcastle Knights, Matthew Johns, accepted an invitation to be patron. Matthew went to a school in the
district and is a very popular figure in the National Rugby League

competition. He has participated in media
promotions for the project.

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iii. Media Launch and on©going Publicity. ƒ

A launch was held at one school. Local dignitaries, parents and representatives of the community attended. The program was officially launched by Matthew Johns. Displays of aerobics, dancing and calisthenics were performed by students from different schools. Newspapers reported on the occasion with photographs and stories. On©going publicity is achieved through media release and interest from local journalists.

iv. ƒDirector©General's Award for Excellence. ƒ

Kurri KurriPublic School, the original school in the program, was successful in gaining recognition in 1994 for its health©promoting excellence. The award was presented at the school by the Deputy©Director of Schools (Hunter). This event has helped provide credibility to the project and added to community awareness and support.

CONCLUSION

ƒThe progress of this project reflects the successful mix of school and community©driven needs and support, intersectoral collaboration, and innovation diffusion principles. The dissemination from a pilot project in one school to fifteen regional schools demonstrates a commitment and ownership at many levels.

The next phase is to build on discussions with the local high schools to explore ways by which the work in primary schools can be continued in the secondary schools.

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