

The community in the classroom: designing a distance education community health course for nurses in Solomon Islands

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Abstract

In 1994 in order to improve educational opportunities for nurses in the Solomon Islands and to try the distance learning model as an educational method, the Distance Education Programme of the Ministry of Health implemented five post basic nursing certificate courses for health workers. This paper focuses on issues and experiences in the development of the Community Health course which in some ways as the most difficult of the courses to prepare. As in many Pacific Island countries, the geographic context of Solomon Islands creates isolated working situations for rural health practitioners, with difficult and limited communications. Each module in the course consists of a study guide with glossary and in-text questions, hand-outs, and an assignment. Videos are available to accompany several units and practical teaching aides are also given. Audiotapes for teaching sessions are currently being developed. The benefits of the distance education model offered in this course are discussed in detail and attention is drawn to some of the difficulties encountered. Overall, the outcome of the trial of this method has been highly successful.

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Introduction

As in many Pacific Island countries, the geographic context of Solomon Islands creates isolated working situations for rural health practitioners, with difficult and limited communications. The distance education mode offers many advantages over conventional teaching modalities, particularly the workshop, which has become the major and often ineffective mode of in-service training. The cost of in-country and overseas training necessitates infrequent short training courses funded by overseas donors. Distance courses permit a greater number of nurses to be trained, at lower unit cost, and the acquisition and consolidation of their knowledge over a longer period of time. Learners contribute to the cost of the course materials and thus have greater investment and motivation in their learning. Greater depth of learning and more individualised assessment of learner progress is possible than in refresher courses. Most importantly, distance courses allow the learner to stay in the field and to apply newly acquired theory to their practical working situation.

From the national perspective, distance courses provide opportunities to introduce and trial innovative techniques and ideas, which are more readily accepted by learners in their pursuit of learning and qualifications. Learners' assignments also provide fascinating insights and data from a wide range of communities and situations, which inform national level practitioners and managers about the real health problems and practices in the community. We would argue therefore that distance education offers benefits at multiple levels. Learners gain not only knowledge, greater motivation and practical skills, but also a career qualification and recognition. Nurse Aides particularly benefit as they have only a one-year training but are often expected to carry out the same diagnostic and community tasks required of registered nurses. They have no career structure and the courses can provide incentive and motivation to keep them in active service. Communities with whom they work benefit through greater interaction with a better motivated nurse able to involve them through the use of more participatory methods. However without further follow up, we are not yet able to offer more than anecdotal evidence of the benefits. Health services are improved by

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better motivated health workers with better understanding of up-to-date standards of practice and how to use health data. Successful completion of courses can lead to further training and career promotion based on merit rather than favoritism. Finally, individual and collective professional status is enhanced and self-esteem has been considerably boosted by the indigenous development of staff courses in Solomon Islands.

The existing community health paradigm and the need for change

The challenge for the course developers was to design a program that would not only teach essential elements of community health, to encourage the nurse to leave the security of the health clinic, and to incorporate new ideas and concepts of community health. Despite the rhetoric and countless workshops on Primary Health Care since the late 1970's, the clinic has become akin to an office with the nurse aspiring to the status of a white-collar worker to whom the public comes for a service (Chevalier and Boseto 1997). Nurses' knowledge, power and control is secure and unthreatened in this environment. Nurses are much less secure outside of the clinic and the conventional modus operandi of Community Health is to provide occasional satellite clinics for under-fives, which are an extension or outreach of the clinic. Nurses mainly focus on meeting curative demand although we must not underestimate the practical constraints such as lack of transport and funds for touring although these are often secondary issues. There is also a general lack of skills in analysis of clinic data and collection of relevant data to prioritise community health issues.

Different contexts of community health in Solomon Islands

A difficulty faced by the course writers after the initial cohort was enrolled was the different contexts of community health that prospective students could expect to meet. Urban nurses faced the problem of how to promote community health in the urban situation where the population is more heterogeneous, mobile, and culturally diverse while community organisation and family support is often weaker. Epidemiological patterns differ from rural populations with increased prevalence of noncommunicable diseases such as diabetes and sexually transmitted infections. Public health services such as water and sanitation come under the auspices of town councils and are less in the control of the community. On the other hand, rural nurses require more assistance in engaging communities in participatory activi-

Table 1. Community Health modules

Core Units	
1	Introduction to Community Health
2	Learning from the Community
3	Community Diagnosis
4	Working in Partnership
5	Family Health Record Card
6	Public Health and Sanitation
7	Maps and Graphs
8	Organisation and administration of Health Services
9	Specific Services in Community Health
Streams and Electives [Choice of five]	
a) Rural Health	b) Urban & Industrial Health
Tools and Community Techniques	Urban Communities
Health Promotion	Specific Urban Health Services
Custom, medicine and culture	Occupational Health
Working with NGOs and VHWS	Urban and rural Industrial Health issues
c) Provincial Health	d) Optional electives
Demography	Diabetes
Epidemiology	Family Planning
Research and Research Techniques	STIs and AIDS
Management, support and supervision	Nutrition

ties and planning. Senior staff at provincial level need more advanced skills in epidemiology, planning, monitoring and evaluation of clinic and community health services.

Given the different levels and locations of nurses, it was decided to provide nine compulsory core modules, three elective streams (provincial, rural, or urban), plus optional elective units. (see Table 1). Students are required to complete 14 modules in total.

The classroom in the community

David Werner suggests that *'Learning in and from the community is essential preparation for community health'* (1983:6). We would add to this that Community Health is best learned in the community over a period of time. Community based care was the key concept in developing the program. An analogy we used is that if an agricultural officer were told that crops were dying he would need to go and look at the food gardens to ascertain the problem. While there, he would talk to the farmers, examine the soil, look at drainage and forestation. He could not do this from his office. In community health, we needed to find ways to take the students to the community in a non-threatening manner for both nurse and community. This has been achieved by including, in almost all modules, practical exercises and tools as part of their assignments which included short surveys, interviews, focus group discussion, pile sorting exercises, and community mapping (see fig 2).

Table 2. Practical work included in assignment

- 1 List advantages and disadvantages of traditional and modern health care in your area.
- 2 Community map and profile. List language words used to describe various types of cough and fever. Three Pile Card sorting to learn health seeking behaviours.
- 3 Conduct a mini survey of pregnant women.
- 4 Write up two projects in your area, one that has stopped and one that is continuing. Discuss possible causes for success and failure of projects.
- 5 Home visiting of 10 families. Fill in Health Cards for EPI and nutritional status of children, Family Planning usage and women and children 'at risk'
- 6 Conduct two focus group discussions with men and women concerning sanitation. Student alternates as facilitator and recorder.
- 7 Produce graphs using own data.
- 8 Listing government agencies in your area and how you can work closer together. Describe your transport, who provides maintenance and rules for use. Prepare daily, weekly, monthly and annual work plans for your work area.
- 9 Outline a health education program. Write a three-page report on one of the programs in your area. Provide statistics and appropriate graphs as well as targets for following year.
- R1 Seven tools for community work are described. Students choose any two and use these with the Village Health Committee to define main problems. The Health Committee then develop an action plan for tackling one of these problems.
- R2 Following from the community list of problems, the student draws up a health education program for the next three months using a variety of adult education techniques.
- R3 Evaluate over-prescribing of both western and custom medicine in their area. Conduct an in-depth interview with a traditional practitioner.
- R4 Conduct two in-depth interviews with an NGO worker and a para medical worker in their area. List ways for closer collaboration.
- P1 Compare Solomon Islands basic UN Indicators with other countries. Graph projected provincial population using high, medium and low growth projections.
- P2 Analysis of monthly provincial health information data.
- P3 Design a mini survey or research project.
- P4 Plan a meeting for the health workers in the student's province. Outline a 10-minute presentation. Write objectives for your job for the next 3 months. Write a 'to do' list for the next week. Plan something that you would like to introduce, evaluate or organise in your work area.
- U1 Meet with urban community members. Find out where they have come from and which community groups are present.
- U2 Interview a sex worker. Meet with a family who cares for an incapacitated elderly person. Devise a plan for closer liaison between hospital and community services to decrease hospital admissions and duration of stay.

Health education was deliberately positioned in the last part of the course after nurses had got know a single community well, had learned about the community, and engaged the community using tools to identify their own problems and needs.

Course delivery

The course structure followed along similar lines to other courses offered by DEP. Students receive an introduction and a course textbook. In this course, the text used was 'Setting up Community Health Programs' (Lancaster 1992). Each module consists of a study guide with glossary and in-text questions, hand-outs, and an assignment. Videos are available to accompany several of the units and practical teaching aides are also given. We are currently developing audiotapes for teaching sessions, which accompany the study guides.

Support for students is provided through feedback, encouragement and comments on assignments. Assignments are marked generously and we always try to personalise the feedback. If a student fails to reach the pass mark of 65%, which is rare, they are given the chance to repeat the assignment or parts that were not satisfactory. All students receive a quarterly newsletter and are encouraged to contact other students in their province. Almost all clinics have HF radio and can contact the DEP Office with any inquiries. There are volunteer mentors in each province who give advice on studying and encourage students with work. Mentors provide additional liaison with the DEP office and also assist with practical attachments, which is occasionally required for nurses in remote areas doing the obstetrics or paediatric courses.

Recommendations for design of distance education programs in the Pacific

One important factor is to develop home produced materials rather than simply importing or undertaking courses from abroad. The Family Planning and Obstetrics courses were adapted from materials developed in Kenya by AMREF while the Nursing Administration course was adapted from a curriculum from Fiji School of Nursing. Development of Paediatrics and Community Health was more challenging and time consuming because they required more extensive adaptation and consultation with local health staff and specific adaptation. In 2000 two more courses will become available, one on Diabetes which is being developed by a local Nutritionist utilising recommendations from a WHO consultant, and another on Mental Health which follows an AMREF course but will be modified during a writers workshop with local mental health staff.

Courses must be easy to read both because English is a foreign language and existing textbooks often have with a strong bias towards African or Western situations. Students must be able to relate to examples, and will struggle to learn if the units have been developed for foreign countries. Materials need to be developed within the Pacific, which reflect the roles, situations and structures of health services. Nursing theory and practice expounded by Australian Universities do not bear much resemblance to the role of nurses in Solomon Islands who mainly work as primary health care practitioners or technicians. Nursing theory also needs to be positioned within the range of Pacific cultures.

The University of the South Pacific (USP) has found that despite considerable advances by course writers to adapt USP materials, students still find written materials difficult to read. A study was conducted of 172 USP students taking four courses (Tuimalealiifano 1986). Mean student scores on Cloze Tests (a readability indicator) were 15%, 20%, 26%, 35% and 43%. Only six students scored higher than 50% with the highest being 57%. Another study in the late 1980's showed that less than one sixth of distance students at USP were capable of performing at an independent level. (Lockwood, Roberts and Williams, 1988)

The design of distance education programs must take account of the economic state of both government and students. If a program is to be incorporated into a national structure it must be provided at a sustainable cost without major expenditure for staff, equipment maintenance or residential programs. Although students can be encouraged with cost sharing such as payment of fees, textbooks or not receiving per diems for residential programs, there are limits to what they can afford without inhibiting enrollment. However any kind of payment is a far cry from the all expenses paid mode for basic and inservice education in which there is no guarantee of motivation or persistent learning.

Technical infrastructure

There are numerous examples of problems with infrastructure in the developing world, including support, distribution systems and insufficiencies in trained personnel and materials Guy (1991), Williams and Gillard (1986). The key is to keep methods and technologies as simple and affordable as possible especially when the learners do not have access to technology. In Solomon Islands, students living in provincial centres may have access to electricity and regular postal services, but those in rural clinics may wait a month or more for someone to collect mail from a postal agency. Telephones are rare or not available in some provinces and very expensive. Meachem's (1992:20) comparison of Maldives and Solomon Islands strongly recommends designing programs around existing facilities and not relying on high technology. An interesting example is the USP satellite, which is utilised by only 5% of students throughout the

Pacific and is mainly for administrative and lecturing purposes rather than for interaction between teachers and students. (Williams and Gillard 1986:59)

The Distance Education Centre (DEC) at Solomon Islands College of Higher Education (SICHE) has also found problems with their teleconference system installed in 1993. There have been minor problems over the years and the system closed down in 1996. SICHE concluded that telephone conferences were too costly, did not give good educational value for money, was not reliable enough and limited the program to provincial centres serviced by the Telekom Network. (Kolej Ion Hom 1996) The DEP opted to use two way radio, as this was free and available to most clinics. Unfortunately the national medical frequency was not available for tutorials as it was in constant use for other medical contacts. When time was set aside for contact, students rarely called to ask questions due to the public nature of the broadcast and a reluctance to show ignorance either to their tutor or peers. In 1998, a new channel was installed in major hospitals and Area Health Centres solely for medical education and is now used by the Nursing Administration course tutor who gives tutorials every fortnight and follow ups when requested. The radio does allow students contact with the DEP Office to follow up assignments and request new materials but because others can hear it, it cannot be utilised for counseling students who are falling behind.

Continuing education for continuing change

The DEP provides a network for equipping nurses for change in working environments, standards of practice or treatment regimes. Health needs and health sciences change and much of what is taught in pre-service programs may be obsolete or forgotten within five years. Nurses working in professional isolation often become deskilled and can easily fall into a pattern of subsistence health care provision, staying in their clinics and treating a small range of illnesses on automatic pilot. The roles of health staff may change as hospital staff are transferred to rural areas and vice versa or staff are promoted to higher clinical or administration posts. Due to Melanesian culture relating to gender, female nurse aides are often asked to perform obstetric and family planning duties for which they are inadequately trained for or male nursing staff (40%) feel that they lack these skills and would like to know more. The Family Planning course is therefore particularly useful for female Nurse Aides and male nurses. Just as importantly, DEP can provide increased motivation and enthusiasm to approach routine work with fresh insights and greater desire to stay up to date.

Distance education mode can also be utilised in various ways. Tertiary courses can utilise both distance and face to face modes using each method where it would suit best. Single units can be distributed to all health workers when

new topics or changes are being made to medical protocols. Provision of scholarships for overseas education can be based on successful completion of courses or modules and bridging courses can be developed for Nurse Aids and Enrolled nurses who wish to commence Registered Nurse Education. Accreditation could also be sought towards a Bachelors Degree in Nursing. Completion of courses can be used as criteria for promotion rather than favouritism.

A few words of caution

We must be careful not to overload staff as Arger (1990:9) brings critical reflection on the promise and reality of distance education in the Third World and warns of the dangers of high expectations. We also need to temper our enthusiasm for the undoubted potential offered by distance education with caution about the reality of implementation in the diverse and scattered Pacific context. The workload associated with developing courses and materials cannot be underestimated nor the need for personnel trained at higher levels who can act as writers, editors, instructional designers, coordinators, markers, tutors and mentors. Utilising the expertise of designers from USP and UPNG as well as sharing of materials and experiences between countries is advisable and helps to reduce design costs. Institutions such as Fiji School of Medicine, College of Distance Education at UPNG and SPC have a major role to play in developing and sharing materials and giving accreditation.

Although this conference is focused on tele-health activities, communication technology and networks, few rural Pacific nurses will have access to technology based services. Our courses are embedded in available, reliable technology and are offered at certificate and diploma level to reach the majority of staff and their needs. It is easy to be enthusiastic about high technology and degree level courses for nurses but in order to improve health services and conditions, we must not neglect the nurse at the coal-face, who does not want to leave her family or want to study eight to sixteen hours a week. We need gradual and articulated links to further courses, whereby nurses can choose what to study and gradually acquire both knowledge and confidence.

Conclusion

Our experience in Solomon Islands convinces us of the value of distance education which provides students with many tools and learning opportunities they will not find in a classroom. Almost 40% of the nursing staff in Solomon Islands are studying, have graduated or are on a waiting list to do a course that they are required to pay for and without any promise of vocational promotion. This figure alone attests to the popularity and unspoken need for opportunities for further education. The courses are low cost, low technology and affordable while at the same time opening up study opportunities to satisfy a real thirst for further education. Student support is a critical area of a distance

program and marks the difference between earlier correspondence courses and modern distance teaching which utilises both personnel and a range of technological advances to provide teaching. However, lessons from developing countries should warn us about undue enthusiasm for technology, which will be available for the few, rather than the majority.

I am very proud, even before I have completed the course, because I am able to solve most of the problems which I have difficulties to handle in the past, especially when working alone in rural clinics.

Male RN Rural Health Clinic

One of the nurses in my area had been having trouble with a Village Health Committee. I had just finished that module and was able to advise her on what to do. It worked and she was really pleased.

Nursing Officer, Community Health Course

I like learning the theory and putting it into practice during working hours. My attitude has changed and I feel more professional now.

Female RN, Paediatrics course

References

- Arger, G (1990) *Distance Education in the Third world: Critical analysis of the promise and the reality*. Open Learning June, p 9-18
- Chevalier C, Boseto P (1997). *Borderline successes and failures. An evaluation of the Choiseul Community Health Project 1994-96*. Honiara, Ministry of Health and Medical Services.
- Guy, R (1991) *Distance Education and the Developing World* Distance Education in Developing Nations. Deakin University
- Lockwood, F. Williams, A and Roberts D. (1988) *Improving teaching at a distance within the University of the South Pacific*. International Journal of Educational Development Vol 8, Issue 3
- Meacham, D. Zubair, (1992) *A Models of Distance Education for Developing Island States* ASPESA Papers No 12, December.
- SICHE (1996) *Kolej Ion Hom* Volume 2 Issue 2
- Tuimalealiifano, E. (1986) *Some comments on Readability and Writing Readable USP Extension Courses*, Directions 16, Journal of Educational Studies, Suva: Institute of Education USP, 39-42
- Werner D (1982). *Helping Health Workers Learn*. Hesperian Foundation Page 6-1
- Williams, A.I. Gillard, G (1986). *Satellite and Kerosene Lamp: Distance Education at the University of the South Pacific* ICDE Vol 12 September p 57 - 61