Background

IHIM was introduced to the concept of Action Research by a consultant from Asian Development Bank during the initial phase of the Institute's development. This concept was taken up by the Institute and a proposal for a health development grant on the subject matter from WHO was developed and granted for the year 2002 and 2003. Included in the grant was attachment of a WHO consultant with the Institute in two phases. The first phase was for three weeks starting from the 13th of January 2003 to 11th February 2003. A workshop was conducted to develop the action research module during this phase. The second phase started on the 17th August until 6 September 2003 and in this phase the module was used and tested in a workshop conducted by IHIM with the consultant as the lead facilitator, from the 25th August to 29th August 2003. Six projects were started as an output of this workshop.

What is Action Research

Kurt Lewin, a social psychologist, introduced the term Action Research in 1946. Lewin's main concern was to build a 'bridge between social theory and social action'. He conducted research aimed at producing a specific desired social outcome using a three-stage change process. In a subsequent paper Lewin described Action Research as a three-step spiral process of (1) planning which involves reconnaissance; (2) taking actions; and (3) fact-finding about the results of the action. He also stressed the importance of group dynamics in identifying forces important for development and problem solving.

Elizabeth Hart and Meg Bond selected seven criteria, and these seven in dynamic interaction, will distinguish Action Research from any other methodologies. Action Research:

1. is educative
2. deals with individuals as members of social groups
3. is problem/issues focus, context specific and future oriented
4. involve change intervention
5. aims at improvement and involvement
6. involves a cyclic process in which research, action and evaluation are interlinked
7. is founded on a research relationship in which those involved are participants in the change process.

Action Research is an analytical framework which focuses on action (or change) and research (or understanding) at the same time. The framework is used to address issues in social settings and for research purposes. The important aim is to build better understanding, change may be pursued, but of less priority. The concept pursues change and the learning process itself as its first priorities.

Both applications are valid. However, we are concerned only with the social change application and, more specifically, change relating to the management of health systems. In this limited context we define Action Research as:

a systematic, analytical framework used to fix local health care problems and, more generally, to actively change and improve the health system.

Action Research is an emergent process which takes shape as understanding increases. It is an iterative process which converges towards a better understanding of what happens.
For this first issue of 2004, we bring you the aspirations of the Director of the National Institutes of Health, Yg Bhg Datuk Dr Hj Mohd Ismail Merican who is also the Deputy Director-General of Health (Research and Technical Support) Malaysia. Not forgetting we also bring the hopes and expectations from all the other leaders of the component institutes of the NIH.

It is also a good time for each and every one of us to reflect on our performances and plan our activities for 2004 especially when the NIH has been officially launched in the last quarter of 2003. Having witnessed the consequences brought about by the SARS last year and more recently the threat of the Avian Flu, expectations from the NIH to help combat these threats are high. It is now the time to walk the talk if we are to be an organization respected locally and internationally.

Dr. Lye Munn Sann
Director of the Institute for Medical Research (IMR)
Jalan Pahang, Kuala Lumpur, Malaysia

When Dr Lye Munn Sann became the Director of the Institute for Medical Research (which is commonly or more famously known as the IMR), a lot of changes were already looming in the horizon, the principal being the reorganization of the institutional framework. What had existed as 22 units for more than half a decade with four principal departments was to be reorganized to form 6 research centres. That was a tremendous feat and no easy task to achieve.

Dr Lye was acutely aware of not only being the Director of the IMR on its centennial year (that was in the year 2000) which had a documented history of excellence in certain areas of tropical medicine and biomedical research, but also inheriting a rich cultural heritage steeped in research and academic traditions. Therefore, what could have been a daunting task full of trepidation, the director's chair was taken on in a spirit of adventure and with an excitement and anticipation for the future that only a scholar researcher with creative tendencies could envisage.

The idea to reorganize the IMR was mooted during the administration of the former Director General of Health, Tan Sri Dr Abu Bakar Sulaiman. The institute would focus on evidence-based biomedical research and it was decided that with its reorganization, the IMR would look into areas of biomedical research that would be initiated to work in tandem with the economic growth of the nation and address national needs with emphasis on biotechnology and molecular biology. Hence the six principal research centres were to focus in specific areas, and they were on: Infectious Diseases; Herbal Medicine; Cancer; the Environment in relation to health; Allergy and Immunology; Cardiovascular, Diabetes and Nutrition. The Specialised Diagnostic Centre focuses initially on Inborn Errors of Metabolism and other specialized tests although other units have also traditionally performed various specialized tests. In addition, the Medical Research Resource Centre looks into support areas such as epidemiology and biostatistics, the computer, library services, electron microscopy and the museum. There is also an Administrative Centre. Through each of the centres has specific research agendas, Dr Lye envisions the centres as working cohesively together in an inter-locking manner with a pooling of resources and harmonizing of priority areas.

Dr Lye emphasizes on and strongly advocates human resource development. Since taking over the directorship of the institute, he has reiterated what he strongly believes, that only in human resource development can we hope to achieve a critical mass that could then generate excellence in the field of biomedical research. One major development in 2003 is the addition of 12 new posts. Of these, seven posts are at the Superscale C level. He reiterates that with the new millennium and the era of knowledge-economy, the human resource of any organization is its single greatest asset.

Another admirable quality that Dr Lye possesses is he believes in working as a
INCLEN started out by providing training and expertise to clinicians from developing countries to improve their health care system through planning, measurement and the evaluation of their systems using a population-based framework. Today after 23 years, it stands as a strong advocate for evidence-based practice of health care. It also provides a forum for researchers to discuss important health issues through programmes, global meetings and collaborative research through the international network.

**Vision**
INCLEN's vision is "the attainment of equity in health for development through essential research and training in clinical epidemiology and related disciplines."

**Mission**
INCLEN's mission statement is as follows: "Dedicated to improving the health of the people by promoting clinical practice based on the best evidence of effectiveness and the efficient use of resources. This is to be achieved through a network of physicians, statisticians and social scientists throughout the world working together to build and sustain institutional capacity for excellence and relevance in research and medical education.

**INCLEN's Programmes and Activities**

**i) Programmes**

- **INCLEN ChildNET**
  - Goal: Reduce child and neonatal mortality and improving health of children worldwide.

- **Global Network for Perinatal and Reproductive Health (GPNRH)**
  - Goal: Improve maternal and perinatal health outcomes and to reduce neonatal mortality.

- **INCLEN Knowledge Plus Programme**
  - Goal: To improve health care through the reduction of information gaps and healthcare inequities, and the enhancement of knowledge translation programmes in low-income countries.

- **INCLEN Networking Programme to Promote Responsible and Efficient Use of Medicines (PROMED) Goal**: To contribute to the formulation of evidence-based policies and clinical guidelines of action which are likely to result in improved use and access to drugs and health.

- **INCLEN Leadership And Management Programme (LAMP)**
  - Goal: To support effective leadership at all levels of the network, propelling the organization forward as a leader in international health research and training for improving equity, efficiency, and quality in health care.

**ii) Meetings**
INCLEN recently held its 20th Global meeting in Agra, India on the 11th-14th February 2004. Its theme for this year was "Leveraging Research through Policy and Practice".

**iii) Proposed Project**

- **Virtual Compendium Initiative**
  - Aim: To provide training and state-of-the-art consulting in clinical epidemiology and related disciplines and on leadership and management.
  - Focus: Initiated, on training of postgraduate health care professionals.

**Region** | **Member Countries**
---|---
1 | Canada, United States
2 | Cameroon, Egypt, Ethiopia, Kenya, South Africa, Uganda, Zimbabwe
3 | Argentina, Bolivia, Brazil, Chile, Colombia, Mexico, Peru
4 | France, Switzerland
5 | China
6 | India
7 | Australia, Indonesia, Philippines, Thailand, Malaysia, Pakistan, Vietnam
8 | Japan

**Member Countries**
INCLEN's member countries come under various regions. There are

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**Institute for Public Health**
The research and training activities from the Institute of Public Health for the year 2004 are as follows:

**a) Research Projects**

- National Ear and Hearing Loss Study
- Development of an Intervention Package to improve Exclusive Breast Feeding Practice
- Burden of Disease Attributable to Risk Factors Study

**b) Training Workshops**

- TB Management
- Adolescent Health and Counselling
- Family Planning
- Effective Speech Writing
- Basic IT
- ISO 9001:2000
- Diagnosing and Notification of Occupational Health Diseases
- SPSS for statistical analysis
- Techniques for Practical Teaching
- Communication for Nutrition
- Basic Epidemiology
- Denpe-End Control and Enforcement
- Public Policy, Integrity and Corporate Culture
- Using Multimodal Technology for Effective Presentation

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**Institute for Medical Research**
The Institute of Medical Research has outlined the following research projects and training activities to be undertaken for the year:

**a) Research**

- Allergy & Immunology Research Center
  - Allergy: studies and characterized local allergens in diagnostic assay
  - Autoimmune Diseases: distribution of biomarkers in the Malaysian population and its usefulness as a tool for diagnosis and monitoring of treatment response.
  - Immunogenetics: HLA alleles and disease association.
- Studies on microarray assay techniques for transplantation.
- Cardiovascular Diseases and Nutrition Research Center
  - In vitro and in-vivo studies and clinical trials - Kup Fatimah, Hempedu Bumi
  - Clinical trials: Sibutramine study for management of obesity

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**Institute for Public Health**

- Sampling Techniques
- Food Safety for Food Technologists
- Crisis Management
- Post Basic Training on Environmental Health
- Follow up Management of Mental Health Patients at Health Centres
- Safety of Water Supply
- Local Preceptor Training
- Care of the Elderly
- Primary Health Care
- Breast Feeding Counselling
- Training on coding of ICD 10
- Using Power Point for Effective Presentation
- Public Speaking
- Orientation course for Public Health Engineers and Food Technologists
- Patient Education
- DOTS for Tuberculosis
- Ergonomics
- Introductory Course to Safety of Water Supply for Public Health Overseas
- Managing and Supervising Practical Teaching

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**Institute for Medical Research**

- Nutritional Biochemistry: Cell-based assays, gene expressions to determine effects of dietary trans-fatty acids on fat and muscle cells.
- Cancer Research Center
  - Cancer Biology
  - identification of new diagnostic and prognostic markers
  - mechanisms of tumour progression and metastasis eg. colorectal cancer, NPC, hepatocellular carcinoma, leukemias
- Cancer Intervention
  - strategies for early detection and evaluation of diagnostic modalities for oral cancer
- Cancer Risk
  - molecular epidemiology of leukemias
  - identification of risk factors
Research and training activities for 2004

- Cancer Prevention, Treatment and Control
  - in vitro screening of microalgal extracts to identify new anti-cancer/anti-viral compounds for NPC
- Identification of novel therapeutic and preventive strategies
- Environmental Health Research Center
  - Drinking Water Quality Index
  - Indoor Air Quality
    - In relation to sick building syndrome
  - Occupational Health
    - To identify diseases and safety issues related to workplace
- Formulation of effective policy and strategies
- Health impact of Air pollution
  - Time series and long term exposure studies
  - Development of quantitative estimates for all-cause mortality and morbidity associated with air pollution
- Acute effects to pollutants
- Herbal Medicine Research Center
  - Ethnobotany and ethnopharmacology research
  - Development of comprehensive toxicity evaluation of herbal products
  - Development of extensive phytochemical analysis including NMR structure elucidation and metabolomics
- Development of extensive bioassay capability: anti-parasitic, anti-fungal, anti-cytotoxic, anti-arthritic drug screening
- Development of various techniques for detection of adulteration and heavy metal contamination in various herbal extracts
- Establishment of bioassay capabilities to include other areas of importance
- Infectious Diseases Research Center
  - Antibiotic Resistance in Malaysia
  - Leptospirosis
  - Fungal infections
  - Tick-borne diseases including the distribution and phylogeny of ticks, spirochaetal tick-borne and viral tick-borne infections.
  - Epidemiological studies on important viral diseases in Malaysia including measles, mumps, rubella, enteroviral infections, HIV and Japanese encephalitis.
  - Virological studies in hepatocellular carcinoma
  - Brugian filariasis transmission, malarial immunity and babesiosis.
  - Vector control studies, rapid test kits for insecticide resistance and maggot therapy
  - Sandflies
- Medical Research Center
  - Antibiotic Resistance Study (with IDRC)
  - National Burden of Disease Study Malaysia
- Specialized Diagnostic Center
  - Establishment of new diagnostic methods for screening of specific inborn errors of metabolic diseases, namely:
  - Lysosomal storage disease
  - Macropoly saccharidosis screening
  - Neonatal screening program for IEMD using Tandem Mass Spectrometer.

Institute for Health Systems Research

The Institute for Health Systems Research has outlined the following research projects and training activities to be undertaken for the year 2004:

a) Planned ongoing Research Projects
  - World Health Survey 2002
  - Health Research System Analysis
  - Implementation of Client Charter within the MOH
  - Evaluation of Family Medicine Specialist services
  - Prevalence and Utilization patterns of Traditional/Complimentary Medicine
  - Patient Safety
  - Quality of Life Breast Cancer Patients and their Carers
  - Healthy Life Expectancy in Aging

b) Planned Training Workshops in Research Methodology
  - Introduction to HSR Methodology Workshop for Allied Health Personnel - April
  - HSR Methodology Workshop for Mid-Level Managers, Part 1 - April
  - HSR Methodology Workshop for Sarawak Mid-Level Managers, Part 3 - April
  - Health Outcomes Methodology "Training of Trainers" Workshop, Part 1 - May
  - Writing for Quality Assurance Publication Workshop - June
  - Quality Assurance "Training of Trainers" Workshop - July

Website for the Institute

The institute has also recently launched its own website, at www.nihs.gov.my. We welcome all visitors to visit this site and appreciate any feedback.

Research and training activities for 2004

- GCP workshop - Jan, April, July, October
- Biostatistics workshop - August
- Evidence Based Medicine workshop - August

Institute for Health Management

The research and training activities from the Institute for Health Management for the year 2004 are as follows:

- Clinical as Managers - April
- ISO Documentation - April
- International Classification of Disease (ICD 10) - April, July
- Communicating Effectively - April, July
- Supply Chain Management - April, July
- Stress Management - April, July
- Internal Quality Audit - May
- Quality Control Circle - May
- Corporate Culture - May
- Introduction to Health Management - May
- Evidence Based Medicine - May
- Leadership and Health Organization Management - May
- Ward Management Skills for Supervisors - May
- Action Research - May
- Strengthening Hospital Management - May
- Health Financing and Economics - May

Institute for Health Promotion

The Institute for Health Promotion together with the IHSB has outlined the following research project to be undertaken for the year:

a) Planned Research Projects
  - Social Profile and Health Seeking Behaviour of Patients seeking treatment at the out-of-office hour outpatient services in the Emergency Department of hospitals in Malaysia

If an elderly but distinguished scientist says that something is possible he is almost certainly right, but if he says that it is impossible he is very probably wrong.

Arthur C. Clarke
The National Institutes of Health Malaysia on the 11th of August 2003 was officially launched by The Honourable Dato' Chua Joo Meng, the Minister Of Health at the Mutia Auditorium, Institute of Health Management, Kuala Lumpur. This official launching marks the formalization of the Ministry of Health's efforts to bring together the various research institutions under one umbrella.

Among the VIPs present at the launching was the Director-General of Health Malaysia, YBhg Tan Sri Dato' Hj. Mohd. Taha Arif, the Deputy Director-General of Health, YBhg Datuk Hj. Mohd. Ismail Merican, the Deputy Secretary-General (Management), Dato' Hj. Siajam bin Buyung, the WHO representative for Malaysia, Singapore and Brunei, Dr. Sigmund Rosel, and the Deputy Chief of Mission, Embassy of the United States America, Mr. Robert Pollard. All Directors of the component Institutes of the National Institutes of Health and invited officials from various departments in the Ministry of Health were also present.

In conjunction with the official launch, an exhibition of the activities by the various component Institutes was also held.
team. He sees his professional colleagues including his subordinates as team players. He believes that in spite of the present hierarchical structure, there can be empowerment at the grass-root level with the staff of the IMR working in a horizontal equilibrium. Though there has sometimes been visible apprehension and palpable tension in the process of reorganizing the IMR, Dr. Lye has gone yet a step further in that direction by recruiting the services of a management consultant to draw up a strategic plan for the IMR which will better reflect the mission and vision of the institute. Contrary to what some may consider a bold step, Dr. Lye courageously believes that it is a definite way forward taking into account that in developing a culture of research and scholarship, certain ingredients are required to create a conducive environment for research, which he ardently believes is a creative and scholarly endeavor. In his reflections, Dr. Lye narrates a personal experience as a postgraduate student in Tulane where he was privileged to soak in and feel the exhilaration of an entire university when Professor Andrew Schally, a noted endocrinologist at Tulane, was awarded the Nobel Prize.

Dr. Lye's belief in working as a team goes back to his public health years as an officer on the field. He was a Medical and Health Officer in Buyn Lepas. In narration, it is not difficult to describe Dr. Lye's intense and encompassing nature; a former staff's re-collection was that he was an excellent pediatric medical officer with the ability and precision to set scalp veins on infants and toddlers. However, with the early decision to spur his career-path into the domain of public health, he reminisces that he has always been fascinated with and was interested in the causality of disease occurrence and therefore, was more inclined towards the preventive and promotive aspects of medicine.

When one wonders how he manages to juggle his time and energy, he admits that it is first a management of self that is of prime importance. And when asked how he prioritizes, he remarks that he always keeps the institute's vision in sight and gives importance according to the mission and that never falter in his decision-making.

It is interesting ponder the fact that his hobbies in his childhood years such as collecting butterflies, and a love of the out-doors with activities such as hiking, trekking and camping might have played a notable role in his selection of a career in a caring profession and specifically as a researcher and an epidemiologist where there is an earnest quest and search for causalities.

The interview with the Director of the IMR ended amicably in a reassuringly positive note. Dr. Lye reiterated his faith and hope that this Institute will achieve even greater heights in the able hands of future capable leaders (he retires in 2004). With his youthful demeanor, candor, poise and willingness to 'walk the talk', there is indeed hope that, with his unique and decisive style of leadership, the Institute will reach the goals it has set out to achieve and that medical research will attract the crème de la crème of the medical, scientific and allied health communities.

Contributed by: Dr. Sumitra Sithamparam

You can't build a reputation on what you are going to do. - Henry Ford

Science is nothing but developed perception, interrelated instinct, common sense rounded out and minutely articulated. - George Santayana
As Director of the NIH, I have tried my utmost to add more substance and meaning to our NIH. I have succeeded in some and yet to succeed in others. I would like to urge all the Directors of the component institutes to reflect on what they have done and strive to do things better for their own institutions and the organization as a whole. Our paramount objective has to be the conduct of innovative research that will make a difference and one that will make every Malaysian proud.

The challenges are many and the road to greatness arduous, tortuous and quite unnerving at times. To reach our goals, we must be armed with the necessary skills, knowledge and proactiveness and be prepared for the battle ahead. Those who are made of lesser stuff will for sure wilt away and leave the lofty ideals they have set for themselves in tatters. So I implore everyone in the NIH to get energized and take up the challenge. No more lamenting and waiting for things to happen. Let us move forward with whatever we have right now to make a difference. Let us add more meaning to our organization and give justice to the setting up of the NIH by our visionary leaders.

DATUK DR HJ MOHD ISMAIL MERICAN

Message from Director of Institute of Public Health

The Institute of Public Health (Institut Kesihatan Umman or IKU as it is widely known), was established in 1966 as the national training centre on public health. However, it is also designated as one of seven institutes under the National Institutes of Health (NIH) that has been entrusted to undertake public health research. Thus, IKU has dual roles of both research and training in public health.

IKU views the roles entrusted to it as very challenging. Already several major research projects have been planned for 2004. One significant area is the conduct of 'Burden of Disease assessment' for which IKU has 3 public health physicians being trained overseas on this new research methodology. The project was initiated in 2002, with the first phase of the study already completed. Using the DALYS (Disability Adjusted Life Years) framework, a total of 112 diseases had been studied and preliminary findings obtained. The Burden of Disease assessment shall be an on-going research activity of this Institute. Spin-offs from this study will include establishing national disease trends, assessment of risk factors, and improvement of medical certification of deaths.

Other research projects for which IKU has also obtained major research grants include the 'National Hearing Loss and Ear Diseases prevalence study' and the 'Exclusive Breast Feeding study'. In addition to above major studies, IKU will also continue to provide research expertise and assistance in data management and analysis.

The year 2004 is indeed very challenging in the face of acute shortage of trained manpower faced by the Institute. Besides unfilled posts, the Institute may face an outflow of existing trained manpower due to the current promotional exercise. Nevertheless, IKU is working closely with the relevant agencies to enhance the Institute's capability and capacity. IKU will expand its capability by developing new linkages with renowned centres of public health research to provide training on specific fields. As incentives to attract talents to join the Institute, fellowships for further training will be offered. IKU will also be further strengthened when the proposal paper for more senior posts are approved by the central agencies.

It is my sincere hope that IKU will grow to be a significant research organisation for the country in the field of public health research and training. In addition, it will continue to enhance its existing expertise as well as develop new ones in its quest as a centre of excellence on public health. In this light, I would like to take this opportunity to urge those who are interested in public health research and training to join this Institute for exciting years ahead.

Thank you.

DR. SULAIMAN CHE' RUS

Message from the Director of Clinical Research Network

The Clinical Research Network (CNR) has now established its credentials as the leading clinical research centre in the country. We will continue to develop our capabilities and enhance our competencies to attract more clinical trials to the country in general and MOH in particular. Together, we will work with clinicians in the MOH and the Universities as well as the pharmaceutical industry to do trials which will have an impact in the practice of medicine in the country.
Aspiration of the leaders of the NIH

Disease registers have proven to be useful and will be further developed until such time when a separate entity can be established, perhaps in the 9th Malaysia Plan. Health economics research will also be carried out as there is a demand for it and both managers and clinicians need to avail themselves to data on the cost effective management of healthcare. We will also help the Ministry build up awareness and capabilities on clinical research amongst its staff through the various seminars and workshops on various aspects of research.

DATO DR. ZAKI MORAD

Message from the Director of Institute for Health Management:

Assalamualaikum Warahmatullahi Wabarakatuh and best wishes to all. Alhamdulillah, we are ever grateful to Allah Subhanaahu Wana’ala for all the blessings bestowed upon us during the whole of the year 2003.

The Institute for Health Management has proven that it is an institute capable of carrying out the responsibilities and aspirations of the Ministry of Health Malaysia. I hereby urge the members of IHM to persevere in efforts to face the challenges of 2004. We have to strengthen our learning culture, which is the pillar in the building of an excellent organization. Without knowledge, there can be no effectiveness and efficiency. In turn, without effectiveness and efficiency, there can be no excellence. Again, I urge the members of IHM to stand by me in the strengthening of the IHM’s unity. It is imperative that we uphold and elevate the harmonious relationship in existence amongst members of the Ministry of Health in general and the NIH in particular, based on our common Vision and Mission.

With 2004 dawning upon us, let us all determinately work at becoming individuals who are more learned, more knowledgeable, more skilled and more outstanding. Let us step into the new year together with the commitment to work diligently, endlessly, seriously and sincerely, for a glowing, excellent and remarkable IHM in the very near future!

DR. AHMAD NORDIN

Message from the Director of Institute for Health Systems Research:

The year 2004 is going to be an exciting year for us. As a fledging institute, our aspirations include ongoing cultivating of expertise in various areas in Health Systems Research. This is in line with our continuous endeavor to be able to meet and anticipate the research needs of the Ministry of Health.

Plans for the year include research into quality of health care issues such as patient safety, healthy life expectancy in aging, implementation of Client Charter in MOH, quality of life studies; community practices in traditional and/or complementary medicine; and continuous collaboration with international organizations such as the WHO in ongoing research activities for World Health Survey 2002, Health Research Systems Analysis and other pertinent research as arises.

Training will be an untending commitment, with planned workshops in Health Systems Research, Health Outcomes and Measuring and Managing Quality in Health Care. Above and beyond all this, we are steadfast in our endeavors to provide technical assistance to MOH when in need, and strive towards brilliance in all our efforts.

Our resolution is to persevere in efforts to help others learn about, and conduct, Health Systems Research and Quality Improvement. We are also unwavering in our stand to share in the expertise that is within our Institute so that others benefit from it, and we ourselves would grow from the challenging, inspiring and enriching experience of cooperation and collaboration. We look forward to a successful and productive year for BISR in 2004.

DR. MAIMUNAH A HAMID

Bob Dick describes Action Research as a cyclic or spiral process that alternates between action and critical reflection with the later cycles continuously refining methods, data and interpretation in the light of the understanding developed in the earlier cycles. It is a participatory, democratic non coercive process concerned with developing practical solutions in pursuit of worthwhile human purposes. In the pursuit of knowledge, researchers and participants are placed on an equal footing. Participants determine the purposes and outcomes of their own inquiry. In a way it is learning by doing. Action Research is designed to empower participants in the process to take charge and create change.

Action research is not simply a research method. Instead it is a framework within which the participants select and apply the methods which are most appropriate and accessible for their local context. The methods used can be qualitative, and where appropriate and data are readily available, the methods can be quantitative. Again, this depends on the context and circumstances.

Similarly Stephen Corey described the process by which practitioners attempt to study their problems scientifically in order to guide, correct, and evaluate their decisions and actions. Eric Trist applied research to introduce systematic change in and between organizations. He also emphasized collaboration and affirmed the role of group relations as an important basis for problem solving, showing that decisions are best implemented by those who help make them.

Action Research encourages commitment to change through the participation process. The five elements in action research include:

1. Action
Action is defined as a process of doing something to achieve an aim. The purpose of action is to bring about positive change and improvement. In taking action it is necessary to consider acting within constraint and if necessary it can also modify the constraint. This part will also determine stakeholders and participants to be involved in the process.

2. Research
A systematic investigation into, and study of, events or actionsFO to other people, thus participants in an Action Research process are more likely to act on the recommendations, because they themselves have determined that change is possible.

Sharing of information is a fundamental aim of participation in Action Research. There should be a shared 'community of discourse' between the participants (insiders) and the researchers or facilitators (outsiders) of the system under review. Further, for an action research to be more effective, the perspectives of participants (insiders) and the researchers (outsiders) need to understand the system and how it can be changed should both be considered to be valid sources of information. In this respect researchers and participants are on an equal footing. All participants are considered to be researchers.

4. Cyclic Process
Action Research proceeds through cycles, starting with reflection on action, and proceeding round to new action which is further researched. The cycle allows change and understanding to be achieved at the same time. It is a dynamic process in which research, action and evaluation interact. It is a 'spirals of cycles' with the end of one series of tasks leading into the next.

Initially, a problem is identified and data is collected for a more detailed diagnosis. This is followed by a collective postulation of several possible solutions, from which a single plan of action emerges and is implemented. Data on the results of the implementation are collected and analysed, and the findings are interpreted in light of...
how successful the action has been. At this point, the problem is re-assessed and the process begins another cycle. This process continues until the problem is resolved.

The exact nature of the cyclic process depends on the type of project.

- Some projects have simple cycles which terminate quickly.
- Other projects will have a larger number of cycles which spiral to conclusion.
- Others such as community development projects may continue indefinitely in an open ended spiral. In these cases intermittent long term change and the short term benefits may be community development and skills transfer which only later contributes to longer term benefits.
- Finally there may be intermittent cycles with a short term process revised or reiterated at intervals as in a strategic management process where budgets for short term goals are linked with long term objectives which are themselves reviewed at longer time intervals.

In Action Research, project goals and objectives can vary from one cycle to another in response to research and evaluation of the preceding stages. As a result the problem statement, understanding of the system and outcome of an Action Research project may not be those that were defined or anticipated when the project first started.

5. Improvement

The aim of Action Research is to improve the way we practice, ideally to achieve a positive outcome or to make true operations of the system more efficient and effective. The aim could be to create an improvement in health status of the client or a more satisfied client, or to improve management processes.

Improvement can be incremental, that is changes are done progressively and getting better each time. This may be through a gradual process of improved understanding and/or achievement of consensus, or through a staged improvement in service standards. A cyclic process also aims for an ongoing improvement until the problem is solved.

Action Research Process Template

This template is dynamic. The sequence of steps are repeated until new information is more collected, or there is consensus about the level of improvement or time constraint reached. The template is adaptable and flexible according to the projects.

Figure 3: Suggested Steps and Flow Diagram for Action Research Process
(Adapted from Action research training module)

Conclusion

Action research is not a new concept. It has been widely used in the social sciences and in management, but use in the health sectors is comparatively recent. The elements of action research are familiar and commonly used by health practitioners and managers but action research brought a new perspective to these elements. This concept will not be fully understood until it is used as a tool for management or a tool to seek knowledge and understanding.

This article is extracted and modified from the module on action research which has been developed by the Institute of Health Management.

Contributed by: Dr. Noorizah Mokhtar

References