ENVS828

Research Methods for Sustainable Development

S2 Evening 2017

Dept of Environmental Sciences

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General Information

Unit convenor and teaching staff

Unit Convenor
Wendy Goldstein
wendy.goldstein@mq.edu.au
Contact via wendy.goldstein@mq.edu.au
12 Wallys Walk (E7A) Fifth Floor Room 505
Open: By appointment

Lecturer
Richard Horsfield
horsfield@exemail.com.au

Credit points
4

Prerequisites
Admission to MEnvEd or MSc or MEnvMgt or MEnvStud or MSusDev or MEnvPlan or MEnv or MSocEntre or GradDipEnv or GradCertEnv or GradCertSusDev or GradDipSusDev or GradCertSIA or GradDipSIA or MPH

Corequisites

Co-badged status

Unit description
This unit develops students' knowledge of the role of research in sustainable development and in research paradigms and methods. Students will have practical experience of processing and communicating quantitative and qualitative data to guide action. The unit will emphasise action research and associated research methodologies providing students with an opportunity to explore, at a practical level, how action research can be used as a tool to achieve the goals of sustainable development. Students will develop skills in research planning, literature review and writing a research funding proposal. Students will be introduced to the ethical considerations and processes of undertaking research. As such, the unit provides students with a broad understanding of the comparative usefulness of different research methods for sustainable development.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

Explain the role that research can play in the achievement of sustainable development

Show a basic understanding of research paradigms, associated methodology and the purposes of research

Understand the importance of ethics in research

Explain the role of action research as a process of participatory change

Be able to articulate principles, strengths and limitations of a research strategy and in particular for action research

Demonstrate an effective grasp of the international literature relating to action research

Critically review action research literature and practice

Apply principles of good practice in action research for sustainable development in the design and planning of an AR project

Be able to present and defend a research project

Prepare a funding proposal for research

Demonstrate skills to process data from research and make a report for a client

General Assessment Information

The assessments in this unit are oriented to work practice.

The first assignment: is a practice at writing report a mini consultant report. The style of writing is appropriate to informing a client of the results of surveys undertaken in an organisation, and recommending next steps based on the research.

The final assessment is quite challenging as students are expected to respond to the donor's requirements for explanations about the project. This means the proposal has to be written in a concise and clear way that is a different skill to writing an essay. Preparing a good proposal takes time and many redrafts to be succinct (within a word limit) and communicate clearly the intent of the project. Students are advised to spend a week (20 hours minimum) on preparing this well.

The literature review provides the context for the project. It shows that the student is aware of the research that has gone before in this area, and in action research methods. It draws out lessons to be learned.

Assessment Tasks

Name	Weighting	Hurdle	Due
Assignment 1 Data Analysis	15%	No	Monday 4th September

Name	Weighting	Hurdle	Due
Assignment 2 Research Proposal	20%	No	Monday 2nd October
Assignment 3 Defend Research	15%	No	9th October
Assignment 4 Research Proposal	50%	No	13th November

Assignment 1 Data Analysis

Due: **Monday 4th September**
Weighting: **15%**

This assignment provides practice in analysing data from a survey - both quantitative and qualitative. The other skills to be demonstrated id being able to present the results in a mini consultant report in a manner that is helpful to a client, and forming recommendations based on the findings. Details of the data will be provided on ilearn and explained in the class session

On successful completion you will be able to:

- Demonstrate skills to process data from research and make a report for a client

Assignment 2 Research Proposal

Due: **Monday 2nd October**
Weighting: **20%**

This assignment requires students to prepare a a) poster and b) a research plan that summarises a proposal for a research project for sustainable development.

The emphasis is on an **action research** approach. The action research component can be complemented by other research approaches.

a) Research Poster

You need to design a poster which summarises the essence and key components of your research project.

The poster will need to be in colour. All lettering must be readable from 1-2 metres away. Minimum font size is 18 point but 24 is recommended.

If you do not want to go through the expense of printing a poster it can be projected and produced in powerpoint or made as a collage on poster cardboard

b) R**esearch plan**

This document will present a summary of the research proposal and can use diagrams and figures. The research plan should specify:

a. the **focus** of the research and how it is relevant to sustainable development;

b. the **action research** component of the research

c. **aims and objectives** of the research;

d. the **different research stages**, including a discussion justifying the research approaches used

e. the **methodology and data collection/ analysis tools** used;

f. expected **outcomes** of the research;

g. an **issues management** table

On successful completion you will be able to:

- Explain the role that research can play in the achievement of sustainable development
- Show a basic understanding of research paradigms, associated methodology and the purposes of research
- Understand the importance of ethics in research
- Explain the role of action research as a process of participatory change
- Be able to articulate principles, strengths and limitations of a research strategy and in particular for action research
- Demonstrate an effective grasp of the international literature relating to action research
- Apply principles of good practice in action research for sustainable development in the design and planning of an AR project

Assignment 3 Defend Research

Due: **9th October**
Weighting: **15%**

This assignment requires the student to ***present and defend*** their research proposal as summarised in assignment 2.

- Presentation to explain your poster and talk the audience through your plan (5 mins)
- Interactive Session with the audience where you use the audience to workshop some ideas or help you solve a problem or simply invite structured questions about the proposal (5 mins)
- Question and Answer Session (5 mins)

On successful completion you will be able to:

- Show a basic understanding of research paradigms, associated methodology and the purposes of research

- Understand the importance of ethics in research
- Explain the role of action research as a process of participatory change
- Be able to articulate principles, strengths and limitations of a research strategy and in particular for action research
- Apply principles of good practice in action research for sustainable development in the design and planning of an AR project
- Be able to present and defend a research project

Assignment 4 Research Proposal

Due: **13th November**
Weighting: **50%**

In this assignment you are expected to submit a complete proposal for an action research project for sustainable development in the format of a funding organisation and to provide a separate literature review to back up your research proposal.

Part A - Literature review:

A research funding proposal usually has a literature review to show that the researcher is aware of what has been done before, and what then is the basis for the new research. It is also designed to have the researcher think about the theory and methodology, and the methods of the research based on past practice.

The literature review focuses on the field of research chosen for the student's project (that is it is not a general review of action research literature).

Twenty percent (20%) of the total marks will be allocated to this literature review. More details are provided through ilearn.

This is an extensive task and it is therefore important that you start reading and making notes in preparation for this Assignment, immediately after the first class.

***Part B - Research Proposal**:*

The proposal must present a complete and improved version of the summary submitted as part of assignment 2.

The proposal must address the **funding agencies priorities** and needs as well as the unit requirements. These will be specified in ilearn. It is recommended that you study the assessment criteria before submitting this assignment.

There will be an opportunity in the first sessions to discuss the above further.

On successful completion you will be able to:

- Explain the role that research can play in the achievement of sustainable development
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- Understand the importance of ethics in research
- Explain the role of action research as a process of participatory change
- Be able to articulate principles, strengths and limitations of a research strategy and in particular for action research
- Demonstrate an effective grasp of the international literature relating to action research
- Critically review action research literature and practice
- Apply principles of good practice in action research for sustainable development in the design and planning of an AR project
- Prepare a funding proposal for research

Delivery and Resources

The unit is taught in in weekly evening sessions of three hours.

The three hour sessions will consist of short presentations to introduce a theme or idea; discussion groups on short class assignments based on readings, or activities to develop skills, or understanding of the research design process.

There are 2 sessions that require you to bring your computer to work on excel to process data.

The main emphasis of the unit is oriented to assisting you to prepare and submit a **research** proposal, providing practice in designing research and in applying for funds. Students practice the following skills through the assignments, in class discussions and delivery:

- designing a research project.
- communicating their research project by making a poster and by presenting a 'pitch' for their research topic,
- forming questions to seek professional input to the proposal,
- developing a funding proposal within the requirements of a donor's format. The funding agency chosen could be an international aid agency such as AusAid, NORAD, DFID, DANIDA, SIDA or US USAID, a Foundation like the MacArthur Foundation (US) or a state agency (such as NSW Office of the Environment – Environment Trust). The funding agency "chosen" for your application needs to be have a stated interest in your project theme.
- Students are also guided on data processing and presentation using excel and develop skills of writing a research findings report for a consultant.

.The unit requires the student to read widely to understand the research process, the role of research for sustainable development, the role of the researcher in the research process, the ethics of research, the ways research is designed, and how it will be evaluated.

Further instructions on assignments and reading are provided through ilearn.

Some key resources include:

Action Research Journal (Sage)

ALAR: Action Learning and Action Research Journal

Educational Action Research (Journal)

Bradbury P & Reason H. 2007 *The Sage Handbook of Action Research: Participative Inquiry and Practice*

Bryman A. *2012 Social research methods* Oxford University Press - provides a good overview of social research, methodology and good details on methods.

Ferrance, A 2000 *Action Research* Northeast and Islands Regional Educational Laboratory At Brown University (this is a brief introduction to Action Research in Education) https://www.brown.edu/academics/education-alliance/sites/brown.edu.academics.education-alliance/files/publications/act_research.pdf

Greenwood D. & Levin M 1998 *Introduction to action research: Social research for social change* Sage - These authors take a pragmatic view of action research oriented to organisational change and consultancy in management

Kemmis S. McTaggart R Nixon R. 2014 *The Action Research Planner Doing Critical Participatory Action Research* Springer - This reference by Australian and Canadian researchers is oriented to action research in education with a particular focus on critical participatory action research. Practical structures are provided and questions to guide the researcher are included. There are several case studies from the education sector.

Stringer E.T 1996 *Action research: A handbook for practitioners* Thousand Oaks Sage - This Australian author draws on experience in community action research and education

Wadsworth Y 2011 *Do it yourself social research* (3rd ed) Allen and Unwin - This reference provides a practical guide to planning and managing a community based action research project, written in an accessible form.

Wadsworth Y. 2010 *Building in Research and Evaluation Human Inquiry for living systems* Allen and Unwin - This reference builds on the above and provides a deeper theory of how we can inquire. A valuable series of research questions and case studies from the human health services field are included

Unit Schedule

Date	Topic	Background Reading – see refs on ilearn

Session 1 July 31	Introduction to the course Role of research in sustainable development Social research compared to environmental science research Overview of social research methods: Quantitative, Qualitative: e.g. Questionnaire, focus groups, interview, case study, phenomenography, discourse Introduction to 'What is action research' Brief on Assessment tasks	DECC Guide to using research in sustainability programs McLoughlin & Young (paper) The Role of Social Research in Effective Social Change Programs Bryman, A. Ch 1 and 2
Session 2 August 7th	What is action research Practice in a research method - constant comparison	Reason and Bradbury Ch 1 Kemmis McTaggart Nixon 2014 *The Action Research Planner Doing Critical Participatory Action* Research Ch. 1
Session 3 August 14th	Why action research for sustainable development? What is and what is not action research? Introduction to Research paradigms	Case studies to be advised Will Allen - role of action research in environmental management http://learningforsustainability.net/research/thesis/thesis_ch3.html
Session 4 August 21st	**Social research methods and skills** Writing Survey Questionnaires Analysis of a survey questionnaire Managing data and reporting data from a case study Presenting and communicating findings	Richard Horsfield will lead this session Bring your lap top
Session 5 August 28th	**Social research skills and reporting** Managing data and reporting Working with quantitative and qualitative data sets Interpreting data Communicating findings	Richard Horsfield will lead this session Bring your lap top
Session 6 September 4th	**Back to Action Research** Examples of Action Research for sustainable development Case studies of AR Models of action research	Case studies to be advised NOTE: Submit Assignment 1
Session 7 September 11th	Defining the elements of an action research project Design Elements of action research Discussion of project concepts	
BREAK FROM CLASSES September 16th - October 2nd		

October 2nd	**NO Session – public Holiday**	NOTE: Submit assignment 2
Session 8 October 9th	**Presentations of posters and defence of research proposals** (Assignment 3) Responding to Funding requirements	NOTE: Assignment 3
Session 9 October 16th	Designing action research Facilitating processes / role of researcher Role of literature review Ethics and Issues management	
Session 10 October 23rd	Research Design and Strategy Data collection and analysis	
October 30th	Designing measures for AR project outcomes Evaluating action research Limitations of AR	
November 6th	Review of action research Responding to funding proposal requirements	

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central. Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy http://mq.edu.au/policy/docs/assessment/policy_2016.html

Grade Appeal Policy http://mq.edu.au/policy/docs/gradeappeal/policy.html

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.html

Disruption to Studies Policy (in effect until Dec 4th, 2017): http://www.mq.edu.au/policy/docs/disruption_studies/policy.html

Special Consideration Policy (in effect from Dec 4th, 2017): https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/special-consideration

In addition, a number of other policies can be found in the Learning and Teaching Category of Policy Central.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/support/student_conduct/

Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and

decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcomes

- Understand the importance of ethics in research
- Explain the role of action research as a process of participatory change
- Be able to articulate principles, strengths and limitations of a research strategy and in particular for action research
- Apply principles of good practice in action research for sustainable development in the design and planning of an AR project
- Be able to present and defend a research project
- Prepare a funding proposal for research
- Demonstrate skills to process data from research and make a report for a client

Assessment tasks

- Assignment 1 Data Analysis
- Assignment 2 Research Proposal
- Assignment 4 Research Proposal

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- Explain the role that research can play in the achievement of sustainable development
- Show a basic understanding of research paradigms, associated methodology and the purposes of research
- Understand the importance of ethics in research
- Explain the role of action research as a process of participatory change
- Be able to articulate principles, strengths and limitations of a research strategy and in particular for action research
- Demonstrate an effective grasp of the international literature relating to action research
- Critically review action research literature and practice
- Apply principles of good practice in action research for sustainable development in the design and planning of an AR project
- Prepare a funding proposal for research

- Demonstrate skills to process data from research and make a report for a client

Assessment tasks

- Assignment 2 Research Proposal
- Assignment 4 Research Proposal

PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Learning outcomes

- Show a basic understanding of research paradigms, associated methodology and the purposes of research
- Demonstrate an effective grasp of the international literature relating to action research
- Critically review action research literature and practice
- Apply principles of good practice in action research for sustainable development in the design and planning of an AR project
- Demonstrate skills to process data from research and make a report for a client

Assessment tasks

- Assignment 1 Data Analysis
- Assignment 2 Research Proposal
- Assignment 4 Research Proposal

PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- Explain the role that research can play in the achievement of sustainable development
- Show a basic understanding of research paradigms, associated methodology and the purposes of research

- Explain the role of action research as a process of participatory change
- Be able to articulate principles, strengths and limitations of a research strategy and in particular for action research
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- Prepare a funding proposal for research
- Demonstrate skills to process data from research and make a report for a client

Assessment tasks

- Assignment 2 Research Proposal
- Assignment 4 Research Proposal

PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

Learning outcomes

- Critically review action research literature and practice
- Apply principles of good practice in action research for sustainable development in the design and planning of an AR project
- Be able to present and defend a research project
- Prepare a funding proposal for research
- Demonstrate skills to process data from research and make a report for a client

Assessment tasks

- Assignment 1 Data Analysis
- Assignment 2 Research Proposal
- Assignment 3 Defend Research
- Assignment 4 Research Proposal

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able

to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcomes

- Understand the importance of ethics in research
- Explain the role of action research as a process of participatory change
- Be able to articulate principles, strengths and limitations of a research strategy and in particular for action research
- Apply principles of good practice in action research for sustainable development in the design and planning of an AR project
- Demonstrate skills to process data from research and make a report for a client

Assessment tasks

- Assignment 3 Defend Research
- Assignment 4 Research Proposal

Changes from Previous Offering

The unit will have less on general social research methods that last semester, because we lose a day of class with a public holiday. The skills section on processing data has been moved to earlier in the session and the order of the 4th assignment made the first.