GSE 828

Research Methods for Sustainable Development

S2 Evening 2015

Dept of Environmental Sciences

Contents

General Information

Unit convenor and teaching staff
Unit Convenor
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Open: By appointment

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Credit points
4

Prerequisites
Admission to MEnvEd or PGDipEnvEd or PGCertEnvEd or MEnvMgt or MEnvStud or
PGDipEnvStud or MSusDev or PGDipSusDev or PGCertSusDev or MEnvPlan or MEnvSc or
MEnv or PGDipEnv or PGCertEnv or MSc in Remote Sensing and GIS or PGDipSc in Remote
Sensing and GIS or PGCertSc in Remote Sensing and GIS or MA in Human Geography or
PGDipArts in Human Geography or PGCertArts in Human Geography or MSocEntre or
PGCertSocEntre or GradDipEnv or GradCertEnv or GradCertSusDev or GradDipSusDev or
GradCertSIA or GradDipSIA

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

Assessment Tasks

Name	Weighting	Due
Assignment 1	20%	21st September
Assignment 2	15%	September 30
Assignment 3	50%	November 4th
Assignment 4	15%	November 18th

Assignment 1

Due: **21st September**
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:
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- 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

Assignment 2

Due: **September 30**
Weighting: **15%**

This assignment requires the student to ***present and defend*** their research proposal as summarised in assignment 1.

- 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
- 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

Assignment 3

Due: **November 4th**
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 1.

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:
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Assignment 4
Due: **November 18th**
Weighting: **15%**

This assignment provides practice in analysing data from a survey - both quantitative and

qualitative - and presenting 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

Delivery and Resources

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

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.

The last 2 sessions 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 donors 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

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.

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
Session 1. 29th July	Lectures in Room E8A 386 Introduction to course Role of research in sustainable development Sustainability Science - interactions between global, social, and human systems Social research role in SD Introduction to Research paradigms Brief on Assessment tasks	McLoughlin & Young The Role of Social Research in Effective Social Change Programs DECC Guide to using research in sustainability programs Bryman, A. Ch1 and 2
Session 2 August 5th	Introduction to '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 12	Why action research for sustainable development? What is and what is not action research?	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 19	Examples of Action Research for sustainable development Case studies of AR Design Elements of action research	
Session 5 August 26th	Defining the elements of an action research project Models of action research Discussion of project concepts	
Session 6 September 2nd	Designing action research Facilitating processes / role of researcher Role of literature review Ethics and Issues management	
September 9th	Research Design and Strategy Data collection and analysis	
14-27 Sept	BREAK	
September 30th	Presentations of posters and defence of research proposals (Assignment 2) Responding to Funding requirements and proposal development	
October 7th	Designing measures for AR project outcomes Evaluating action research Limitations of AR	
October 14th	Other Research Methodology Case Study Phenomenography	
October 21	Social science methods Quantitative design and methods Qualitative design and methods	

28th October	Social research skills	Richard Horsfield
	Managing data and reporting from a case study	Bring your lap top
	Analysis of a survey questionnaire	
	Writing Survey Questionnaires	
	Presenting and communicating findings	
November 4th	Social research skills	Richard Horsfield
	Managing data and reporting	Bring your lap top
	Working with quantitative and qualitative data sets	
	Interpreting data	
	Communicating findings	

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.html

Grading Policy http://mq.edu.au/policy/docs/grading/policy.html

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

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

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://informatics.mq.edu.au/help/.

When using the University's IT, you must adhere to the Acceptable Use 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 3
- Assignment 4

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
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- Understand the importance of ethics in research
- Explain the role of action research as a process of participatory change
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- Critically review action research literature and practice
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Assessment tasks

- Assignment 1
- Assignment 3

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 3
- Assignment 4

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
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Assessment tasks

- Assignment 1
- Assignment 3
- Assignment 4

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
- Assignment 2
- Assignment 3
- Assignment 4

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

Assessment task

- Assignment 2

Changes from Previous Offering

This unit is being taught in three hour evening sessions over semester 2, 2014 rather than in block mode as it was in 2013