

Church Involvement in Education for Sustainability:
Using Participatory Action Research to Design a Faith-based
Education for Sustainability Programme
in a Christian Community, New Zealand

by

Xiaoming Gong

Thesis

ENVIRONMENTAL STUDIES 593

2007

A 90-point thesis submitted to the Institute of Geography

Victoria University of Wellington

As partial fulfillment for the degree of Master of Environmental Studies

Institute of Geography

School of Geography, Environment and Earth Sciences

Victoria University of Wellington

August 2007

ABSTRACT

This study develops and analyses a faith-based education for sustainability (EFS) programme as a means of addressing the issue of climate change in an urban Christian community – St John’s in the City, Presbyterian Church, Wellington, New Zealand. It also, explores a participatory design and practice process for an adult-focused community EFS programme within a Christian context. The outcome of the study may serve as a model of adult-focused community of EFS which can be used by other faith-based communities in New Zealand.

The critical approach, which is considered as an important approach to EFS, aims to achieve social change by fostering critical thinking in relation to sustainable issues. However, the so-called rhetoric-reality gap of critical approach causes difficulty for practicing the approach. As such, it was hoped that this study, informed by Freirian critical pedagogy, bridges the ‘rhetoric-reality’ gap of the critical approach in EFS practice.

The methodology of this research – participatory action research (PAR) – aims to empower participants by involving them as co-researchers in the research process. Combined with group discussion and in-depth individual interview, participatory method – diagramming was used as the main research method. The PAR methodology was proved effective for the faith-based EFS programme design and it was also represented a democratic EFS process in itself. Therefore, it informed the subsequent practice of the St John’s programme that was designed by this research as an action research (AR) project and also functioned as a dialogical education programme. In the St John’s programme, the participants as discursive subjects would gain freedom to critically enquire their relationships with God’s world and with each other and would be facilitated to take realistic actions on sustainable issues associated with climate change through the critical enquiry.

ACKNOWLEDGEMENTS

My grateful thanks firstly go to my supervisors, Sean Weaver and Sara Kindon. I thank Sean for his constant encouragement and constructive suggestion. Without these, I could not have combined different disciplines in this study. I thank Sara for her strict, patient and pertinent supervision. Working with her was great fun! Like playing netball, I passed the ball to her, she passed it back, and we never dropped the ball on the floor.

Three years ago I left China for New Zealand to pursue something without being sure what it was. Through this study, I know that what I have been painstakingly seeking is freedom and love. I sincerely thank my focus group participants who demonstrated to me what love was by contributing their wisdom, time and enthusiasm to this study.

I also dearly thank my Christian theological advisors, Graham Redding and Chris Marshall. Graham vividly illustrated to me the theological meaning of a real life and Chris led me to more academically understand Jesus – a genuine pursuer of love and freedom. These enabled me to conduct an academic study in a real setting.

Last but by no means least, I greatly thank my parents and my husband Xie Jing. I particularly thank them for their support from my hometown far away, which accompanied me to go through the difficult periods.

TABLE OF CONTENTS

ABSTRACT	2
ACKNOWLEDGEMENTS	3
TABLE OF CONTENTS	4
LIST OF ABBREVIATIONS	6
LIST OF FIGURES	7
LIST OF TABLES	8
CHAPTER ONE: INTRODUCTION	9
1.1 Introduction of St John's Church	9
1.2 Justification of the Study	10
1.3 Scope of the Study	13
1.4 Structure of the Thesis	14
CHAPTER TWO: AIM, OBJECTIVES AND THEORETICAL FRAMEWORK	15
2.1 Aim and Overall Questions	15
2.2 Research Objectives, Specific Questions and Rationales	16
2.3 Theoretical Framework	21
2.4 Summary	25
CHAPTER THREE: LITERATURE REVIEW	26
3.1 International History of Education for Sustainability	26
3.2 Understanding Sustainability	28
3.3 The Critical Approach to Education for Sustainability	31
3.4 The Ecumenical Community's Participation in Education for Sustainability	34
3.5 Overview of Adult-focused Community Education for Sustainability in New Zealand	35
3.6 Summary	38
CHAPTER FOUR: METHODOLOGY	40
4.1 Participatory Action Research (PAR)	40
4.2 Research Design and Process	42
4.3 Summary	59
CHAPTER FIVE: ST JOHN'S FAITH-BASED EDUCATION FOR SUSTAINABILITY PROGRAMME	60
5.1 Programme Objectives	61
5.2 SWOT Analysis of St John's Church	63
5.3 Programme Activities and Implementation Processes	65
5.4 Programme Design Rationale	73
5.5 Concluding Reflections	75
5.6 Summary	85
CHAPTER SIX: ANALYSIS AND DISCUSSIONS	86
6.1 Empowering Participants as Discourse Subjects	86
6.2 The Dialogue of Education	92
6.3 Transforming the World	97
CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS	102

7.1 Answers to Overall Research Questions	102
7.2 Future Research.....	106
7.3 Epilogue	108
REFERENCES.....	109
APPENDIX 1: WORKSHOP ONE PROCESS	121
APPENDIX 2: WORKSHOP TWO PROCESS	125
APPENDIX 3: WORKSHOP THREE PROCESS.....	129
APPENDIX 4: WORKSHOP FOUR PROCESS.....	137
APPENDIX 5: INTERVIEW QUESTIONS AND DATA SUMMARY	140
APPENDIX 6: DIAGRAM “CREATION NARRATIVE”	144
APPENDIX 7: HUMAN ETHICS APPROVAL FORMS	145

LIST OF ABBREVIATIONS

AR	Action Research
CANZ	Caritas Aotearoa New Zealand
CASI	Churches' Agency on Social Issues
CWS	Christian World Service
SJCAC	Social Justice Commission of the Anglican Church
EE	Environmental Education
EFS	Education for Sustainability
EPA	Environment Protection Agency
IPCC	Intergovernmental Panel on Climate Change
JPSS	Just, Participatory and Sustainable Society
JPIC	Justice, Peace and Integrity of Creation
MfE	Ministry for the Environment
NZCCO	New Zealand Climate Change Office
PAR	Participatory Action Research
PCE	Parliamentary Commissioner for the Environment
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational Scientific and Cultural Organization
WCC	World Council of Churches
WCED	World Commission on Environment and Development

LIST OF FIGURES

Figure 1: Overall Research Questions and Research Objectives	16
Figure 2: A Cyclical and Participatory Model.....	43
Figure 3: Workshop Data Analysis Procedure.....	53
Figure 4: Interview Data Analysis Procedure	57
Figure 5: SWOT Analysis of St John’s Church.....	64
Figure 6: The Experiential Learning Cycle in Complex Dynamics of Action Research Project	74
Figure 7: Creation Narrative - Created by the First Sub-group in Workshop 1	79
Figure 8: Creation Narrative - Created by the Second Sub-group in Workshop 1	80
Figure 9: SWOT Stepping-stones - Created in Workshop 2.....	80
Figure 10: Education and Evaluation Co-ordinates - Created in Workshop 3	81
Figure 11: Workshop Impact Assessment - Created in Workshop 4	83
Figure 12: Diagram Format - Creation Narrative.....	122
Figure 13: Diagram Format – SWOT Stepping-stones	128
Figure 14: Diagram Format – Education and Evaluation Co-ordinates	132
Figure 15: “Creation Narrative”	144

LIST OF TABLES

Table 1: Workshop and Interview Overview	47
Table 2: Workshop Interval (Between Workshops 3 and 4) Activities	48
Table 3: Information Analysis Schedule	49
Table 4: Research Objectives and Outcomes	60
Table 5: St John's Programme Overview	66
Table 6: St John's Programme Theological Learning Activity.....	67
Table 7: St John's Programme General Faith-based Activity.....	68
Table 8: St John's Programme Transport Activity.....	69
Table 9: St John's Programme Waste Activity	70
Table 10: St John's Programme Energy Activity	71
Table 11: Types of Evaluation.....	75
Table 12: Habermas's Theory of Knowledge-constitutive Interests Linking with Three Forms of Environmental Education.....	77
Table 13: Reflection on the Draft St John's Programme	77
Table 14: Reflection on the Programme Design Process (Workshops 1-3)	82
Table 15: Suggested Workshop Outline	105
Table 16: Workshop 1 Overview.....	121
Table 17: Workshop 2 Overview.....	125
Table 18: Workshop 3 Overview.....	129
Table 19: Actions and Activities Identified in Workshop 2.....	133
Table 20: Educational Activities for St John's Faith-based Programme (Workshop 3 data summary)	134
Table 21: Workshop 4 Overview.....	137
Table 22: Interview Data Summary (1).....	141
Table 23: Interview Data Summary (2).....	143

CHAPTER ONE: INTRODUCTION

1.1 Introduction of St John's Church

St John's in the City Presbyterian Church was founded in 1853 and is located in the central city of Wellington, New Zealand. There are around 400 people in the congregation and the majority of them are between the ages of 26 and 65. It is a multi-cultural congregation, but Pākehā are an overwhelming majority. The congregation has various groups including children's groups, youth groups, young adults groups, house groups and other adults' groups. St John's is served by a Senior Minister, an Assistant Minister, a team of Elders, and a Pastoral Care worker. Currently, both the positions of Senior Minister and Assistant Minister are vacant.

St John's congregation has conducted a number of programmes to address the issue of climate change as part of their mission. In May 2006, two Sunday services focused on the theme of "climate change and the new creation". After the services, numerous people expressed their appreciation to the Minister about the way in which the services had such an integrated theme. However, four months later, when a climate change study group was initiated, only three people expressed their interest in the group. The Minister didn't know how to interpret this. The St John's faith-based education for sustainability (EFS) programme was designed within this context where there seemed to be a need for an appropriate programme to address the issue of climate change.

1.2 Justification of the Study

1.2.1 Role of Education for Sustainability in Addressing Climate Change

The issue of climate change urgently faces the whole world (BBC, 2006). The Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) predicts global temperature increases between 1.4C and 5.8C by the end of this century (BBC, 2006). Such a temperature rise will cause global sea level rise and increase the frequency and intensity of extreme weather events. Also, Overpeck et al. (2006) and Otto-Bliesner et al. (2006) state that sea levels could rise faster than previously estimated. Strong evidence shows that human-induced greenhouse gas emissions and other pollutants are the main causes of current global warming (EPA, 2006; IPCC, 1990, cited in MfE, 2006).

Parties to the United Nations Framework Convention on Climate Change established the Kyoto Protocol in 1997. The purpose of this Protocol is to reduce greenhouse gas emissions of developed countries (including countries in economic transition) as a means of mitigating climate change, and specifically to avoid dangerous anthropogenic interference in the climate system. New Zealand signed and ratified the Kyoto Protocol and thereby agreed to an emissions reduction target during the First Commitment Period (2008-2012). This target is to reduce greenhouse gas emissions to 1990 levels, or take responsibility for any overshoot of this target by purchasing carbon credits in Kyoto carbon markets (NZCCO, 2006). The New Zealand government aims to encourage more efficient energy and transport use, and less waste in every area (including domestic) because carbon dioxide and methane are the fastest increasing greenhouse gas emissions (MfE, 2006; NZCCO, 2006). Inefficient use of energy and transport in people's daily life, and community waste are some of the main contributors (ibid.).

Among various approaches to reach the above goal, EFS has been identified as key (also see Section 3.1). It emphasises the interdependence of environmental, social, cultural, and economic concerns through a holistic paradigm (Fien, 1993; Huckle, 1996). The issue of climate change has to be considered as intimately connected with other sustainable issues (Vischer, 1997). Therefore, EFS is an ideal general framework for building capacity for a more climate-change friendly society.

1.2.2 Possibility of Faith-based Education for Sustainability

People's worldviews are shaped by many factors including religion (Hayes & Marangudakis, 2001; Hunter & Toney, 2005). This study therefore, focused on combining Christian religious education with EFS.

This challenge presents an interesting opportunity for faith-based EFS. Environmental behaviour change is regarded as an important goal of EFS (MfE, 1999a). At the same time, a value commitment has been seen as essential for people to start environmentally responsible action (Stern & Aronson, 1984, cited in Taylor, 2005). Sterling (2001) insists that EFS has to encompass transformative education. Christianity is the major religion in New Zealand but it has been criticised as “the most anthropocentric religion” in the world (PCE, 2004; White, 1967). White (1967) states that Genesis 1:26, in which God gives humankind a mandate to exercise dominion over the Earth, leads to an anti-environmental ethic. However, many theologians have questioned this interpretation of Genesis and indicated some other Bible passages which require humans to take good care of the Earth (Bookless, 2005; Hessel & Rasmussen, 2001; King, 2001; Petersen, 2003). Also, some empirical studies responding to White's (1967) statement show no obvious negative and even positive relation between environmental concern and Christian faith (Biel & Nilsson, 2005; Hayes & Marangudakis, 2001; Hunter & Toney, 2005; Schultz et al., 2001; Wolkomir et al., 1997; Woodrum & Hoban, 1994). Elsewhere, Christian belief is

found to be positively linked with pro-environmental behaviour (Kanagy & Willits, 1993; Wolkomir et al., 1997). For that reason, it is critical to re-interpret particular Bible passages and reinforce Christian faith to shape Christians' worldviews, so that Christian faith can benefit EFS by promoting environmentally responsible action.

1.2.3 Importance of Adult-focused Community Education for Sustainability

Hopkins and McKeown (2002) identified the importance of non-formal education by acknowledging that formal education alone cannot achieve the aim of EFS. The need and importance of adult EE are firstly highlighted in two international documents – the *Belgrade Charter* (1975) and *Our Common Future* (1987) (Clover, 1996). Also, *Agenda 21* (1992) strongly emphasises non-formal adult environmental education (EE) and recognises that sustainability practice can be upheld only when it is based on local people's aspirations and needs (Clover, 1996; Fagan, 1996).

Furthermore, community education is less influenced by conventional society than formal education, so that it is more powerful to challenge conventional society, which is underpinned by reductionist paradigm and shaped by unsustainable actions (Fien & Trainer, 1993; Sterling, 1993; 1996). Therefore, Huckle (1996) recognises community EE as an approach to social change is able to guide people to critically inquire about diverse environmental related issues.

However, EE has tended to give too much emphasis to children and youth at the expense of adults who are presently the most vital decision makers (Clover, 1995). This oversight could generate difficulties for immediate changes in sustainable development and sustainable lifestyles (PCE, 2002; Taylor, 2005). As such, adult-focused community EE offers considerable potential for change (Burch, 1994 & Deri & Cooper, 1993, cited in Clover, 1995). EFS, considered as a focus of EE (Tilbury, 1995) and as transformative education (Sterling, 2001), could be more effective for

adults because adults are more capable of critical reflection than young people (Brookfield, 1987; Schon, 1983) and community education is an effective form of transformative education (Brookfield, 1983; 1991; Cranton, 1994). Critical thinking enables people to take individual and collective action which can trigger social change to resolve environmental problems (Brookfield, 1987; Orr, 1992 & Tilbury, 1994, cited in Clover, 1996). Therefore, adult-focused community EFS is important for achieving the goal of social change.

1.3 Scope of the Study

This study has been completed as a 90-point Masters thesis. Therefore, its scope is similar to the scoping stage of a Ph.D. study. The purpose of this study is to help inform the practice of critical faith-based adult-focused community EFS and set the stage for further research and practice.

It has been recognised since the 1990s that a big challenge for EFS is how to shift the mainstream educational paradigm from being mechanical to ecological, and how to shift the wider social paradigm from being reductionist to holistic (Palmer, 1998; Sterling, 1996; 2001). This challenge is made no easier by the ambiguous definition of “sustainability” (Fien & Trianer, 1993; Huckle, 1996; Tilbury, 1995). Also, an ecological or holistic paradigm calls for different approaches to conventional educational approaches – approaches that are holistic, inclusive, systemic, critical, collaborative, inclusive, ethical and participative (Orr, 1992; Robottom and Hart, 1993, cited in MfE, 1999a; Palmer, 1998; Tilbury, 1995).

This study engaged the community at St John’s Church to co-design a faith-based EFS programme as one possible approach for the Christian community to develop more sustainably within a climate change context. The design process itself as a process of critical enquiry empowered participants to create a critical enquiry project

– the St John’s faith-based EFS programme. Christian theological themes on “sustainability” were explored in the design process and the outcome of the study may serve as a model of adult-focused community EFS for use by other faith-based communities in New Zealand.

1.4 Structure of the Thesis

The research aim and objectives and theoretical framework are presented in Chapter Two. The theoretical framework includes a description of EFS together with the epistemological and educational theories that informed this study. Chapter Three reviews literature on the international and New Zealand backgrounds to the study, various understandings of “sustainability” and EFS, as well as the debate concerning the critical approach to EFS. This provides an opportunity to outline the academic context for this study.

The methodology used for the design and process of the study is presented in Chapter Four and the outcomes of the process are detailed in Chapter Five. The discussion in Chapter Six focuses on the issue of discourse democracy in both the St John’s programme design process as a dialogical education process and the programme itself as a dialogical education programme. Finally, Chapter Seven draws conclusions about what an appropriate faith-based EFS programme for St John’s Church might be and how to effectively develop faith-based approaches to EFS more generally. The last chapter also offers recommendations for similar practice in other faith-based communities and ideas for future research.

CHAPTER TWO: AIM, OBJECTIVES AND THEORETICAL FRAMEWORK

This chapter defines the research aim and objectives. Each objective is followed by some specific questions that were designed to fulfil the objective and the rationale for asking those questions. The theoretical framework for the study is then developed by using Huckle's (1993) discourse on EE, critical theory referring to the work of Freire, and Mezirow's adult education and experiential learning theory.

2.1 Aim and Overall Questions

The purpose of this research was to understand how to develop an effective faith-based EFS programme (specifically addressing the issue of climate change) within the context of Christian environmental practice. Of course, the process of faith-based EFS programme development was also a sustainability education process in itself including participant researchers from St John's Church, Wellington, New Zealand. Therefore, the aim of the research was to answer the following overall questions:

- A) What would the practicing community of St John's Church consider to be an appropriate faith-based EFS programme (specifically addressing the issue of climate change)?
- B) What can a practical case study of St John's Church tell us about how to develop faith-based approaches to education for sustainability?
- C) What lessons could be shared to support similar practice in other faith-based communities in New Zealand?

2.2 Research Objectives, Specific Questions and Rationales

The overall questions can be further divided into the following objectives and their allied questions. Figure 1 illustrates how each objective relates to the aim.

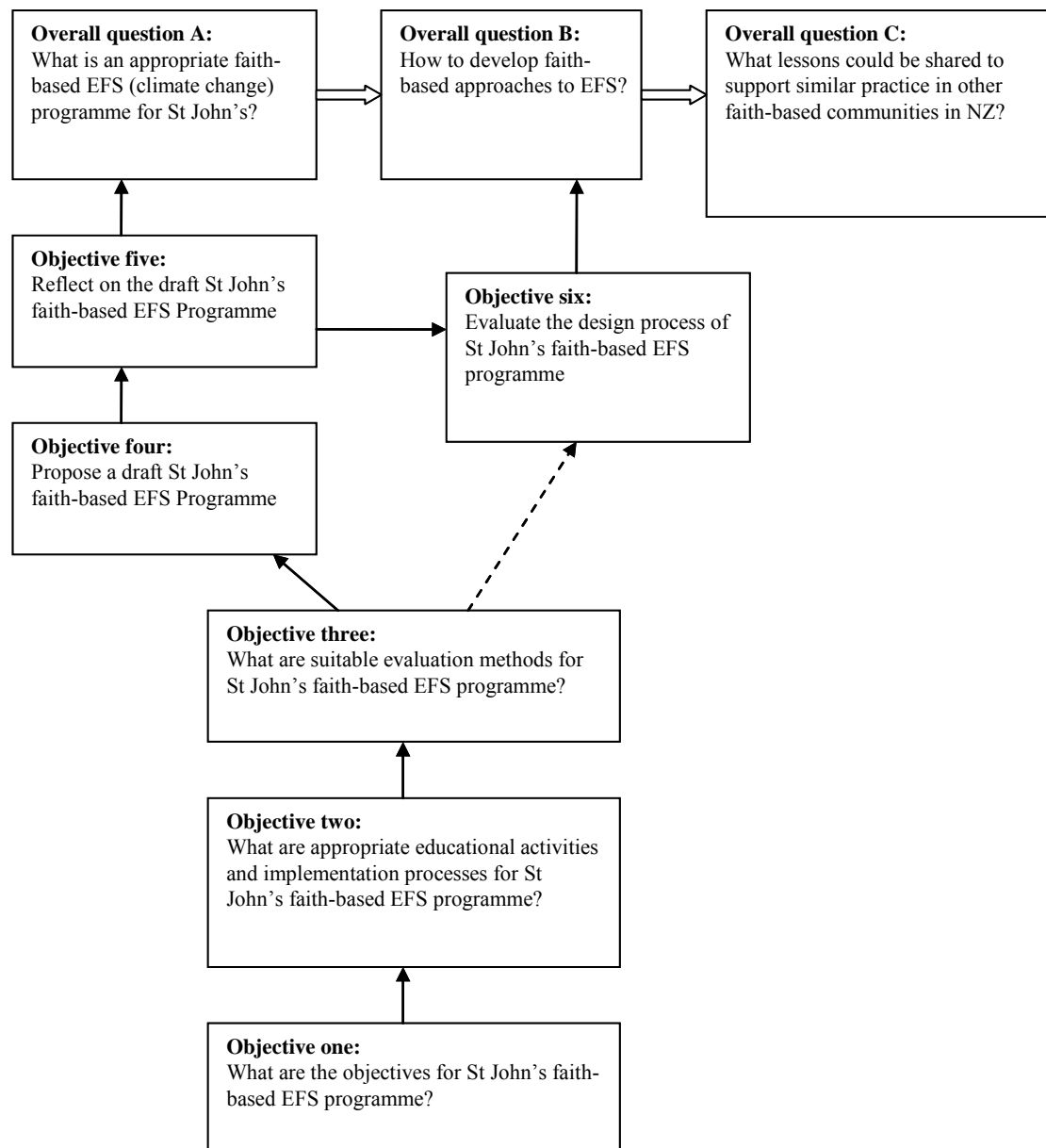


Figure 1: Overall Research Questions and Research Objectives

Objective one: What are the objectives of St John’s faith-based EFS programme?

Allied Questions:

- 1) What are Christian theological themes on “sustainability” and what biblical/theological knowledge would help to understand those themes?
- 2) What are some possible actions that St John’s members can take in their daily lives to address the climate change issue in light of the theological themes on “sustainability”?
- 3) What benefits will St John’s members think they can get from a faith-based EFS programme?
- 4) How will a faith-based EFS programme benefit St John’s Church as an organisation?

Rationale: The first step of designing an education programme is to determine its objectives. The research questions above were used to identify four types of programme objectives which were “theological learning objectives” (question 1), “action objectives” (questions 2), “participant reaction objectives” (question 3) and “organisational outcome objectives” (question 4).

EFS calls for changes in social and behavioural patterns (Sterling, 1993). Therefore, “action objectives” need to be identified. However, the ambiguous concept of “sustainability” presents a difficulty for EFS (Fien & Trianer, 1993; Huckle, 1996). Christian theological themes on “sustainability” and relevant biblical/theological knowledge (“theological learning objectives”) can help Christians to understand “sustainability” from a theological perspective, which could motivate them to take action on climate change. In the process of theological learning and action taking, participants should be able to scrutinise and reorganise the nature of their paradigms or worldviews. Sterling (1993, 2001) calls this transformative learning which could inform and motivate changes in lifestyle.

“Participant¹ reaction objectives” and “organisational outcome objectives” are two important types of objectives for programme design according to Blanchard and Thacker (2004). Drawing on Blanchard and Thacker’s (2004) work, “participant reaction objectives” were understood as the objectives set for how participants should feel about the programme; “organisational outcome objectives” were seen as the programme outcomes that can benefit the organisation.

Objective two: What are appropriate educational activities and implementation processes for St John’s faith-based EFS programme?

Allied Questions:

- 1) What strengths and weaknesses does St John’s Church have and what opportunities and threats does it face which may inform the achievement of the objectives of the faith-based EFS programme?
- 2) What educational activities and implementation processes are considered to represent best practice within existing secular and faith-based community EFS programmes?
- 3) What educational activities and implementation processes can effectively use the strengths and exploit the opportunities of St John’s Church, and at the same time manage its weaknesses and defend against its threats?

Rationale: The most appropriate educational activities and implementation processes should effectively use strengths and exploit opportunities of St John’s Church, and at the same time manage weaknesses and defend against threats (questions 1 & 3). The educational activities and implementation processes of existing secular and faith-based community EFS programmes considered to be best practice were sought to provide helpful models for adaptation within St John’s faith-based EFS programme (question 2).

¹ Blanchard and Thacker (2004) used “trainee”. But “participant” was considered to be more appropriate for this study because it was accordant with the participatory approach taken.

Objective three: What are suitable evaluation methods for St John’s faith-based EFS programme?

Allied Questions:

- 1) What areas of St John’s faith-based EFS programme should be evaluated?
- 2) What are the aims of evaluation for those areas?

Rationale: Evaluation has been identified as an important part of EFS programmes, and evaluation methods are determined by evaluation aims (MfE, 1999a; 1999b) (question 2). However, Blanchard and Thacker (2004) suggest that evaluation is not necessary at all levels all the time as it can be complex and costly despite being useful and important. Therefore, evaluation areas needed to be decided before the evaluation aims were identified (question 1).

Objective four: Propose a draft St John’s faith-based EFS programme in light of information from objectives one to three.

Allied Question:

What education theory can be used to inform the design of St John’s faith-based EFS programme?

Rationale: Objectives one to three generated important basic information for the programme design, but to propose a draft programme also needed the support of some suitable education theories. Each person as well as each organisation is unique and it is impossible to meet every person’s or every organisation’s educational needs by one programme (Blanchard & Thacker, 2004). However, theories can provide the guidelines, principles, and predictions for each unique organisation with different cultures, strategies, and persons (ibid.). The “programme design rationale” section of Chapter Five illustrates how education theories were used to guide the programme design.

Objective five: Reflect on the draft St John's faith-based EFS programme.

Allied Questions:

- 1) Will the draft programme provide knowledge and skills for St John's community to take action on climate change?
- 2) Will the draft programme increase the awareness of the climate change issue by providing spaces for St John's community to examine their beliefs, attitudes and values towards the environment?
- 3) Will the draft programme empower St John's community to reflect and act on the paradigms and mechanisms which shape their social use of nature?
- 4) Are the educational activities, implementation processes, and evaluation methods of the draft programme 'doable' at St John's Church?

Rationale: Reflection is a method to improve programme effectiveness since it is recognised as one of the main characteristics of evaluation (Cotton, 2004; MfE, 1999a; MfE, 1999b). The first three questions were developed to assess if the draft programme had the main elements of EFS. They addressed three forms of EE identified by Huckle (1993) (see Section 2.3.1). The last question assessed the practical feasibility of the draft programme. They were also a way to test if the draft programme effectively used the strengths and exploited the opportunities of St John's Church and at the same time, managed its weaknesses and defended against its threats (question 3 of Objective two).

Objective six: Evaluate the design process of St John's faith-based EFS programme.

Allied Questions:

- 1) What are appropriate methods to evaluate the effectiveness of the programme design process?

2) What are appropriate methods to assess² the impact of the programme design process?

Rationale: The programme design process played two roles. On the one hand, it was a means in which the St John's faith-based EFS programme could be designed. On the other hand, it *itself* was an EFS programme for sustainability learning. Therefore, the evaluation areas and aims had already been defined. They were the effectiveness of the programme design process (question 1) and the effectiveness of sustainability learning (the impact of the programme design process) (question 2). Accordingly, from the sustainability learning perspective, the objectives of the St John's EFS programme were also the objectives of the programme design process. Thus, the evaluation methods for the second area can refer to those of the St John's faith-based EFS programme (see Figure 1) and should be developed along with the critical reference group³ (MfE, 1999a; MfE, 1999b).

2.3 Theoretical Framework

2.3.1 Three Forms of Environmental Education

Huckle (1993) identified three forms of EE which he saw as coherent with Lucas's (1972) description of EE as "education *in*, *about* and *for* the environment". The three forms are

- *Education for environmental management and control*. This mainly uses empirical or scientific knowledge to solve technical problems and is close to the notion of education *about* the environment;
- *Education for awareness and interpretation*. This aims to increase people's

² Assessment focuses on learning of participants (individual or teams); evaluation focuses on effectiveness of a programme or course (Hall & Jones, 2004).

³ The group which is identified as the main focus of an environmental education programme or activity is often called the 'critical reference group' (Wadsworth, 1991, cited in MfE, 1999a:12).

environmental awareness by examining their beliefs, attitudes and values towards the environment. This form is close to the notion of education *in* the environment.

- *Education for sustainability (EFS)*. This aims to achieve sustainable development through social change in which people are empowered to reflect and act on paradigms and mechanisms which shape the social use of nature. This form is close to the notion of education *for* the environment.

The above first two forms can be seen at the “shallow green” stage of EE and the third form is at the “deep-green” stage according to a model identified by Sterling (1993) based on O’Riordan’s (1983) model of environmentalism. O’Riordan (1983) recognised that philosophical positions, which informed European environmentalism, were between “technocentrism” and “ecocentrism”. Accordingly, Sterling’s (1993) model identifies three stages of EE with “dry or non-green” at one end, “deep-green” at the other end, and “shallow green” between the two ends.

Therefore, the first two forms of EE in Huckle’s (1993) discourse are not sufficient “if environmental education is to contribute to a truly environmentally sustainable society”, although “they are probably necessary” (Sterling, 1993:89). As such, Sterling (1993:91) suggests employing a holistic approach to transform them by “balancing and broadening their perspectives”. On the other hand, Huckle (1996:12, based on Pepper, 1993 & Martell, 1994) states that the position of viewing nature neither as “a resource for our use (technocentric materialism) [nor] as a source of intrinsic worth (ecocentric idealism) but as a social category to be consciously created (historical materialism) [can collapse] dualism between technocentrism and ecocentrism and between the modern reductionist and postmodern holistic world views”.

For this study therefore, EFS was understood as Huckle’s (1993) third form of EE which is able to integrate valuable elements of the other two forms through creative

understanding of this world and humanity's relationship to it. Such understanding was informed by critical theory that is discussed in the following section.

2.3.2 Critical Theory

Critical theory, stemming from within the Marxist tradition tries to “understand why the social world is the way it is; [and] more importantly, through a process of critique, [it] strives to know how it should be” (Huckle, 1993:47). By linking to critical social theory developed by Habermas, critical theory goes further and aims to not only interpret the world within historical and social contexts, but to transform it through a process of critical inquiry which seeks knowledge and emancipates knowledge and searches for freedom (Calhoun & Karaganis, 2001; Carr & Kemmis, 1986; Crotty, 1998). Thus, critical theory applied to EFS enables it to be both a subject and an agent of social change to “regain control of the social structures and institutions which control us” (Gough, 1997:89).

This study applied critical theory, especially through Freirian critical pedagogy. While Cahill (2007b) thinks Freire's work has little to do with contemporary critical theory, Pietrykowski (1996:89, based on Giroux, 1994) recognises Freire's work as “straddling both the modern and postmodern worlds”. Nevertheless, the themes of Freire's work – liberation and empowerment – are essential to EFS (Huckle, 1993) and his influence on critical inquiry cannot be denied (Crotty, 1998). Thus, appropriate application of Freire's work in this study was an attempt to explore a practical critical approach to EFS in a postmodern society in which knowledge is associated with power and in which individuals gain a new sensitivity of difference and subjectivity (Huckle, 1996).

Critical theory realises its pursuit of emancipation and freedom in a process of critical inquiry which has been recognised as praxis of reflection and action by Freire (Crotty, 1998:150). The praxis is a creative way to transform the constantly moving

reality in which there is “indivisible solidarity” among humans, and also between humans and the world around them (ibid.). In other words, human beings can effectively transform the world through the praxis of reflection and action because the reality is not a static entity, and also because human beings have complex relationships with the world, and with each other. Freire (1976) believes that reflection without action is not authentic praxis; nor is action without reflection. Reflection and action become creative when they “constantly and mutually illuminate each other” (Freire, 1976:149, cited in Crotty, 1998:151). Therefore, in his understanding human beings gain freedom through continually transforming their existence and life conditions, and then changing themselves through dialogical education in which educators as co-learners engage in critical thinking and action together with learners (ibid.).

Central to dialogical education is conscientization defined by Freire (1996) as awakening critical consciousness. A “problem-posing” approach helps to achieve conscientization because this approach poses problems that matter to both educators and learners. This inspires them to strive for “the *emergence* of consciousness and *critical intervention* in reality” (Freire, 1996:62, italics original). Conscientization can be understood as paradigm shift, or what Habermas refers to as emancipatory action and Mezirow as “perspective transformation” (Mezirow, 1981:7). Drawing on the work by Freire and Habermas, Mezirow built a critical theory of adult education and experiential learning, which guided the design of the St John’s faith-based EFS programme.

2.3.3 Adult Education and Experiential Learning

Carrie and Brian (2000) regard experiential learning as the foundation of adult EFS because adults’ learning always draws on their diverse experiences. However, experiential learning is an ambiguous concept which has no agreed definition (Malinen, 2000). For the purpose of this study, learning is understood as “the process

of using a prior interpretation to construe a new or a revised interpretation of the meaning of one's experience in order to guide future action" (Mezirow, 1991:12).

Mezirow (1981) identified perspective transformation as a major domain and key to adult learning because meaning perspectives are components of experience. Perspective transformation is defined as a learning process of "becoming critically aware of how and why the structure of psycho-cultural assumptions has come to constrain the way we see ourselves and our relationships, reconstituting this structure to permit a more inclusive and discriminating integration of experience and acting upon these new understandings" (Mezirow, 1981:6). Critical reflectivity⁴, which is critical to perspective transformation, is understood by Mezirow (1981:11, *italics original*) as "awareness of *why* we attach the meanings we do to reality, especially to our roles and relationships". Therefore, facilitation of participants' critical reflectivity was an essential part of this research.

2.4 Summary

In summary, this research aimed to co-design a faith-based EFS programme at St John's Church by identifying the programme's objectives, educational activities, implementation processes and evaluation methods with research participants. The research also aimed to co-test and co-evaluate the faith-based EFS programme design process that was also a sustainability education process in itself. This research, as a practice of EFS, can be seen as:

- one form of EE that emphasises social change as a means of achieving sustainability;
- informed by critical theory involving a praxis of reflection and action;
- guided by critical educational theory focusing on "perspective transformation" in adult experiential learning.

⁴ In this study, "critical reflectivity" is used as a synonym for "critical reflection" which is used by Freire (1996).

CHAPTER THREE: LITERATURE REVIEW

This chapter outlines the academic context of this study. It reviews the evolution of EE to EFS. It then discusses understandings of sustainability both in secular and Christian religious domains, and introduces the debate on the critical approach to EFS which focuses upon the “rhetoric-reality” gap. Then after canvassing the international ecumenical community’s participation in EFS, an overview of New Zealand adult-focused community EFS practice is presented.

3.1 International History of Education for Sustainability

The roots of EFS lie in the EE movement of the late 60s and early 70s (PCE, 2004). The broad principles of EE were first outlined in the *Belgrade Charter* (1975). The charter calls for a “new global ethic which recognises and sensitively responds to the complex and ever-changing relationships between humanity and nature and between people” (UNESCO-UNEP, 1976:1)

The Charter was developed and confirmed by the *Tbilisi Declaration* (1977). The Declaration set up three goals for EE and emphasised fostering “new patterns of behaviour”. The *Tbilisi Declaration* also suggested a “holistic approach” to “recreate an overall perspective which acknowledges that natural and man-made [sic] environments are profoundly interdependent” (UNESO-UNEP, 1978:2&3). The founding principles and goals of the *Belgrade Charter* and the *Tbilisi Declaration* have been used as an EE framework in a number of countries including New Zealand, the United Kingdom, Australia and the United States (MfE, 1999a).

The concept of sustainability first gained credit in the *World Conservation Strategy* and was then refined by the *Brundtland Report* (Tilbury, 1995). Since then, the

language has shifted from EE to EFS⁵ and more emphasis has been put on the integration of economic, social, cultural and political concerns about the environment (PCE, 2004; Tilbury, 1995).

In the 1990s, the important role of education in achieving a sustainable society was emphasised through a number of documents and conferences. “*Caring for the Earth: A Strategy for Sustainable Living*” clarified that EFS was the centre of EE and highlighted its role in encouraging sustainable lifestyles (Tilbury, 1995). The priorities of *Agenda 21* of the UN Rio Summit 1992 focused upon implementation of EFS at all levels through the integration of development education and EE (ibid.). In 1997, an international conference was organised by UNESCO and the government of Greece on ‘Environment and Society: education and public awareness for sustainability’. It emphasised the need to refine the concept of EFS and its international trans-disciplinary practice (MfE, 1999a). These themes and foci were reinforced at the World Summit on Sustainable Development in 2002 and through the UNESCO Decade of Education for Sustainable Development from 2005 to 2014 (PCE, 2004).

The *Belgrade Charter* (1975) and the *Tbilisi Declaration* (1977) have been regarded as fundamental documents of EFS (Chapman, 2004; PCE, 2004). Based on these, discussions involve various understandings of the nature and approaches to EFS around the world (Tilbury, 1995). These discussions, along with the debate on the meaning of sustainability, significantly influence the practice of EFS (Chapman, 2004; Dale & Newman, 2005; Fien & Tilbury, 2002; Fien & Trainer, 1993).

⁵ Many alternative terms are being used including “education for sustainable development” (Gough, 1997), “ecological education and education for a sustainable world order” (Orr, 1999), sustainability education (Hopkins & McKeown, 1999), “green education” (Dyer, 1996) and “education for environment and sustainability” (Knapp, 2000) (cited in Douglas, 2002).

3.2 Understanding Sustainability

Dale and Newman (2005) suggest there are now hundreds of definitions of sustainability (also see Kates et al., 2005; Chapman, 2004). Sustainable development was first defined by the Brundtland Commission as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987:8). Since then, this definition has been widely used but the concept of sustainability means different things to different people because it can be underpinned by different knowledge, values, and philosophies (Huckle, 1996; Kates et al., 2005). Therefore, the Brundtland Commission’s definition is also criticised for its ambiguity (ibid.).

Kates et al. (2005) see this ambiguity as a “creative ambiguity” that drives a dynamic open discussion process and provides a baseline for debate on the concept. Lele (1999) believes that the main contribution of the sustainability debate has been its recognition that social conditions influence ecological conditions through human-nature interactions (also see Wilson et al., 2000; Redclift, 2005; Littig & Griebler, 2005). Based on the argument in the 1980 *World Conservation Strategy* (WCS) that conservation is a means to achieve sustainability, the Brundtland Commission’s definition is an effort to concern and reconcile development and environment by focusing on the intergenerational equity of development and by clarifying the environmental limitations of human development (Lele, 1999; Kates et al., 2005). However, it is arguable that equity should not only be intergenerational but also intra-generational, and that it should even exist between humanity and the rest of nature (Redclift, 2005; Qizilbash, 2001). Thus, the discussion on sustainability has moved from the original Brundtland Commission’s concern for human needs to concerns about human and non-human rights. It is now linked to liberty, power, justice and democracy (Fien & Tilbury, 2002; Mason, 1999 & Barnett, 2001 & Martinez-Alier, 1995, cited in Redclift, 2005; Langhelle, 2000; Huckle, 1996; Ray,

1997).

The linkage between socio-economic justice and ecological sustainability was first identified by the ecumenical community through the World Council of Churches' (WCC) programme – “Just, Participatory and Sustainable Society (JPSS 1975)” (Hallman, 1997; Vischer, 1997). But the term “sustainable society” was replaced by “integrity of creation” in its follow-up programme – “Justice, Peace and Integrity of Creation (JPIC 1983). This was because the concept “integrity of creation” was seen to specifically combine ecological and theological perspectives of sustainability (Hallman, 1997; Rasmussen, 1996). However, Migliore (2004) recognised that humans' limited knowledge about God as Creator and the integrity of God's creation resulted in traditional Christian theology's anthropocentrism and the understanding of human power as domination in relation to the environment. In this sense, sustainability is identified by Vischer (1997:145) as the need to make “a commitment to the greatest possible care and restraint in dealing with God's creation” through reinterpretation and reformation of creation theology (Migliore, 2004) as well as redemption theology and eschatology (Bukus, 1999).

There are two main approaches to make such a “commitment”:

- one draws on process theology to advocate that traditional theology must be thoroughly reconstructed if it is going to address the ecological crisis (Migliore, 2004);
- the second is based on Trinitarian theology and its central doctrine as “stewardship” (Migliore, 2004; Reitan, 1998).

The first approach is seen as ecocentric (Santmire, 2000; Scharper, 1994) while the doctrine of “stewardship” is still considered as anthropocentric by Santmire (2000). An alternative reading refers to Christian stewardship as neither ecocentric nor anthropocentric but theocentric (e.g. Reitan, 1998). In this regard, the notion of sustainability from a theological perspective should be profoundly theocentric

(Butkus, 1999).

Similarly, in the secular domain, the discussions on sustainability are seen as being rooted in two areas with anthropocentric and ecocentric bases respectively, for example, “weak sustainability” versus “strong sustainability” (Wilson et al., 2000). The spectrum of “weak sustainability” assumes that economic, social, and environmental conditions can be improved by trade-offs among these three dimensions; while “strong sustainability” gives priority to the environmental dimension over economic and social dimensions, and challenges our current dominant social paradigm (ibid.). Dominant social paradigm can be viewed as a synonym of the “technocentrism” identified by O’Riordan (1989, cited in Chapman, 2004) whose 1989 survey showed that the “technocentric” views of the world were dominant within the ‘west’ (Chapman, 2004).

To many commentators (e.g. Dale & Newman, 2005; Fien & Tilbury, 2002; Warburton, 2003; Wilson et al., 2000:3), sustainable development means “a process of change” rather than a “goal”. It can be a process of transforming unsustainable behaviours that are underpinned by technocentrism (Chapman, 2004; Acsehrad, 1999). In this process, the concept of sustainability might be able to transcend being seen as ‘old wine in new bottles’ through practice because the “practices of communication themselves carry symbolic meanings” (Redclift, 2005:219).

EFS is regarded as a part of this “process of change” (Sterling/EDET Group, 1992, cited in Fien & Tilbury, 2002) through its engagement of people in a “realistic appraisal of the alternative meanings, values and agendas of sustainable development” (Huckle, 1996:15). Orr (1992) also recognises that EFS has the responsibility of not only changing people’s talk but also their lifestyles. As such, EFS should be a “continuous lifelong process” according to the *Tbilisi Declaration* (UNESCO, 1978:27). To challenge our current dominant social paradigm or the “technocentric” views of the world, EFS faces the challenge of enabling a paradigm

shift from a mechanical/reductionist worldview to a more holistic/ecological one (Sterling, 1993; 1996). EFS, therefore, is called to adopt a critical approach. In turn, this has created a debate focusing on the gap between “rhetoric” and “reality” in EFS practice (Chapman, 2004:93; Fien, 1993; Fien, 2000; Palmer, 1998). This debate is discussed in the next section.

3.3 The Critical Approach to Education for Sustainability

Currently, the acknowledgement of the importance of critical education has been very influential in EFS (e.g. Huckle, 1983a & 1991 & Pepper, 1987 & Fien, 1988 & 1993a, cited in Fien, 2000; Tilbury, 1995). Based on critical theory, the socially critical approach, along with ideological awareness, is regarded as a key component of critical education by Fien (2000, based on Huckle, 1983a; 1991; Pepper, 1987; Fien, 1988; 1993a) and Sterling (1996).

Palmer (1998:102, based on Robottem and Hart, 1993) considers the socially critical approach as a form of “participatory enquiry” which “fosters the development of independent critical and creative thinking in relation to environmental issues”. On Freire’s (1972) spectrum, critical thinking capacity can be improved through “critical praxis” – a dynamic cycle of reflection and action (Fien, 1993:73). Accordingly, the socially critical approach calls for participatory action research (PAR) within EE (Huckle, 1996; Palmer, 1998).

However, the critical approach to EFS is a controversial arena in which the debate focuses on the ‘rhetoric-reality’ gap (Lousley, 1999 & Robertson & Krugly-Smolka, 1997 & Stevenson, 1986, cited in Chapman, 2004; Fien, 1993; Palmer, 1998). Some commentators blame critical theory for constraining the practice of EE (Oulton & Scott, 2000 & Robinson, 1993 & Scott & Oulton, 1999 & Walker, 1995 & 1997, cited in Chapman, 2004). For example, Scott & Oulton (1999) are not convinced that

Habermas's three forms of knowledge-constitutive interests equate with Lucas's (1972) tripartite model of education *in* (or through, from), *about* and *for* the environment introduced in Section 2.3.1. They proclaim that such interpretation overly emphasises the importance of a "for" approach, which results in the other approaches being overlooked (also see Jickling & Spork, 1998). Scott & Oulton (1999) would prefer that different perspectives were integrated and dialogues among them were encouraged. In other words, they appeal for the intrinsic value of the "about" and "in" approaches to EE rather than their utility to serve the "for" approach.

However, Sterling (1993) claims that Lucas's (1972) tripartite model, with separate skills, knowledge and values, is no longer able to carry the responsibility of achieving a sustainable society. In accordance with this declaration, Tilbury's (1995:206) "three-fold approach" and Palmer's (1998:143) "integrated model" highlight the integration of education *in*, *about*, and *for* the environment. Engaging these different interpretations, Fien (1993, 2000) borrows Foucault's (1980) notion of discourse⁶ to explain the power relations behind knowledge production in EE. He sees Huckle's (1993) three forms of EE as an attempt to deconstruct earlier EE discourse and gives currency to Greenall Gough's (1993) feminist proposal of 'position reflexivity' in discourse analysis.

Furthermore, Scott & Oulton (1999) blame the failure of the critical approach in practice within school structures on its lack of practical strategies (based on Robinson, 1993) and implementation theory (based on Walker, 1997). However, many explanations to this failure highlight teachers' lack of expertise and willingness to use a critical approach (Chapman, 2004; Fien, 1993). More thoroughly, Fien (1993) points out that the abandonment of the critical approach by many teachers has possibly resulted from their own environmental values being underpinned by the

⁶ Foucault defines discourse as a "network of practices which systematically form the objects of which they speak" (1972:49, cited in Kosmidou & Usher, 1992:84), in which "meaning is given in and through language" (Kosmidou & Usher, 1992:84).

dominant social paradigm. However, he points out that at the time of his writing no relevant research into this had been conducted. As such, a paradigm shift as a solution to the highly complex 'rhetoric-reality' gap (Chapman, 2004; Palmer, 1998, based on Gough, 1987) is not only necessary for students but also for teachers (also see Kemmis, 1986, cited in Gough, 1997). Thus, EE can be conducted as a process of action research (AR) in which the teacher, working as researcher, reflects critically with his/her students (Carr & Kemmis, 1986, cited in Gough, 1997). Furthermore, there is an argument that *priori* environmental ideology and the political values of the critical approach made value education in EE no easier (Scott & Oulton, 1999) and put education for the environment in danger of being regarded as indoctrination (Jickling & Sportk, 1998). In this regard, there is wide debate about the necessity of a value-based curriculum (Dale & Newman, 2005).

The critical approach has also been criticised by Bowers (1991a & 1991b & 1993a & 1993b & 1995, cited in Gough, 1997) for its anthropocentrism: it ignores ecological imperatives and fails to integrate a holistic approach because it accepts Cartesian dualisms such as culture versus nature, and rational thought over embodied action. Responding to Bowers' criticisms, Fien (1993) emphasises the need to theorise critical pedagogy based on more reflection and action; Gough (1997) proposes combining a poststructuralist perspective (central to which power and knowledge are exercised through discourse) with critical pedagogy. This combination represents the confluence of feminisms, critical theories and poststructuralisms (ibid.). Sterling (2003) from the standpoint of a holistic ethical view suggests that legitimising sustainability education as the core of all education in society is vital because society itself is a subsystem of the whole biophysical system. This legitimisation can be communicated through systems thinking centered in a paradigm shift (ibid.). Such a paradigm shift can be seen in the interface between global environmental science and policy, with the emergence of systems science as a unifying thread in major global ecological, and earth systems assessments and response measures. Examples of these are the Assessment Reports of the Intergovernmental Panel on Climate

Change and the Millennium Ecosystem Assessment. Therefore, this paradigm shift would deepen the goals set up in the *Tbilisi Declaration* as a response to the call of a “new global ethic” from the *Belgrade Charter* (Sterling, 2003; 1993).

3.4 The Ecumenical Community’s Participation in Education for Sustainability

The international ecumenical community has actively participated in and contributed to EFS for several decades through the World Council of Churches’ (WCC) study and action programmes binding the themes of “justice”, “peace” and “creation” together (WCC, 1998).

In 1975, the WCC initiated a programme called “Just, Participatory and Sustainable Society” (JPSS) at its fifth assembly in Nairobi to address development concerns and environmental issues such as poverty and earth’s limited capacity to sustain life (Hallman, 1997; WCC, 1998). This programme gave inspiration to the broader global community to integrate the two dimensions of development and environment together (Hallman, 1997).

The framework of JPSS was followed by the programme – “Justice, Peace and Integrity of Creation” (JPIC) at WCC’s sixth assembly in Vancouver 1983 (Hallman, 1997). Under this theme, WCC encouraged its member churches to make public commitments and take action in relevant areas. This was seen as a part of the essential meaning of ‘being the church’ (WCC, 1998). At WCC World Convocation on JPIC in Seoul, 1990, participating churches agreed to work together on the JPIC programme after a debate on the relationship between socio-economic justice and ecological sustainability (Hallman, 1997). Since 1991, the central theme of WCC’s work on sustainability has been the “theology of life” (TOL). This programme is a series of 22 case studies of local churches around the world that made affirmations

on the Seoul World Convocation on JPIC (WCC, 1998).

The WCC delegation participated in the Rio de Janeiro (1992) and Johannesburg (2002) UN Conferences on Environment and Development (UNCED) (WCC, 2002). This participation has been a part of WCC's journey of "building a faith-based understanding of the integral relationship between social justice, human development and protection of the environment" (Martin, 2002:271). This understanding is a foundation of the ecumenical approach towards sustainability – building "sustainable community" – by ensuring "the integrity and sustainability of the ecclesial community" (Aram, 2002:483).

3.5 Overview of Adult-focused Community Education for Sustainability in New Zealand

3.5.1 The Practice of the Wider Community

The New Zealand Government emphasises the role of education in sustainable development and made a commitment in the *Environment 2010 Strategy* to promote EE⁷ throughout the country (Law, 2004). Backed by the Strategy, some documents are issued to assist all levels of EFS practice including the community level.

The Ministry for the Environment (MfE) released a national strategy for EE in 1998 – "Learning to care for our environment" – that provided a framework for EE activities in all sectors (Law, 2004). Within this framework, a guide for EE programme providers and a literature review on EE were supplied by the MfE in 1999 (MfE, 1999a; 1999b). Furthermore, the MfE set up the Sustainable

⁷ In New Zealand, the education for sustainability has been addressed through the concepts of both environmental education and education for sustainability/sustainable development (Law, 2004).

Management Fund to support community projects associated with EE resource development, implementation and evaluation of EE strategies and programmes (Law, 2005; PCE, 2004).

In 2004, a report on learning and EFS – “See Change” – was written by the Office of the Parliamentary Commissioner for the Environment (PCE) (Law, 2004). This report works as a dialogue among different sectors of EFS by looking at sustainability learning and education beyond schools. The report also makes recommendations on key areas for EFS to focus and act on (PCE, 2004)⁸.

At the local governmental level, local authorities’ initiatives often target individuals or small groups to achieve possible actions (PCE, 2004). According to a 2001 stock-take, most New Zealand local councils and unitary authorities undertake some EE initiatives, for instance, the Big Clean Up campaign in the Auckland region from 2002 and the Sustainable Households Programme in nine regions from 2001 (PCE, 2004; Taylor, 2005). Implementing and supporting EFS programmes also help local authorities to fulfil their statutory obligations under legislation, especially under the Resource Management Act (1991) and the Local Government Act (2002) (PCE, 2004).

Environmental NGOs and community groups also play a vital role in EFS often through directly involving people in environmental issues:

- some NGOs have a strong natural conservation focus, such as Greenpeace and the Worldwide Fund for Nature (WWF) although they also aim at general environmental issues (Greenpeace, 2007; PCE, 2004; WWF-NZ, 2007);
- some NGOs have a strong school education or professional development focus such as WWF, the New Zealand Association of Environmental Education (NZAEE) (NZAEE, 2007; PCE, 2004) and the Sustainability Trust

⁸ Most of the sources referred to in the rest of this section come from this report. It was interesting to find that few resources on community EFS practice exist, largely as most community EFS practice focus on conservation.

(Sustainability Trust, 2007);

- some work from a specifically business perspective, such as the Natural Step (Nature Step, 2007).

Furthermore, NGOs and community organisations often emphasise immediate practical actions for reducing environmental impact although they also encourage people to see environmental issues within a wider context (PCE, 2004). Some community groups have established Environment Centres, financially assisted by local authorities and the MfE. Their work provides an arena for a wide range of people interested in EFS and is often linked to other social sectors (PCE, 2004) such as justice and peace education in the ecumenical community.

3.5.2 The Practice of New Zealand Churches

The social justice agencies of New Zealand Churches, such as the Churches' Agency on Social Issues (CASI), Caritas Aotearoa New Zealand (CANZ), and the Social Justice Commission of the Anglican Church (SJCAC), facilitate their members to integrate the local, national, and international ministry for justice, peace and development into their church life (CANZ, 2007; CASI, 2007; CWS, 2007; SJCAC, 2007).

They supply resources for church worship services, individual and group learning, and information for taking action at church and personal levels (CANZ, 2007; CASI, 2007; CWS, 2007; SJCAC, 2007). For example, in 2006, the Social Justice Commission of the Anglican Church published a booklet of five studies on faith and the environment – “God’s Earth•Our Home” (SJCAC, 2006); a special issue of the *Social Justice Series* on environmental justice – “Renew the face of the earth” has been published by Caritas Aotearoa New Zealand (CANZ, 2006). Information, knowledge and skills on reducing environmental impacts are provided throughout Christian websites and publications.

Debates on understanding sustainability at local, national and global levels as well as taking relevant action are encouraged by public lectures, publications and website discussion (CANZ, 2007; CASI, 2007; CWS, 2007; SJCAC, 2007). Everyone is encouraged to contribute to the discussion; aid from local churches is required to overcome poverty and injustice in New Zealand and around the world; education on gospel values like love, peace, justice, compassion, and reconciliation, which are seen as a foundation of real action, have been taught by means of some education agencies, for instance Catholic Social Teaching. Such teaching also plays a role of encouraging communication between church members and communities (CANZ, 2007).

3.6 Summary

Based on the principles and goals set up in the *Belgrade Charter* (1975) and the *Tbilisi Declaration* (1977), EFS is regarded as a focus of EE in various international documents and conferences as well as EE literature. Focusing on sustainability presents some difficulties for EE practice partly because of ambiguous definitions of sustainability, which have resulted in a wide debate on its meanings. Central to the debate is the relationship between development and environmental protection, which can also be seen as the relationship between humans and the environment, either in the secular domain or the Christian religious domain. Emphasising the relationship, sustainability can be understood as “a process of change” in which EFS is able to play a key role through a critical approach. However, there is difficulty in applying this approach mainly due to the perceived gap between its theories and practice. Thus, different EFS practitioners have given different suggestions about how to bridge the so-called rhetoric-reality gap. Although this debate was articulated mainly in a schooling context, it still provides a basic theorising and practice skeleton for the application of a critical approach to EFS in the wider community. Meanwhile, the

application of a critical approach is hardly found in adult-focused EFS in the New Zealand community, including in churches. The purpose of this research therefore, was to apply the critical approach within a church context as a contribution to bridging the ‘rhetoric-reality’ gap.

CHAPTER FOUR: METHODOLOGY

This chapter starts by explaining the rationale informing the choice of PAR as the chosen methodology. It is followed by the introduction and discussion of the research design and its subsequent implementation process. The design and process are illustrated together because they were integrated throughout this research project. Some research data are presented in this chapter because participatory data analysis took place throughout the research process and was undertaken through negotiation between the participants and the researcher. Therefore, the data were closely interlocked with the research design and implementation stages.

4.1 Participatory Action Research (PAR)

This study has been conducted as a PAR process. This is because the empowerment and transformation aims of EFS can be better achieved through PAR, which itself is seen as a vehicle of social change and environmental transformation (Cahill, 2007b; Huckle, 1993; Kindon, 2005).

Firstly, PAR aims to empower participants by involving them as co-researchers in some or all research stages. Their involvement can be realised through researchers' flexible facilitation, critical reflexivity⁹, and authentic representation (Coghlan & Brannick, 2005; Dowling, 2005; Kindon, 2005; Mohammad, 2001; Sense, 2006; Stoeker, 1998). As such, PAR is about research **with** the participants of a community rather than **on** the community (Kindon, 2005).

The process of PAR is a “cyclical process”: an interplay between researcher and participants in which the researcher's relationship to participants “moves back and

⁹ Kim England (1994) defines critical reflexivity as “a process of constant, self-conscious, scrutiny of the self as researcher and of the research process (Dowling, 2005:22)”.

forth between research steps, spiraling out” towards the research aim (Cahill, 2004:278; Herr & Gary, 2005). Critical reflexivity is the essence of the “cyclical process”. It enables the researcher to constantly act on new relations and issues in the dynamic and ongoing research process (Dowling, 2005; Mohammad, 2001). Participants also develop the ability of critical reflection on their learning and action through facilitation (Sense, 2006). Such facilitation requires a high level of aptitude and flexibility, which can be improved through a researcher’s constant critical self reflexivity (Coghlan & Brannick, 2005; Dowling, 2005; Stoeker, 1998; Hanson & Hanson, 2001; Mohammad, 2001; Sense, 2006). Accordingly, the process of PAR can work not only as an empowerment process but also a transformation process.

Secondly, the empowerment is more possible in PAR than other approaches because of the use of participatory methods, which facilitate participants in knowledge production, interpretation, and analysis within their cultural and social contexts, rather than a process of knowledge ‘gathering’ (Veale, 2005:254). Participatory methods (such as diagramming and mapping) along with other qualitative methods (such as in-depth interviews and focus group discussions) explore participants’ beliefs and actions by using their own language. This use of participants’ own language “reveal (s) the underlying social structure” of their relationship to the world and among themselves (Hoggart et al., 2002; Winchester, 2005:9).

This research only used qualitative methods (focus group discussions, diagramming, and in-depth interviews) because the aim of the research – EFS programme design and sustainability learning in the design process – required a deep exploration of meanings, complex interpretation and analysis, and creative knowledge production. In other words, it required a high level of researcher-participant interplay at all research stages. By framing this study as a PAR process, I was attempting an undertaking arising from a postmodernist holistic worldview (Huckle, 1996) to challenge objective positivist science that separates theory and practice (Carr & Kemmis, 1986). It also sought to multiply and deeply interpret a single phenomenon

by the participant co-researchers and myself (Kindon et al., 2007, based on Greenwood and Levin, 1998). This engaged us in subjective, relational and experiential ways of knowing (Martin, 1999). The rigour of PAR can be ensured by researcher's critical reflexivity (Dowling, 2005). Therefore, in this study, I constantly strove to be aware of the influence of my social position and personal opinions, and characteristics of my dialogue with the participants.

Furthermore, the combination of EFS and critical theory calls for reflective action which is qualitative, collaborative, contextual and dialectical (MfE, 1999a). PAR draws from and is compatible with critical theory because it is able to facilitate the reflection and action of both researchers and participants in praxis (Kindon, 2005; Sense, 2006). PAR is also compatible with Mezirow's (1981) "perspective transformation" approach to adult education and experiential learning, which draws on the work by Friere and Habermas. Therefore, this study employed PAR as a critical methodology in order to benefit EFS practice.

4.2 Research Design and Process

4.2.1 Research Design and Process Procedure

The design of this research was integrated with the research implementation because participants were co-researchers. In other words, I designed some possible research methods based on my knowledge of the participants' situation before the process started. Then during the implementation, I changed the design according to the reactions and reflections of participants and my own critical self reflection. The research design and process procedure was based on a cyclical and participatory model for EE (see Figure 2).

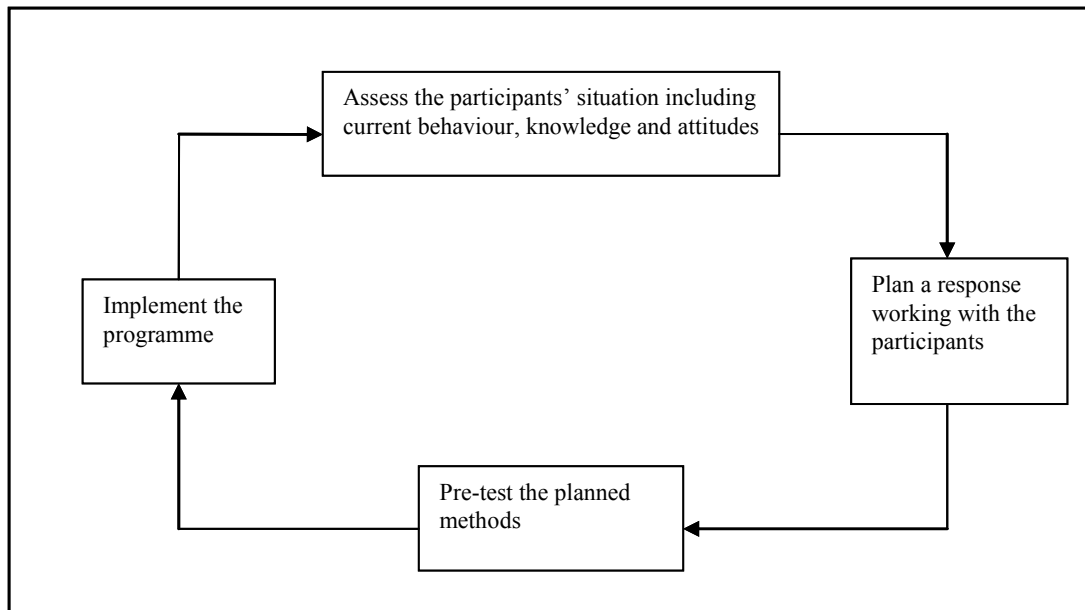


Figure 2: A Cyclical and Participatory Model

Adapted from: Smith,1995, cited in MfE, 1999b:104

Drawing on this model, the research design and process procedure included the following steps:

Step 1: Attainment of knowledge of participants' situation through focus group building

Step 2: Workshop and interview overview and information analysis planning

Step 3: Diagramming Activities 1 to 3: design, pre-test and adjustment

Step 4: Workshops 1 to 3: implementation and data analysis

Step 5: Interview: design, implementation and data analysis

Step 6: Workshop 4: design, implementation and data analysis

4.2.2 Focus Group Building

Instead of forming a new group with whom to carry out this research, I chose an existing church group because the group dynamics of support and trust already existed and could help group activities (Hoggart et al., 2002; Cameron, 2005; Aubel, 1994). Working with an existing group also mitigated against the likelihood that a new group would be disbanded when the research was completed thereby ensuring

greater follow through. Furthermore, it reflected PAR principles to work within and out of existing knowledge and social systems (Kindon et al., 2007).

After consulting the church minister and group leaders, I focused on one house group which had expressed an interest in participating in this research. This group consisted of around 12 people (including three couples) who were regularly attending weekly group bible studies. The average age of the group members was around 50 and all members had good educational backgrounds (half of them had different levels of university degrees). This group had existed for 25 years although not always with the same members.

There were several advantages to working with this group. First of all, the group had a number of married couples, which was good for taking environmentally friendly action into daily life¹⁰. In addition, the group's average age and educational level were consistent with the average age of church adult members and their educational level, so they were representative of the wider congregation.

I began to attend this group's regular bible study in October 2006 and volunteered to facilitate a preliminary study in which I trialed a diagramming activity. In this trial, quiet people became talkative; everyone fully participated in it; and the discussion kept focused on the topic. Moreover, participants' feedback showed they enjoyed diagramming very much. Thus, I decided to use diagramming as a main technique in the formal research workshops associated with the programme design process.

Through attending the focus group's weekly bible studies for three months, I was able to build good rapport with the participants. This rapport helped me to encourage them to positively participate in the research. Secondly, this interaction gave me the opportunity to gain an understanding of their theological knowledge level,

¹⁰ I drew this conclusion from NZ Sustainable Households Programme which showed that it was difficult for people who were not household managers to apply their learning at home (Taylor, 2005).

personalities, group culture, and their social and cultural contexts. All this contextual information helped me to develop appropriate workshop activities. Thirdly, I drew their attention to sustainable issues through informal discussions and actions such as car pooling.

Throughout the focus-group building period as well as the whole research process, I critically reflected on my positionality. As a member of St John's Church, I was an insider. Being an insider helped me to understand St John's culture and situation well; and being a Christian, "God is love" meant knowing and being known in relationships (Moltmann, 1981). As a Chinese woman, I was racially and culturally an outsider. However, being Chinese, the Philosophy of Taoism has already infiltrated my life. In this research, I took the principle of *Wu wei* to build relationships with the participants. *Wu wei*, an important tenet of Taoism, literally means "non action". This does not mean doing nothing, but rather "accomplishing much with the minimum of activity by going with the natural flow of things" (Fowler, 2005:119). It is an art and ability in the sense of being humble to work with people. Critical reflexivity helped me to love people by employing *Wu wei* to a great extent.

In adherence of proper procedure, I gained research ethics approval from the Victoria University Ethics Committee (see Appendix 7). Before I submitted the application to the Committee, I showed the information forms and the overview of workshops and interviews to the participants and explained some issues including the way of keeping information confidential and the workshop facilitator. I arranged a colleague of mine to be the workshop facilitator (I designed all diagramming activities) because diagramming activities require a high level of facilitation, and I was concerned that my limited English language abilities might restrict my ability of facilitation. I also wanted to be able to pay closer attention to the discussions and group dynamics, which is hard to do while facilitating. The facilitator was also a St John's youth group participant, so the participants were happy with his role as

facilitator. The facilitator fully participated in the research process as a facilitator/participant through our cooperation on workshop preparation, facilitation and reflection (see Table 3, p. 49). I also clarified with members of the group that the workshops would be video-taped by the facilitator or myself and the interviews would be telephone interviews and recorded for information analysis. They were informed that no other person besides me and my academic supervisors would see/listen to the recordings of all interactions which would be kept in a password-protected file. And they were able to choose pseudonyms to maintain their anonymity. The participants were thus assured of their privacy.

4.2.3 Workshop and Interview Overview

A series of four workshops, in which diagramming activities, group discussions, and presentations were employed, along with individual interviews, were used to fulfil the research aim and objectives. Table 1 provides an overview of the workshops and outlines the tasks of each workshop and interview as well as their roles in the fulfilment of research objectives.

Table 1: Workshop and Interview Overview

Workshop (7.30-9pm)	Task	Research Objective Fulfilment
1 (12/02/07)	1. Introduce main existing secular definitions of “sustainability” (presentation);	Objective one (question 1)
	2. Identify Christian theological themes on “sustainability” and biblical/theological knowledge needed to understand these themes (Diagramming Activity 1).	
2 (19/02/07)	1. Introduce the existing Christian theological themes on “sustainability” (presentation);	Objective one (question 2) and Objective two (question 1)
	2. Present the summary of the Christian theological themes on “sustainability” identified in Workshop 1 and reflect on it (presentation & group discussion);	
	3. Pre-diagramming activity: reflect on personal life to identify possible actions on climate change (individual reflection & group discussion);	
	4. Broadly identify appropriate educational activities of the St John’s EFS programme based on activity 3 and SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of St John’s Church (Diagramming Activity 2).	
3 (26/02/07)	1. Present the summary of the SWOT analysis of St John’s Church and reflect on it (presentation & group discussion);	Objective two (questions 2-3) and Objective three (questions 1-2)
	2. Case studies of existing EFS programmes (presentation);	
	3. Specifically identify appropriate educational activities, implementation processes, and evaluation methods for the St John’s faith-based EFS programme (Diagramming Activity 3).	
Interval (27/06/07 –25/03/07)	1. Develop evaluation methods for the design process by interview. The overall interview questions are ¹¹ : (1) What are appropriate methods to evaluate the effectiveness of the programme design? (2) What are appropriate methods to assess the impact of the design process on you life?	Objective four and Objective six (questions 1-2)
	2. I design a draft St John’s faith-based EFS programme.	
4 (26/03/07)	1. Propose a draft St John’s faith-based EFS programme (presentation);	Objective one (questions 3-4), Objectives five (questions 1-4) and Objective six
	2. Reflect on the draft programme including identification of “participant reaction objectives” and “organisational outcome objectives” of the programme (group discussion ¹²);	
	3. Evaluate the programme design process (Diagramming Activity 4).	

¹¹ Specific questions (see Appendix 5) were identified after Workshop 3 and based on workshops 1-3 information.

¹² This method and the next activity’s method were decided after the interviews.

Table 2 lists the activities that took place between Workshops 3 and 4 from 26th February 2007 to 26th March 2007 (Workshop interval). The interval between workshops gave the participants time to apply what they had learnt in the workshops and enabled them to reflect upon the relationship between their learning in the workshops and actions (or non actions) in their daily lives.

Table 2: Workshop Interval (Between Workshops 3 and 4) Activities

Date	Activity
05/03/07	Check Workshop 3 data with the participants ¹³
06/03/07 – 09/03/07	Interview and data analysis; Workshop 4 design
12/03/07 – 16/03/07	Draft St John’s faith-based EFS programme design
19/03/07	Distribute the draft programme to the participants

4.2.4 Information Analysis Plan

Information generation, analysis and participatory evaluation were seen as overlapping components of the research process because information analysis¹⁴ was closely related to information generation and participatory evaluation¹⁵ (Fountain, 2002). Therefore, I planned to articulate information analysis and participatory evaluation through my cooperation with the participants and the facilitator in the research implementation process (see Table 3). Some specific strategies were also employed to analyse workshop and interview data respectively.

¹³ We spent half an hour on this activity in the group’s regular bible study meeting.

¹⁴ “Information analysis is integral to the research process as the choice of analytical tools limit and/or enable what meaning can be constructed from the information and therefore also what can be concluded” (Cragg, 1997, cited in Fountain, 2002:25).

¹⁵ “Participatory evaluation is a process of self-assessment, collective knowledge production, and cooperative action in which the stakeholders in a development intervention participate substantively in the identification of the evaluation issues, the design of the evaluation, the collection and analysis of the data, and the action taken as a result of the evaluation findings” (Jackson & Kassam, 1998:3).

Table 3: Information Analysis Schedule

When	How	Who
Before and after each workshop	Informal conversation	Participants, the facilitator and myself
	Analyse the diagram that is created in each workshop and review the facilitation process	The facilitator and myself
	Analyse and check comprehension and accuracy of information using video recording after each workshop	Myself
In the first three workshops	Diagramming activities and check the information from the previous workshops	Participants, the facilitator and myself
Interviews	In-depth discussions on workshop information	Participants and myself
Final analysis and evaluation	Using methods that are decided by the interviews in the last workshop	Participants, the facilitator and myself
	Final reflection report	The facilitator
	Final reflection in the thesis	Myself

4.2.5 The Design Process of Diagramming Activities

This section introduces the design process of four diagramming activities that I used in the four workshops. I designed Diagramming Activity 4 (used in Workshop 4) after the interviews, but I introduce it here with other activities to show the holistic design process of diagramming activities.

4.2.5.1 Diagramming Activity One

Diagramming Activity 1 – Creation Narrative – aimed to understand sustainability from a theological perspective. My rationale was to facilitate the participants to not only identify the learning objectives of the St John’s faith-based EFS programme but also to reflect on their theological understandings of creation. This reflection would be the motivation for their action/behaviour changes with relation to climate change.

At first, I designed a very specific and comprehensive diagramming activity, which

was intended to involve almost all biblical and theological concepts relating to the creation narrative. After consulting several theologians, I found the main problems of my initial design were that:

- it was too specific to give participants enough space to bring their own thoughts in;
- such specification might also prevent participants from understanding biblical and theological concepts holistically;
- it was too comprehensive to be conducted within the workshop timeframe.

Then, I simplified the activity and did a workshop pilot¹⁶ which involved two Presbyterian Church ministers and some congregation members from five different Christian communities. They were divided into two groups in the diagramming activity (with one minister per group). The results were that one group subverted my design and made their own diagram which just used parts of my instructions. This showed there was still not enough space in my design. The other group struggled at the beginning and suggested that I should provide some basic bible passages as a starting point. This group also suggested integrating non-biblical and theological knowledge in the design because in their view it is hard to separate it from biblical and theological knowledge. As a result, I adjusted the design and the results of this are detailed in Appendix 1. This process of pre-testing was very helpful and enabled the final design to work well.

4.2.5.2. Diagramming Activities Two and Three

Diagramming Activity 2 – SWOT Stepping-stones – was designed to broadly identify the educational activities of the St John’s faith-based EFS programme and to do a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of St John’s Church. Diagramming Activity 3 – Education and Evaluation Co-ordinates – aimed

¹⁶ This workshop was initiated by the Sustainability Trust as a part of its Sustainability Education in Churches Programme. I conducted my internship in the Sustainability Trust which is a (secular) Wellington-based non-profit charitable trust (also see Section 3.5.1).

to specifically identify appropriate educational activities, implementation processes, and evaluation methods for the St John's faith-based EFS programme. These two activities were closely related to each other, and grew out of Workshop 1, but were not subject to the same pre-testing process.

The pre-testing process started from a group discussion in the above-mentioned workshop pilot. From that discussion, I found when people talked about their personal actions, they would inevitably relate to church educational activities. Therefore, I changed the original design of Activity 2 (personal action identification and a SWOT analysis) to that shown in Appendix 2. Accordingly, Diagramming Activity 3 was adjusted to what is shown in Appendix 3. The second stage of pre-testing involved trialing workshop activities with a member of St John's (not a focus group member) who is a high school teacher and who also teaches St John's youth group. In this way, I improved the way that I later explained the activity tasks to the focus group participants. Finally, when the facilitator and I were preparing for these two activities, he questioned me about the activity rationales and steps, which made me clearer about every detail of the design. This individual pre-testing process was not as efficient as the group pre-testing process used for the first diagramming activity, which is shown by the reflections on diagramming activities discussed in Section 5.5.2.

4.2.5.3 Diagramming Activity Four

Diagramming Activity 4 – Workshop Impact Assessment – was an outcome of the participants' and researcher's reflections on diagramming activities (1-3). After Workshop 3, I considered not using diagramming for Workshop 4 because in Workshop 3 I found several participants had difficulty following the diagramming activity instructions, although they still participated in discussion. The participants, however, encouraged me to continue using diagramming because they thought it helped to ensure the research method's efficacy (this issue is further discussed in

Chapter Six). Thus, I designed Diagramming Activity 4 shown in Appendix 4. This activity was very simple and similar to the trial diagramming activity because the participants enjoyed that trial activity and it was appropriate for asking questions identified by the participants in the interviews.

4.2.6 Participatory Data Analysis

Participatory data analysis in PAR, compared with non-participatory data analysis, has two main characteristics:

1. the analysis takes place *throughout* the research process as an integrated part of critical reflection and action cycles in PAR;
2. the analysis is undertaken by means of cooperation between researchers and participants through negotiation and interpretation (Cahill, 2007a).

These characteristics also enabled participatory data analysis to work as a means of participatory evaluation design in this research (Estrella & Gaventa, 1998; Greenwood & Levin, 1998; Guba & Lincoln, 1989; Jackson & Kassam, 1998).

4.2.6.1 Workshop Process and Data Analysis

The purpose of workshop data analysis was to achieve the research objectives by answering the specific research questions associated with each objective as demonstrated in Section 2.2. Figure 3¹⁷ illustrates the procedure of the data analysis. I undertook the analysis four times for the four workshops according to this procedure.

¹⁷ Figure 3 and Figure 4 were inspired by Gao (2003:117).

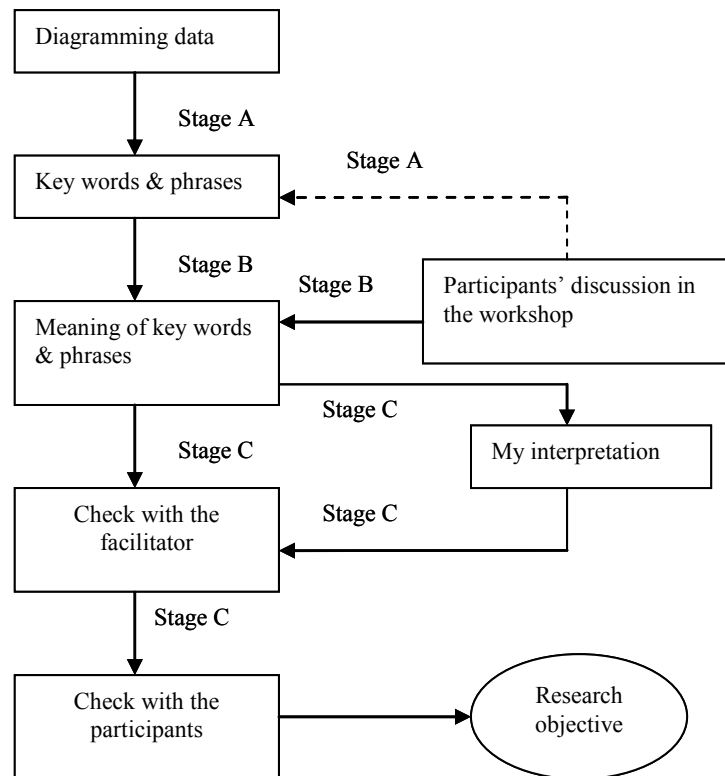


Figure 3: Workshop Data Analysis Procedure

Stage A: Quoting key words and phrases

Stage B: Identifying meaning of key words and phrases

Stage C: Achieving research objective

After each workshop, I identified key words and phrases, and then their meaning from the diagram that was created by the participants in that workshop. When I had problems identifying the meaning of key words and phrases, I went back to the workshop recordings and transcribed what the participants talked about to assist my understanding. Then, I listened to the recording from the beginning to the end to see if the diagram missed any important points. If so, I transcribed those parts to supplement key words and phrases and their meaning shown in the diagram.

Identifying the meaning of key words and phrases included my own interpretation of these meaning. In Workshop 1 data analysis, after I identified the meaning of key words and phrases from the diagram and the workshop recording, I summarised the

theological themes on sustainability by using as much of the participants' language as possible. Then I checked my summary with the participants at the beginning of Workshop 2 which was followed by participants' reflection upon the themes (Workshop 1 data summary see "Our themes" in Appendix 2, p.126, the diagrams created by the participants see Figures 7 & 8, p.79-80). I then talked about these themes to Dr. Chris Marshall¹⁸ and I realised the significance of eschatological redemption to theological understandings on sustainability that the participants' themes had not specifically identified. I then, highlighted this theme and discussed it with the participants and then they improved their diagram – "Creation Narrative" (see Figure 15, p.144) in the last workshop.

In Workshop 2 data analysis, some Strengths, Weaknesses, Opportunities, and Threats that the participants identified were inter-connected. I summarised them in a diagram which showed the SWOT in a systematic way (see Figure 5, p.64). I discussed this diagram with the participants at the beginning of Workshop 3. In Workshop 2, the participants also broadly identified the St John's faith-based EFS programme activities. I summarised these activities as a start point of Diagramming Activity 3 in Workshop 3 (see Table 19, p.133).

In Workshop 3 data analysis, my interpretation was based on my knowledge of St John's and guided by adult experiential learning theories. In other words, my summary of Workshop 3 data was a preliminary programme design and my position of inside researcher acted as a catalyst for the workshop data analysis. The participants and I discussed this summary for half an hour in the following week's group bible study (Workshop 3 data summary see Table 20, p.134). In the discussion, they were able to critique, amend, add or remove aspects of my summary to better represent their understandings.

The analysis procedure for Workshop 4 data was slightly different from that for the

¹⁸ Dr. Chris Marshall is an Associate Professor in Christian theological studies, Victoria University of Wellington.

previous three workshop data. The two steps of “my interpretation” and “checking with participants” were omitted because Workshop 4 itself was data checking. Workshop 4 consisted of an outcome of the interview data analysis (Workshop 4 process see Appendix 4). This workshop included three parts:

1. reflection on the draft St John’s faith-based EFS programme;
2. reflection on the programme design process (Workshops 1-3);
3. an impact assessment of workshops (1-3).

Therefore, the function of Workshop 4 data analysis was to accurately represent rather than interpret the reflection and assessment results (Workshop 4 findings see Section 5.5). The accuracy of my English understanding in each workshop data analysis was ensured by checking data with the facilitator. Workshop data analysis was made much easier by starting from diagramming data identification. However, the first two activities in Workshop 4 were group discussions, so I had to transcribe both discussions to identify key words and phrases and their meaning. But I designed two tables to take notes from the group discussions in the workshop, which was helpful for identification of key words and phrases and their meaning (see Table 13, p.77, and Table 14, p.82).

4.2.6.2 Interview Process and Data Analysis

The identification of evaluation methods for the St John’s faith-based EFS programme was one of Diagramming Activity 3’s objectives. However, we did not have enough time to fulfil that objective in Workshop 3, so I covered this aspect in the interviews. Accordingly, interview aims were adjusted to identify evaluation methods for the St John’s programme and for the programme design process (Workshops 1-3).

I started the first interview with some questions based on Workshop 3 data. In finding that some direct questions did not make sense to the participants, I had to use

indirect questions to achieve the aims of the interview. For example, “Why do you think it is important to evaluate this activity?” made more sense than “What is the aim to evaluate this activity?” Also, it was difficult for the participants to answer questions like “What are appropriate methods to evaluate the programme design process?” Rather, reviewing the programme design process helped to identify its evaluation methods. Similarly, reviewing Workshop 3 data helped to identify appropriate evaluation methods for the St John’s programme activities. Thus in the interviews, the participants also supplemented some ideas on the programme activities and gave some suggestions to workshop design. The interview questions that evolved were not exactly the same for each participant. I applied PAR’s iterative cycle of action and reflection to this process to build on and improve the efficacy of the interview method. The following figure illustrates this process.

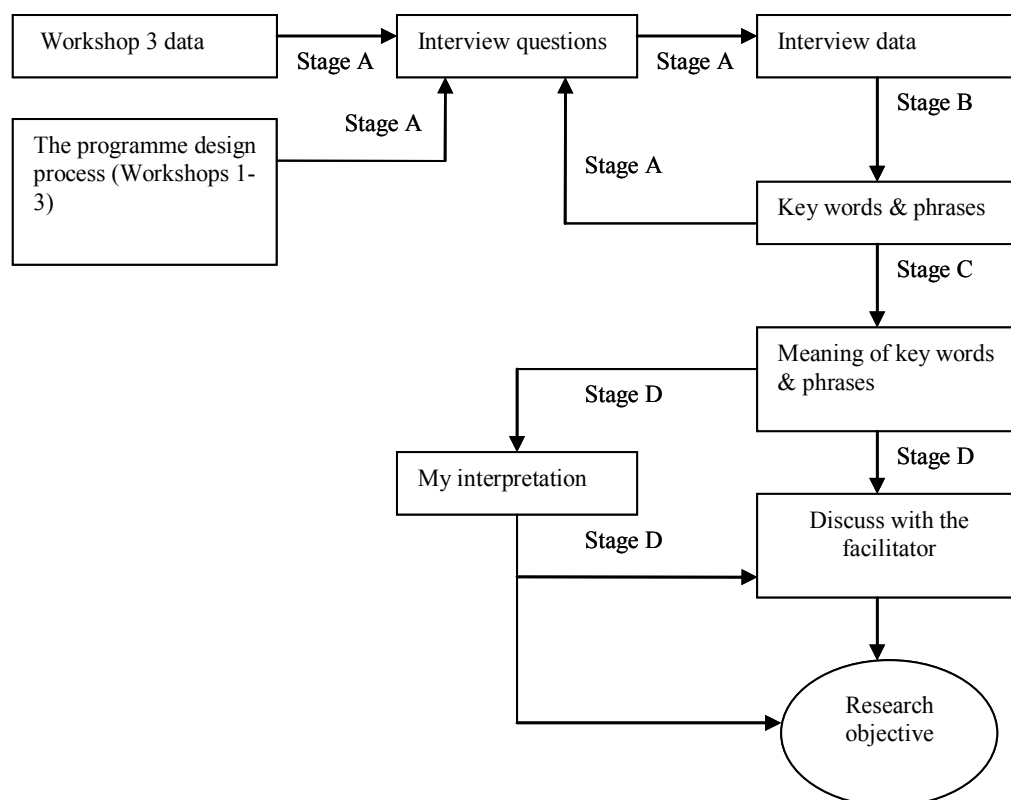


Figure 4: Interview Data Analysis Procedure

Stage A: Identifying interview questions and generating interview data

Stage B: Quoting key words and phrases from the interview recording

Stage C: Identifying meaning of key words and phrases from the interview recording

Stage D: Achieving research objective

I interviewed eleven out of thirteen participants and went through Stages A, B and C each time. After I finished the last interview, I completed a list of interview questions (interview questions and data summary see Appendix 5), on which I designed Workshop 4 (see Appendix 4) and integrated certain evaluation methods that had been identified by the participants in interviews for the St John's programme. I also discussed Workshop 4 design with the facilitator to ensure its feasibility.

The identification of appropriate evaluation methods for the St John's programme was challenging because different participants had different opinions. Some participants' opinions even contradicted each other. For example, one participant

insisted that every programme activity should be evaluated even where that might be problematic; while another participant thought we shouldn't put too much pressure on people to evaluate things, otherwise, they might simply switch off. Ultimately I had to make a choice about what methods might be best. This took place through my interpretation in Stage D. The interpretation was based on the role and values of evaluation methods by considering the following concerns:

- (1) *Concerning educational role*: is it possible and necessary that the evaluation methods play not only a role of evaluation but also a role of education in experiential learning cycles?
- (2) *Concerning contextual validity*: are the evaluation methods practical in St John's context referring to the SWOT analysis and my knowledge of St John's Church?
- (3) *Concerning participants' emotions*: are the evaluation methods acceptable to St John's congregation according to congregation information in the SWOT analysis of St John's Church and my knowledge of the congregation?
- (4) *Concerning coherence*: do the evaluation methods fit into the basic group consensus which excludes extreme opinions?

The first concern was based on one objective of participatory evaluation that is focusing on learning (USAID, 1996) and the other three issues basically drew on Cahill (2007a). The evaluation methods employed for the St John's programme are highlighted in Tables 6 – 10 (p.67-71).

4.3 Summary

The research design and process was a cyclical process of interplay between the participants and myself (as the researcher), in which I moved back and forth as I illustrated in the above sections. With the hope of achieving the empowerment and transformation aims of EFS, this PAR process attempted to empower the participants as co-researchers through the research methods of group discussions, individual interviews and diagramming. Through these methods, the participants and I collaboratively designed the research activities, and generated and interpreted research data to achieve the research objectives. Through the use of these three methods, the research activities also became a learning process about sustainability for the participants and myself. The outcomes of the research process are introduced in Chapter Five.

CHAPTER FIVE: ST JOHN'S FAITH-BASED EDUCATION FOR SUSTAINABILITY PROGRAMME

This chapter presents the research outcomes which fulfil the research objectives introduced in Section 2.2. The following table shows how these outcomes are detailed in the relevant sections of this thesis.

Table 4: Research Objectives and Outcomes

Research Objective		Outcomes are detailed in
Objective one: What are the objectives of St John's faith-based EFS programme?		Section 5.1
Objective two: What are appropriate educational activities and implementation processes for St John's faith-based EFS programme?		Sections 5.2 & 5.3
Allied question	1) What strengths and weaknesses does St John's Church have and what opportunities and threats does it face which may inform the achievement of the objectives of the faith-based EFS programme?	Section 5.2 (Figure 5)
	2) What educational activities and implementation processes are considered to represent best practice within existing secular and faith-based community EFS programmes?	Appendix 3 (Case studies of EFS programmes)
	3) What educational activities and implementation processes can effectively use the strengths and exploit the opportunities of St John's Church, and at the same time manage its weaknesses and defend against its threats?	Section 5.3
Objective three: What are suitable evaluation methods for St John's faith-based EFS programme?		Section 5.3
Allied question of objective four: What education theory can be used to inform the design of St John's faith-based EFS programme? (Objective four: Propose a draft St John's faith-based EFS programme in light of information from objectives one to three.)		Section 5.4
Objective five: Reflect on the draft St John's faith-based EFS programme.		Section 5.5.1
Objective six: Evaluate the design process of St John's faith-based EFS programme.		Sections 5.5.2 & 5.5.3

Section 5.4 is particularly worthy of mention. This section demonstrates how I applied educational theories to guide the arrangement of programme activities which

were outcomes of workshops and interviews. The outcomes were not as systematic as shown in this chapter, so the integration of educational theories was needed to increase their logic and flow. From the perspective of PAR's "cyclical process", this stage was my moving back to complete the design of a faith-based EFS programme using and contributing my own knowledge to that generated by the participants. This stage ensured the programme was both theoretically-informed and practical as discussed in Chapter Six.

5.1 Programme Objectives

Four types of objectives to be achieved by the end of the faith-based EFS programme designed by means of this research have been identified as follows:

(1) Theological Learning Objectives

Participants will understand "sustainability" from a theological perspective referring to the following themes¹⁹:

Theme one: The goodness and reality of original creation

- Originally creation is good and ordered;
- Humanity is part of creation, but given a special responsibility for the care of creation;
- Creation has been marred because of human sin, and exploited by human greed;
- Creation is being redeemed and will one day be renewed as the new creation;

Theme two: Human stewardship and dominion

- God gave us the responsibility of stewardship and the privilege of dominion at the same time, which means we should see nature as a valuable creation while yet also

¹⁹ Diagram "Creation Narrative" shows the rationale of these themes (see Appendix 6).

having the right to use it as resource;

- We must get a biblical model of stewardship which is balanced with dominion and away from greed because greed leads to political and social mismanagement;
- People are mutually interdependent with each other and with nature, so we have responsibility to take care of the poor and the vulnerable without harming creation.

Theme three: Jesus, resurrection and new creation

- Jesus heals people and restores their broken bodies and lives back to wholeness;
- Through his resurrection, Jesus initiates the new creation which is good and ordered, and transforms original creation into a new creation.

Theme four: Human capacity and limitation

- God created humanity with the potential to address problems theoretically and practically. But humanity's understanding has limitations and only God has the complete understanding of the nature of ecological order;
- Affected by original sin, we have limited generational and cultural perspectives and there are ethical limits to science;
- We have to challenge generational and cultural differences and be aware of the limitations of science to find our Christian path towards tomorrow.

Theme five: Eschatological (future) hope and redemption

- The final redemption of creation, prefigured in Jesus' resurrection and the activity of the Holy Spirit, awaits the future;
- Only God has the power to achieve ecological salvation, but He chooses not to work alone but in company with his people;
- Our task is not to wait passively for God to do it all, but to bear witness to God's redemptive actions in Christ and to participate in its outworking now;
- Inspired by the hope of eschatological redemption of all creation, Christians should do all they can to make an effort for healing the planet in the present.

(2) Action Objectives

Participants will be motivated by the above theological learning to take action on climate change in the following areas in daily life at both a church level and a personal level.

- waste: reduce paper use and recycle paper;
- transport: reduce private car use;
- energy: reduce energy consumption through insulation, the use of renewable energy, and the maintenance of appliances, cars and buildings.

(3) Participant Reaction Objectives

Participants will express a strengthening of their Christian faith by:

- reflecting on and reforming some traditional Christian views;
- acting on sustainability issues in Christian life.

(4) Organisational Outcome Objectives

St John's Church will have an integrated creation ministry with other ministries and fulfil its social responsibility in this area as a Christian church.

5.2 SWOT Analysis of St John's Church

In order to achieve the above objectives, some programme activities and their implementation processes have been identified. This is based on a SWOT analysis of St John's Church because institutional capacity is likely to be one challenge facing this programme according to Cameron (2007).

SWOT analysis is defined by Lai and Rivera Jr. (2006:26) as

a process that identifies the strengths, weaknesses, opportunities, and threats involved in a proposed project or business venture, [which] can be a powerful technique for facilitating discussion and

identifying key criteria and issues in situation analysis and problem solving²⁰.

Figure 5 presents the participants' identified Strengths, Weaknesses that St John's Church has and the Opportunities and Threats it faces to achieve the programme objectives. In the middle of the figure are common themes. Some common themes are seen as both Strengths and Weaknesses or Opportunities and Threats as well.

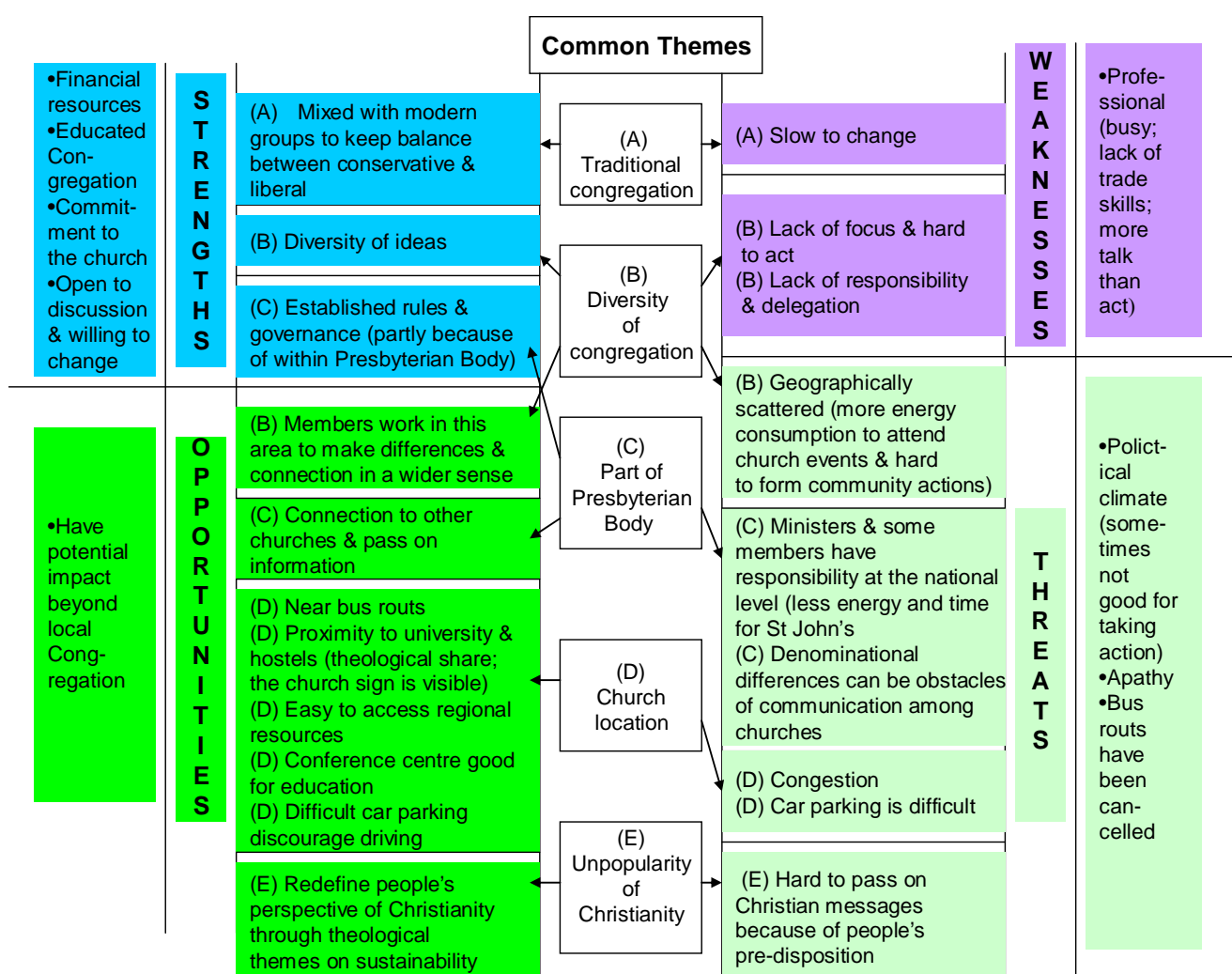


Figure 5: SWOT Analysis of St John's Church

Figure 5 clearly shows the contextual scales within which the programme is situated. They move from St John's Church to the Presbyterian Body to the popularity of

²⁰ For definitions and examples of Strength, Weakness, Opportunity, and Threat see Appendix 2.

Christianity to the political climate of the society. The connections between personal experiences and their cultural, social and political contexts are discussed further in Chapter Six.

5.3 Programme Activities and Implementation Processes

The programme activities and implementation processes are presented in the following tables. Table 5 provides a general overview of the programme, while tables 6-10 provide more specific details of each activity. The theological learning activities are designed to achieve the theological learning objectives. The faith-based activities, which are designed to achieve the action objectives, include general activities in the areas of transport, waste and energy, and specific transport activities, waste activities and energy activities. Evaluation activities are integrated with other activities in the implementation processes.

Table 5: St John's Programme Overview

Theological Learning Activity	Faith-based Activity	Main Task		Timeframe
“Green Sunday” service	“Green Committee” recruitment	Set up a Green Committee including coordinators of waste, transport, and energy		Spring (Sep. – Nov.) 2007
	Group eco-discussion	Raise awareness on sustainable issues at St John’s		
	Car pooling campaign (stage one)	Create friendly car pooling atmosphere at St John’s and information gathering		
	Reduce and recycle green waste at St John’s	Manage paper waste/reduce paper use at St John’s		
	Sunday bulletin scheme (stage one)			
Group theological study on “sustainability”	Car pooling campaign (stage two)	Reduce private car use at St John’s		Summer (Dec. – Feb.) 2007/08
	Sunday bulletin scheme (stage two)	Reduce paper use and recycle paper at St John’s		
Creation evening service (organised by church groups)	Eco- seminar	Focus on efficient use of energy at St John’s and at home	Waste and transport activities are on-going	Autumn (Mar. – May) 2008
	Eco-forum			
	Energy efficiency at St John’s			
Joint Sunday service	Climate change film evening workshop	Raise political awareness of climate change	Waste, transport, and energy activities are on-going	Winter (Jun. – Aug.) 2008
	Green Committee report	Reflect on programme activities and plan new activities		
Feedback on theological study	Information dissemination	Raise climate change awareness in the wider community		

Table 6: St John's Programme Theological Learning Activity

Activity	Suggested			Responsible Person	Relating to SWOT
	Contents	Time	Venue		
“Green Sunday” service	(1) Prayer (Prayer could be integrated to regular prayer and combined with other issues such as poverty and development); (2) Sermon (Sermon could be given by present minister or guest preachers such as St John’s retired ministers, St John’s theology lecturer); (3) “Green Committee” recruitment; (4) After-service meeting for communication.	The first Sunday of Sep. (2007) could be “Green Sunday”	Church	Minister	These activities use strengths and opportunities of: <ul style="list-style-type: none">● educated congregation;● diversity of ideas;● connection to other churches & pass on information;● theological study is connected with university. Manage weaknesses and threats of: <ul style="list-style-type: none">● lack of focus;● ministers’ energy and time on St John’s work are reduced because of responsibilities at the national level;● denominational obstacles.
Group theological study on “sustainability”	(1) Church groups do group theological study on “sustainability”; (2) The study could refer to the provided theological themes on “sustainability” or directly use Workshop 1 activities (see Appendix 1).	During Dec. – Feb. 2007/08	House groups/ Church	Group leaders	
Creation evening service (Group organised)	(1) Three groups organise three evening services of creation worship based on their group theological study; (2) This activity can be combined with Eco-seminar and Eco-forum (for details see those two activities in Table 10).	From Mar. – May 2008, one service each month	Chapel		
Joint Sunday service	(1) Organise a joint Sunday service with another church which could be another Presbyterian church or a church of another denomination; (2) Share creation worship stories in the service.	The Sunday before or after Jun. 5 th , 2008 (International Environment Day)	Church	Minister	
Feedback on theological study ²¹	(1) Get feedback on theology study from individuals and church groups; (2) Publish some feedback on the <i>Messenger</i> and <i>sPanz</i> .	Jun. - Aug. 2008	---	Minister/group leaders	

²¹ The highlighted activities in Tables 6 – 10 are evaluation methods.

Table 7: St John's Programme General Faith-based Activity

Activity	Suggested			Responsible Person	Relating to SWOT
	Contents	Time	Venue		
"Green Committee" recruitment	Recruit a Green Committee including coordinators of waste, transport, and energy.	On "Green Sunday" Service (02/09/07)	Church	Minister	<p>These activities use strengths and opportunities of:</p> <ul style="list-style-type: none"> ● established rules & governance; ● commitment to the church; ● open to discussion & willing to change; ● members work in the relevant area to make difference and connection in a wider sense; ● connection to other churches & pass on information; ● easy to access regional resources; ● conference centre good for education. <p>Manage weaknesses and threats of:</p> <ul style="list-style-type: none"> ● lack of responsibility & delegation; ● political climate (sometimes not good for taking action); ● apathy towards the climate change issue.
Group eco-discussion	Church groups organise group discussion on waste, transport, and energy issues at St John's ²² .	From the second week of Sep. to Nov. 2007	Church groups	Group leaders	
Climate change film evening workshop	(1) See a climate change film; (2) Discussion on climate change from a political perspective; (3) Combine with public events on climate change; (4) Involve people from other church communities; (5) Integrate this activity evaluation/impact assessment in Green Committee report.	One or two evenings in Jul. 2008	Conference Centre	Minister/ Jonathan Boston ²³	
Green Committee report	(1) Green Committee reviews waste, transport, energy activities and plans the next year's programme; (2) Green Committee reports to the congregation and gets congregational response at "after service meeting" on the following "Green Sunday".	Aug./Sep. 2008	Church	Green Committee	
Information dissemination	Allocate Green Committee report and relevant programme information on St John's website and Presbyterian Church of Aotearoa New Zealand website.	Aug. 2008	---	Minister	

²² This study could refer to Workshop 2 (see Appendix 2). For example, include reflection on personal lifestyle, discussion on SWOT of St John's Church, and emphasize the relation between the theological themes on sustainability and practical actions.

²³ Jonathan Boston: St John's member, Associate Professor of Public Policy, Victoria University of Wellington.

Table 8: St John's Programme Transport Activity

Activity	Suggested			Responsible Person	Relating to SWOT
	Contents	Time	Venue		
Car pooling campaign (stage one)	(1) People who are doing and willing to do car pooling play a game called “locating your home” with a youth group: - the youth group creates a big simple Wellington map before the game; - the adults and the youth specify the map (with bus routes) and locate their homes on the map; - display the map in Church foyer;	Oct. 2007	Spinks Cottage/ Church/ Courtyard	Transport Coordinator	These activities use strengths and opportunities of: <ul style="list-style-type: none">● willing to change;● difficult car parking discourage driving;● church location is near bus routes. Manage weaknesses and threats of: <ul style="list-style-type: none">● slow to change;● geographically scattered congregation;● car parking is difficult²⁴ ;● bus routes have been cancelled;● political climate (sometimes not good for taking action).
	(2) Help people to get car pooling buddies based on information from the map and informal conversations through which the difficulties of car pooling can also be identified.	Nov. – Aug. 2007/08			
Car pooling campaign (stage two)	(1) Organise financial support for car pooling providers; (2) Organise car park (e.g. car pooling people have car park priority at St John’s);	Dec. – Aug. 2007/08	Church		
	(3) Car pooling story-sharing at tea time followed by questionnaires to evaluate this activity.	Aug. 2008			

²⁴ The issue of car parking was seen as both a strength (from the perspective of discouraging driving) and a weakness (from the perspective of church member increasing) by the participants.

Table 9: St John's Programme Waste Activity

Activity	Suggested			Responsible Person	Relating to SWOT
	Contents	Time	Venue		
Reduce and recycle green waste at St John's	(1) Reduce paper use at the Church office;	From Sep. 2007	Church	Minister	<p>These activities use strengths and opportunities of:</p> <ul style="list-style-type: none"> ● willing to change; ● established rules and governance; ● keep balance between conservative and liberal; ● conference centre good for education. <p>Manage weaknesses and threats of:</p> <ul style="list-style-type: none"> ● slow to change; ● more talk than act.
	(2) Set up recycling collection points.	Oct. 2007	Conference Centre	Waste coordinator	
Sunday bulletin scheme (stage one)	(1) Reduce Sunday bulletin use by avoiding unnecessary print such as hymns which are in the Hymn Book (If the hymns are changed from the Hymn Book and used very often, then supplement the Hymn Book); (2) More precisely anticipate required bulletin quantity; (3) Highlight recycling and indicate church recycling points on bulletins; (4) Allocate bulletin contents on St John's website for personal use and indicate this information on bulletins.	Sep. – Aug. 2007/08	Church	Minister	
Sunday bulletin scheme (stage two)	(1) Initiate family/buddy Sunday bulletin sharing which means: <ul style="list-style-type: none"> - a family with two people shares one bulletin; a family with three people shares two bulletins, and so on; - share bulletin with your buddy such as car pooling buddy; (2) Activity observation during services and informal conversations after services to identify difficulties and effectiveness; (3) Evaluate the activity's effectiveness by calculating the reduced bulletin quantity during the past year.	Feb. – Aug. 2007/08	Church	Waste Coordinator	

Table 10: St John's Programme Energy Activity

Activity		Suggested			Responsible Person
		Contents	Time	Venue	
1 (One Sunday in Mar. 2008)	Eco-seminar	Introduction to insulation;	5 – 6pm	Conference Centre	Energy coordinator
	Eco-forum	Share story of using insulation;	6 – 6.30pm (shared meal: 6.30 – 7pm)		
	Creation evening service	Creation worship (organised by one church group based on their group theological study).	7 – 8pm	Chapel	Group leader
2 (One Sunday in Apr. 2008)	Eco-seminar	Introduction to solar energy;	5 – 6pm	Conference Centre	Energy coordinator
	Eco-forum	Share story of using renewable energy;	6 – 6.30pm (shared meal: 6.30 – 7pm)		
	Creation evening service	Creation worship (organised by one church group based on their group theological study).	7 – 8pm	Chapel	Group leader
3 (One Sunday in May 2008)	Eco-seminar	Introduction to (1) energy consumption in appliance manufacture and house building; (2) appliance and car maintenance to encourage people to hang on to energy efficient cars and appliances;	5 – 6pm	Conference Centre	Energy coordinator
	Eco-forum	Share story on purchasing and maintenance of appliances and cars;	6 – 6.30pm (shared meal: 6.30 – 7pm)		
	Creation evening service	Creation worship (organised by one church group based on their group theological study).	7 – 8pm	Chapel	Group leader

Table 10: St John's Programme Energy Activity (continued)

Energy efficiency at St John's	(1) Turn off appliances such as lights and heaters at church when they are not in use;	Oct.- Aug. 2007/08	Church	Energy coordinator
	(2) Find out insulation and renewable information from Eco-seminars and Eco-forums; (3) Insulate church buildings if insulation is needed; (4) Find out the possibility of using renewable energy at church;	May – Aug. 2008		
	(5) Check out power consumption in spring and compare it with the consumption in the previous year.	Aug. 2008		
Relating to SWOT	These activities use strengths and opportunities of: <ul style="list-style-type: none">● financial resources;● church location (visible; conference centre good for education);● connect to other churches and pass on information;● redefine people's perception of Christianity through theological themes on "sustainability".	Manage weaknesses and threats of: <ul style="list-style-type: none">● busy and lack of trade skills;● hard to pass on Christian message;● more talk than act;		

5.4 Programme Design Rationale

The general rationale of the design was to initiate “faith-based activity” as an AR²⁵ project motivated by theological learning. This rationale was based on the understanding that AR is able to be combined with PAR and critical social science (Kindon et al., 2007). In the AR project, Green Co-ordinators and group leaders will work as insider action researchers. Specifically, the researchers are expected to engage in the AR cycles including four stages: diagnosing, planning action, taking action and evaluating action (Coghlan & Brannick, 2005:33) and to learn with the programme participants (other members of the congregation) in experiential learning cycles including four types of activities: experiencing, reflecting, interpreting and taking action (ibid, based on Coghlan, 1997).

Reflection is seen as a “critical link between the concrete experience, the interpretation and taking action” (ibid, p.35, based on Kolb, 1984 & Seibert & Daudelin, 1999 & Raelin, 2000 & Rudolph et al., 2001; McGill & Brockbank, 2004), so Raelin (2000, cited in Coghlan & Brannick, 2005:35) argues that “reflection must be brought into the open”. Therefore, the faith-based activities in the programme are all designed as open activities which need Green Coordinators and group leaders to further interpret the process of learning with other participants.

Moreover, Coghlan & Brannick (2005) recognise that reflection on content, process and premise play a key role in the AR cycle; Mezirow (1991) further identifies that content and process reflection may indirectly lead to transformation while premise reflection can directly result in perspective transformation (see Section 2.3.3). As such, the programme employed the model of an experiential learning cycle within the complex dynamics of an AR project (Coghlan & Brannick, 2005:41) (see Figure 6).

²⁵ Carr & Kemmis (1986:162) define action research as “a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out”.

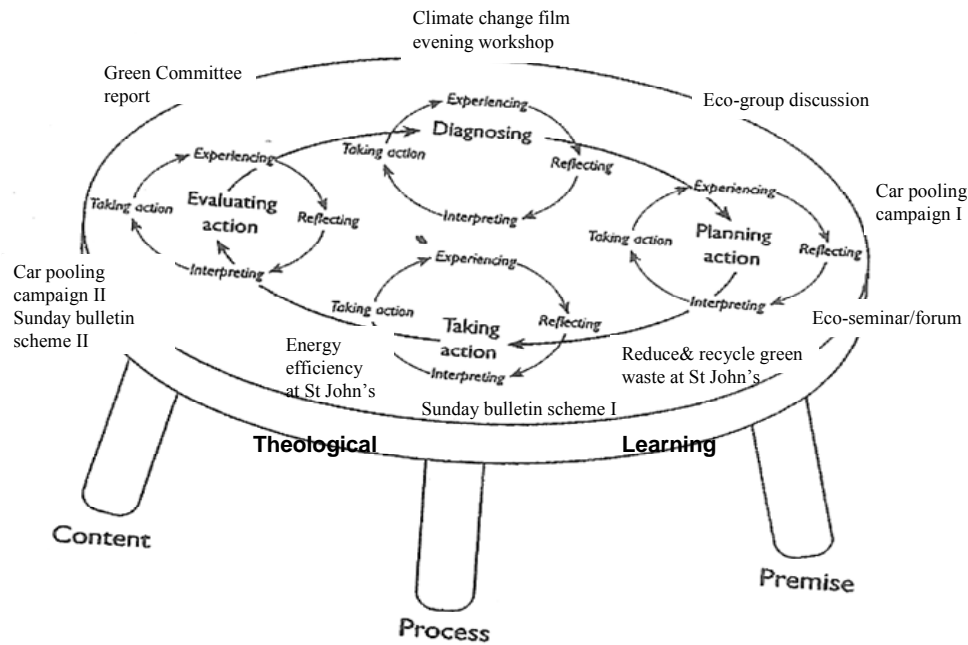


Figure 6: The Experiential Learning Cycle in Complex Dynamics of Action Research Project

Source: Adapted from Coghlan & Brannick, 2005:41

While helpful, caution is needed when reading this figure for the diagram only roughly shows how this model guided the programme design. The boundaries between diagnosing, planning, taking action, and evaluating action were not this clear. For example, the “Green committee report” could be evaluating previous action and also diagnosing for future action. Furthermore, what exact role one activity will play in the programme according to this model will depend on the action researchers (Green Coordinators and group leaders)’ interpretation at the time. While the experiential cycles that were designed to be fulfilled in each activity might be broken in implementation due to institutional constraints for example, the researchers will also have chances to create new cycles. This issue is further discussed in Chapter Six.

The design of evaluation activities, highlighted in the programme, was guided not only by the experiential learning cycles but also by two evaluation types identified by Walter & Marks (1981) (see Table 11 below).

Table 11: Types of Evaluation

	Formative²⁶	Summative²⁷
Formal	- Feedback on theological study	<ul style="list-style-type: none">- Green Committee report- Calculate reduced Sunday bulletin quantity- On-line Eco-seminar questionnaires- Check out Church's power consumption- Car pooling questionnaires at tea time
Informal	<ul style="list-style-type: none">- Informal conversations in car pooling campaign (stage one)- Observation and informal conversations in Sunday bulletin scheme (stage two)	<ul style="list-style-type: none">- Car pooling story-sharing at tea time

Source: Walter & Marks (1981:172)

The application of these two evaluation types in either formal or informal format helped me to consider the concerns for managing differences among the participants' opinions towards programme evaluation methods introduced in Section 4.2.6.2. For example, formative evaluation helps to identify difficulties of programme activities and an informal evaluation method will not create a heavy workload and can be flexibly used throughout a programme activity.

5.5 Concluding Reflections

This section offers some reflections on the methodological design and the process of executing it, which are based on the findings of Workshop 4.

5.5.1 Reflection on the Draft St John's Faith-based EFS Programme

Reflection on the draft St John's programme was the first activity of Workshop 4. One week before Workshop 4, I distributed the draft programme²⁸ with four reflection

²⁶ Formative evaluation refers to efforts during a learning experience to make ongoing changes in that experience to improve its effectiveness (Walter & Marks 1981:171).

²⁷ Summative evaluation refers to efforts at the end of a learning experience to determine the extent to which learning objectives have been achieved (ibid).

²⁸ I did plan to get feedback on the draft programme from my teacher in educational studies from the University

questions, and examples of “participant reaction objectives” and “organisational outcome objectives” to help the participants understand what these two types of objectives were. I also highlighted the programme evaluation activities and asked them to think about whether they were appropriate.

The participants had problems understanding the first three reflection questions, which were based on Huckle’s (1993) three forms of EE. The three questions were:

- (1) Will the programme provide knowledge and skills for St John’s community to take action on waste, transport and energy? If yes, what knowledge and skills? If no, how can we improve the programme from this perspective?
- (2) Will the programme increase the awareness of the issue of climate change by providing spaces for St John’s community to exam their beliefs, attitudes and values towards the environment? If yes, how? If no, how can we improve the programme from this perspective?
- (3) Will the programme enable St John’s community to reflect and act on their paradigms and mechanisms which shape their social use of nature? If yes, how? If no, how can we improve the programme from this perspective?

Huckle’s (1993) three forms of EE stem from Habermas’s theory of knowledge-constitutive interests. This theory uses threefold typology of human knowledge based on the identification of instrumental action, communicative action, and emancipatory action, and their relationship to three types of science (see Table 12).

before I distributed it to the participants. But the time was too tight for me to do that.

Table 12: Habermas's Theory of Knowledge-constitutive Interests Linking with Three Forms of Environmental Education

Environmental Education	Interests	Knowledge	Action	Science
Education for environmental control	Technical	Work (causal explanation)	Instrumental action (labour)	Empirical-analytic sciences
Environmental education for awareness and interpretation	Practical	Practical (understanding)	Communicative action (social interaction)	Hermeneutic (interpretative) sciences
Education for sustainability	Emancipatory	Emancipatory (reflection)	Emancipatory action (Instrumental action, communicative action, and the exercise of power and domination)	Critical sciences

Adapted from Crotty, 1998; Huckle, 1993; Mezirow, 1981

Firstly, they could not differentiate between questions (2) and (3); secondly, the answers that they gave to the first question showed that their understandings of “knowledge and skills” were related to communicative action rather than instrumental action. Their answers to the reflection questions are given in the following table.

Table 13: Reflection on the Draft St John's Programme

Answer Question	Yes How (what, why)?	No How to improve?
Provide knowledge and skills?	Theological motivation provides some of the knowledge.	
Increase awareness and provide spaces for examining attitudes...?	Some writings (e.g. green committee report) that people can read help them to think it through; even prayer gives people a chance to think through what they could do to satisfy God; practical actions help people change attitudes.	
Enable people to reflect and act on their paradigms and mechanisms?	It is very similar to the second question because “the paradigms and mechanisms are our belief structure” (Nell, Workshop 4 data, 26/03/07).	

Although the third reflection question didn't quite make sense to the participants, they talked a lot about what they called “mindset change”. For example, Nell said, “it is a major mindset change that has been required ... you really have to plug into [reflect

on] a big concept to get people to really overturn their lives.” Donald said, “it is an even bigger mindset change necessary in a Christian context ...” It seems to me that “mindset change” was a synonym for what I had called “paradigm shift”, which indicated the importance of translating my “jargon” to participants during facilitation.

Many valuable reflections such as the above dialogue were generated in the identification process of “participant reaction objectives” and “organisational outcome objectives”. The rationale for identifying these two types of objectives in Workshop 4 rather than at the beginning of the programme design was that the draft programme would help participants to identify these objectives, rather than have them be defined by me at the outset. In addition, the identification of these objectives also worked well as reflection questions for the participants. Participants’ reactions to the three reflection questions from Huckle’s (1993) three forms of EE revealed that discursive democracy was important in EFS practice. This issue is further discussed in Chapter Six.

The fourth reflection question was: are the programme activities, implementation processes, and evaluation methods of the draft programme ‘doable’ at St John’s Church? The participants thought what was ‘doable’ depended on what could be approved by St John’s Church Session and Council, and what could get support from the congregation. Therefore, four participants and I presented the programme to the Session on the 6th of June, 2007 and the Session approved this programme. Now the programme has gone to the Council to get financial support. The final version of the programme presented in this Chapter is almost the same as the draft programme, given that the participants thought the draft programme was very good (Workshop 4 data, 26/03/07).

5.5.2 Reflection on the Programme Design Process

The second activity of Workshop 4 was the reflection on the programme design process (Workshops 1-3). The reflection focused on the role of diagramming in achieving workshop objectives. Diagramming Activity 1 went very well²⁹, however it was somewhat difficult for several participants to follow the activity instructions in Diagramming Activities 2 and 3, and we didn't finish the third activity.

Figures 7-10 below show the diagrams created by the participants in Workshops 1-3.

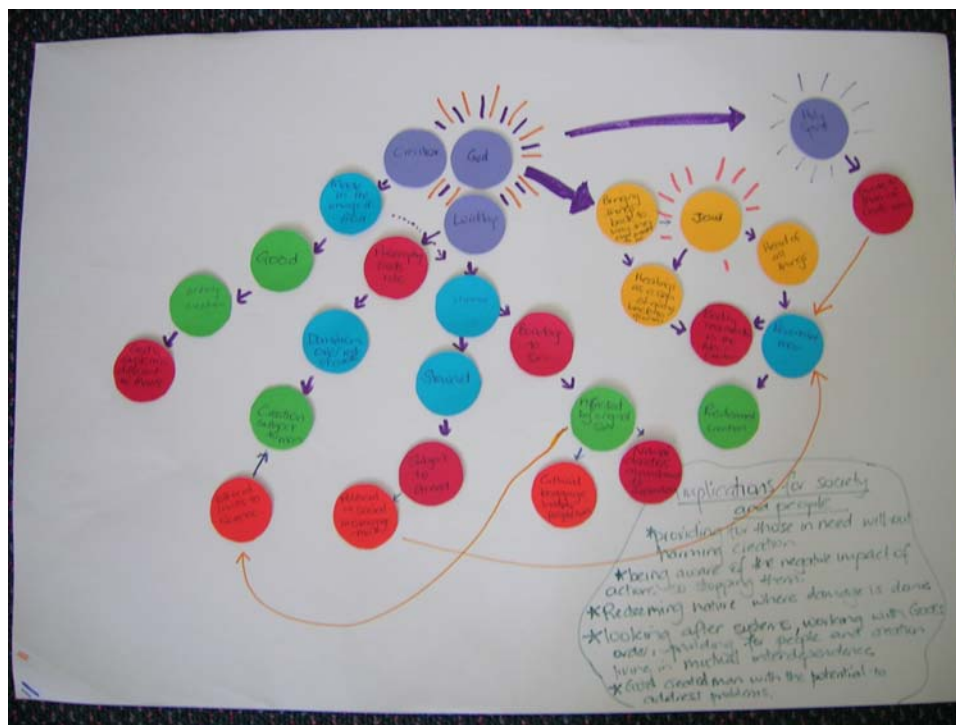


Figure 7: Creation Narrative - Created by the First Sub-group in Workshop 1

²⁹ There were two sub-groups in this activity. It went very well with one group which was formed by all the focus group members; it didn't work out with the other group which was mainly formed by non focus group members from St John's congregation who were keen to participate in the workshop and this group was significantly dominated by one person. This issue is discussed in Chapter Six.

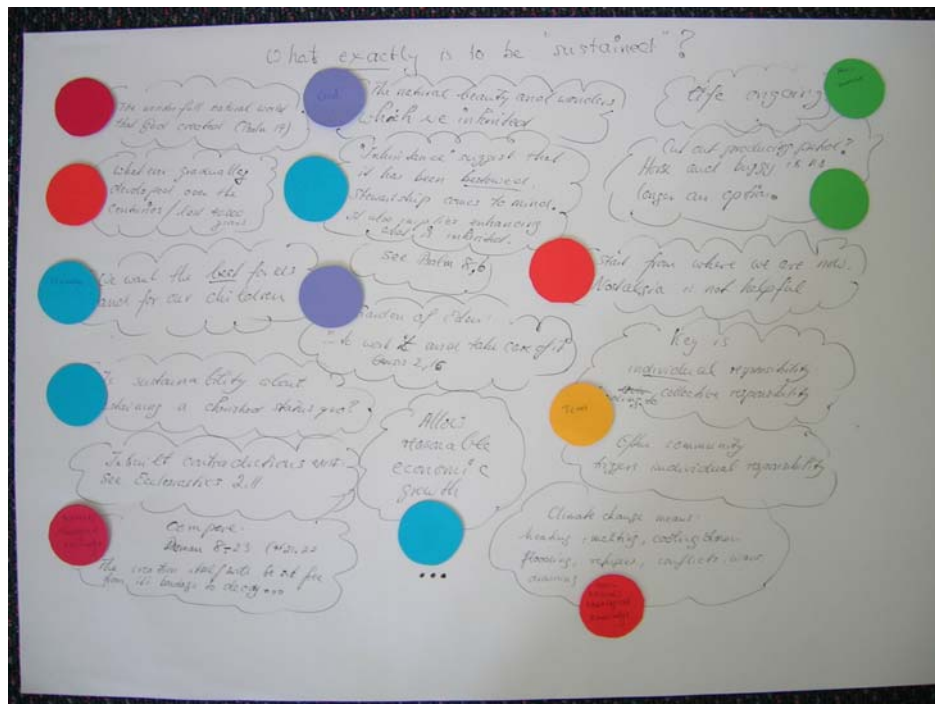


Figure 8: Creation Narrative - Created by the Second Sub-group in Workshop 1

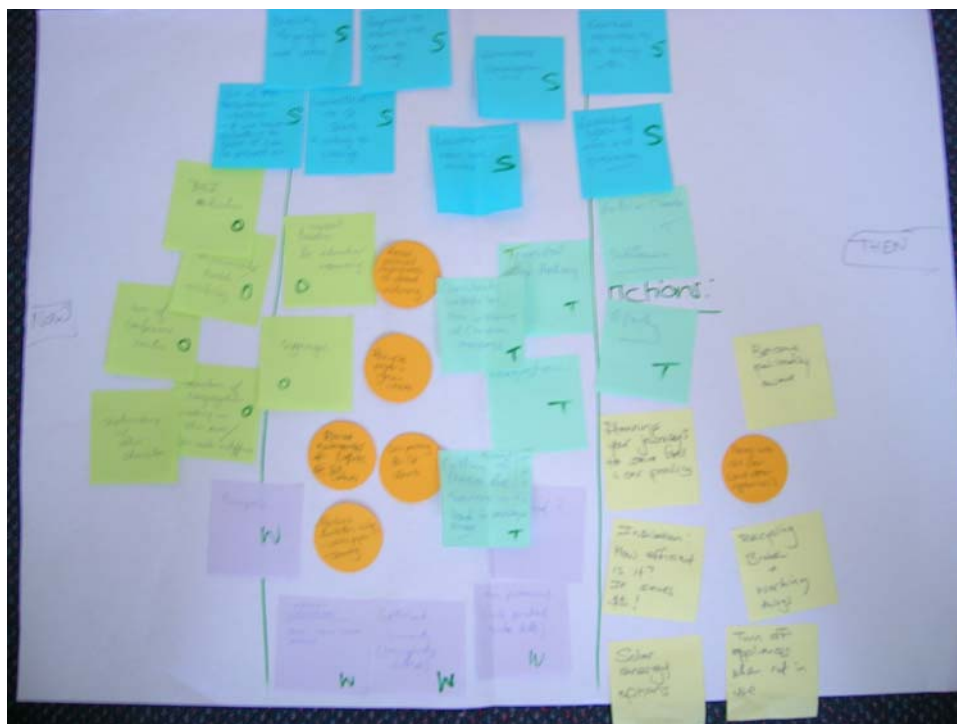


Figure 9: SWOT Stepping-stones - Created in Workshop 2

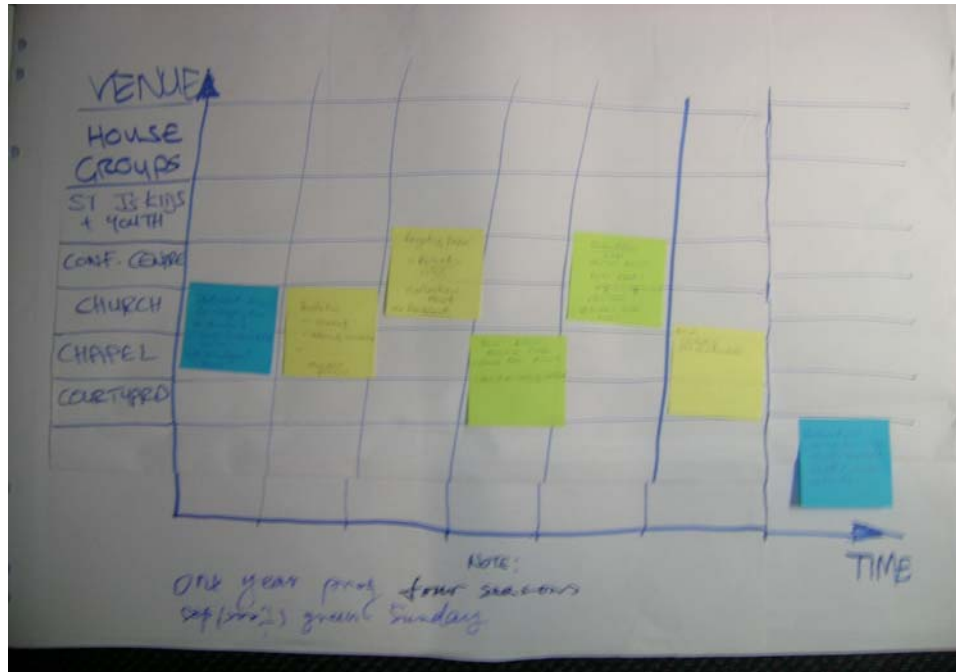


Figure 10: Education and Evaluation Co-ordinates - Created in Workshop 3

Time was identified by the participants and the facilitator as our biggest setback in the diagramming activities, but there were some other issues. The reason that Diagramming Activities 2 and 3 didn't work as well as the first activity was that activities 2 and 3 "came from [a] different point of view (Nell, Workshop 4 data, 26/03/07)" than that of activity 1. The first activity used instructions to facilitate the participants to create a diagram; the second and third ones asked them to put their contributions into the diagrams I had created. The latter, for some, were too "abstract" (Matthew, Workshop 4 data, 26/03/07). One participant pointed out that such "abstract" ideas probably stemmed from my Chinese language and culture (Sheila, Workshop 4 data, 26/03/07).

From my point of view, another factor also mattered: I had too many aims for the one diagramming activity. Activity 2 had two aims and activity 3 had three aims. The more aims that one activity had, the more complicated it was, and the more difficult it became for the participants to follow. Moreover, the first activity was conducted in two sub-groups with six participants respectively. However, activities 2 and 3 were practiced in one big group with twelve participants, which made the two activities

more difficult. This issue is further discussed in Chapter Six. Nevertheless, the participants and the facilitator felt that the diagramming activities were helpful to the workshops because they “condensed discussions on the topic” (Carol, Workshop 4 data, 26/03/07) and “stimulated group discussion and ‘unblocked’ discussions that had reached an impasse” (quoted from the facilitator’s reflection report).

Besides diagramming activities, we also reflected on other workshop activities. Table 14 shows whether and how the activities in Workshops 1-3 helped to achieve the workshop objectives from the participants’ point of view. I agree with the participants and we all felt that the summary of Workshop 3 data was especially helpful to the interviews. Recommendations on workshops and interviews are offered in Chapter Seven.

Table 14: Reflection on the Programme Design Process (Workshops 1-3)

Helped? Activities		Yes How?	No Why?
Diagramming	the 1 st one	simplified a very complex area	
	the 2 nd one	focused discussions on the topics (it would have worked better if more time was available)	
	the 3 rd one		
Introduction to relevant knowledge (e.g. case studies of existing EFS programmes)		stimulated thoughts	
Summary of each workshop’s data		systematic and captured very well the way discussions had gone; therefore, helped the reflections and the following activities	

5.5.3 Assessment of Workshop Impact

Due to the aforementioned reasons, Diagramming Activity 4 for the impact assessment of workshops (1-3) was as simple as possible (see Appendix 4) and it went well. This group had a very good dynamic; the participants encouraged each other to express opinions. Therefore, the main role of the facilitator in the first three

diagramming activities was to keep the discussions on the topic and on time. However, this good group dynamic might have caused a false consensus to arise. Diagramming Activity 4 managed this limitation along with the interviews because the participants could simply write their comments on paper and stick them on the poster without talking if that was their preference. The results revealed there was a space for different opinion in such an activity.

The following figure shows the diagram created by the participants in Workshop 4.



Figure 11: Workshop Impact Assessment - Created in Workshop 4

Diagramming Activity 4 had two groups of assessment questions (see Appendix 4), which were generated by the participants in the interviews. The first group was about the changes in their understandings of sustainability (“Blues” in the above diagram); the second was about the changes in their lifestyles in relation to the issue of climate change (“Greens” in the above diagram). The changes of understandings about sustainability can be summarised as the following:

- the workshops linked their faith to “sustainability”, which both strengthened their

faith and encouraged their actions by increasing their understandings on “sustainability” from a theological perspective;

- the workshops encouraged them to reflect more deeply on sustainability issues;
- the workshops improved their abilities to communicate with others on the concept and issues of “sustainability”.

Of the 12 participants, 10 people indicated they had made changes in recycling, 8 people indicated they had made changes in their transport patterns, 6 people indicated they had made changes in their energy use, and 8 people indicated they had made general changes (in lifestyle). Only 1 person indicated no change (in understanding relevant concepts) had occurred.

5.5.4 Limitations of the Research Methods

There were two main limitations associated with the methods used in this research (focus group discussions, individual interviews, and diagramming). First of all, there was a contradiction in the focus group sample. On the one hand, collaborative activity requires a high level of group dynamics (Hoggart et al., 2002; Cameron, 2005; Aubel, 1994). Therefore, I chose an existing group as the focus group, but this excluded other members of St John’s Church from participating in the research. On the other hand, a good group dynamic may result in a false consensus through collaborative activity (Veale, 2005; Aubel, 1994). The use of individual interviews can mitigate against the limitation of false consensus (Hoggart et al., 2002; Dunn, 2005), but it very much depends on participants’ communication abilities (Hoggart et al., 2002). Further, the three methods used in this research all inevitably depend on researcher (facilitator)’s interventions with participants (Hoggart et al., 2002; Kindon, 2005; Cameron, 2005), so the quality of research outcomes will be significantly influenced by researcher-participant rapport and the researcher’s capability of entering into the dialogue with participants. Finally, the design and implementation of these methods were extremely time-consuming since they involved several rounds of testing-analysis-and-

adjustment at both design and implementation stages.

5.6 Summary

This chapter introduced the research outcomes that achieved the research objectives. The rigour of the research was ensured by the participants' and my critical reflections on the research design and process throughout all research stages. The effectiveness of the research design and process was shown in Section 5.5 but according to the participants it should be also shown by the efficacy of the St John's faith-based EFS programme that was designed in the research process. In turn, the efficacy of the St John's programme was decided by the effectiveness of the PAR methodological design and the process of executing it. Therefore, the discussion in Chapter Six weaves between the research process and the St John's programme to demonstrate how this PAR process tried and the St John's programme tries to achieve empowerment and transformation through the research methods and the St John's programme activities.

CHAPTER SIX: ANALYSIS AND DISCUSSIONS

“If I do not love the world – if I do not love life – if I do not love people – I cannot enter into dialogue ...the dialogue of education [is inaugurated] as the practice of freedom...there is no true word [which is the essence of dialogue] that is not at the same time praxis. Thus, to speak a true word is to transform the world.”

----- Freire (1996:69, 71, 77)

6.1 Empowering Participants as Discourse Subjects

Conscientization is a central concept of Freire’s critical pedagogy and defined as a process of awakening of critical consciousness (Freire, 1996). The outcome of conscientization according to some writers like Cahill (2007b) can be understood as empowerment. Since “a PAR process engaged in addressing issues of power implicitly adopts an understanding of power as ubiquitous and circulating in discourses...” (Cahill, 2007b:275, based on Foucault, 1975), this section discusses the importance of empowering participants as discourse subjects in the research process and the St John’s faith-based EFS programme.

Empowering participants to be discourse subjects in research relates to the issue of whose discourse of sustainability or EE is being legitimised (Acselrad, 1999; Scott & Oulton, 1999). From Freire’s (1996) point of view, dialogue is an act of creation and dialogical education is a practice of freedom, which implies that nobody has the authority to speak for others. Accordingly, Gibson-Graham (2002, italics original, cited in Cahill, 2007b) argues that PAR is “about creating new discourses that *subject* in different ways, thus enabling subjects to assume power in new forms”. I understand that these “new forms” enable subjects to reach a desired outcome through the exercise of their power. In this context, it was the discourse of a faith-based EFS programme (rather than Huckle’s EE discourse) and its participatory approach which enabled participants to exercise their power. As Sheila says,

“Our motivation for taking action [that] would make a distinctive difference [for the St John’s programme][was a choice] between being a faith-based EFS programme and just an EFS programme”
(Participant, Workshop 4 data, 26/03/07).

The identification of theological themes on sustainability in this study worked as a jumping off point towards a path of perspective transformation. According to Mezirow (1981), there are two paths to perspective transformation: one involves completely overturning people’s worldview from the beginning; the other involves a “movement in the same direction that occurs by a series of transitions which permit one to revise specific assumptions about oneself and others until the very structure of assumptions becomes transformed” (Mezirow, 1981:8).

This study employed the second path. It started by facilitating theological reflection based on St John’s previous Minister’s two sermons on ‘the new creation and climate change’ in the first diagramming activity. For the design rationale for the activity, I drew on Trinitarian theology, which inevitably excluded other theological approaches to understanding sustainability, as I understood this to be St John’s community’s theological approach. Through this I was able to enter into the dialogue with them because my Christian life and theological learning also started within this community. This diagramming activity not only created a context for reflection for the participants but also inspired them to explore further the concept of sustainability. After the first workshop, a number of St John’s people who didn’t participate in the workshop spoke to me and said things like: “I heard what you have done with the house group, which is brilliant...”

In the last workshop, many participants expressed that engaging sustainability as an issue of their faith gave them a new incentive to both take action on climate change and to reflect on their faith. This made me reflect on the different languages of the secular world and the Christian world in their conceptualisations of sustainability. I

realise now that they both contribute to the “rhetoric-reality” gap in EFS more widely. The secular discourses on sustainability often have no space for theological terminology (or even the terminology of whatever cultural or social group sustainability advocates are trying to engage with), so that they hardly motivate Christians (or any other group) to take action on an environmental issue like climate change. On the other hand, Christian discourses on sustainability often hide the secular aspect behind theological terms such as “integrity of creation”.

The theological themes on sustainability identified by the participants integrated secular terms, and in the processes of theme identification and reflection, the participants discussed environmental issues, commented on different attitudes towards those issues and clarified their standpoints in cultural, social and political contexts. Thus, the theological themes, along with the identification and reflection processes carved out a space in otherwise secular discourses on sustainability, which was meaningful in the context of the participants’ faith and lives. Consequently, some participants, such as Skylark, were “finding hope and [the] possibility of working towards sustainability” (participant, Workshop 4 data, 26/03/07). As such, linking the concept of sustainability with Christian faith (or other cultures) is an important point from a practical point of view. It shows that the degree to which people take action is at least partly a product of enabling them to engage in an issue on their own terms and from within their own value system rather than by any attempt to completely change them to someone else’s value system. The latter approach (involving complete value change) has at least partly caused the gap between ‘rhetoric’ and ‘reality’ in EFS. It has also been a basic flaw of the standard approach to environmentalism which depends on the participant adopting the value system of the ‘saved’ environmentalist. In this regard, the participants expressed the willingness to seek their own Christian approach towards sustainability, rather than to follow some environmentalist approaches which they thought were too ecocentric (Workshop 1 data, 26/02/07).

Stewardship is a central doctrine of the Trinitarian theology approach to

understanding sustainability that was used in the identification of the theological themes in the study. However, as I introduced in Section 3.2, the doctrine of Christian stewardship is often seen as anthropocentric or theocentric. In this study, the participants considered their relationships with God before they considered their relationships to and with other people and the Earth. More precisely, they wanted to improve their relationship with God by improving their relations with other people and the Earth because God requires them to take care of people and the Earth. What matters more then, is that “it’s pretty easy to say “we’re stewards, we have duty to look after [the creation] but it’s a bit more [than that]. It’s having enough faith to go out and do something” (Ronald, Workshop 4 data, 26/03/07). The significance of the themes therefore, rests in their ability to motivate Christians to act on climate change even though they are not ecocentric. The ability of a theocentric faith to move followers to ecocentric action may also make sense to other faith-based communities other than Christian communities because “to turn toward God (theocentrism)” would be simultaneously “to turn toward God’s beloved world (geocentrism)” (Rasmussen, 1996:98, based on Douglas, 1993:309). Furthermore, the meaning of sustainability can be presented in action because practice itself has symbolic meaning (Redcliff, 2005). In other words, an “ecocentric” or “anthropocentric” orientation to practice is not only shown by people’s language but also by their actions. In this way, EFS is able to fulfil its responsibility recognised by Orr (1992) of changing both people’s talk and their behaviour.

The path of “movement in the same direction” (Mezirow, 1981:8) to perspective transformation was designed to continue from the programme design process into the St John’s programme proper. The programme was planned to facilitate St John’s congregation to take realistic action. One elder used the metaphor of eco-bulb to emphasise the importance of “movement in the same direction” in the Session meeting in which the St John’s programme was approved. He said that it was impossible to change all St John’s bulbs to eco-bulbs right now, but they could start to use eco-bulbs when they need new bulbs and change the old church settings to fit

eco-bulbs. His point with this metaphor was that social and environmental change has to be a gradual process.

This process was incorporated into the reflection and action cycles of the St John's programme. Reflection and action are two dialectical dimensions of Freire's concept of praxis. In considering reflection and action, Freire (1996:68) states that "if one is sacrificed – even in part – the other immediately suffers." The sacrifice of action results in verbalism and the sacrifice of reflection results in activism (ibid). The chances of revising and transforming people's perspective were therefore thought to be most likely through praxis because "the element of practically doing things helps people think through what they are doing" (Matthew, Workshop 4 data, 26/03/07). In this regard, when combined with Huckle's (1996:12) proposal that nature can be viewed as "a social category to be consciously created (historical materialism)" (see Section 2.3.1), the ideal outcome of revising and transforming participants' understandings of sustainability might not necessarily be "ecocentrism"; rather, it could be their constant and critical conscious interpretation of their relationships to God's world and relationships among themselves in praxis.

The St John's programme is therefore able to work as praxis because it provides the necessary discursive space for participants to critically reflect on their faith and lifestyles. The space empowers Green Coordinators and group leaders, who are educators as well as learners in the programme, to enter into dialogue with their fellow learners by using their own language. In this way, their talking is not "just alienated and alienating rhetoric" (Freire, 1996:77). A similar space was what I also tried to construct in the research process.

Critical reflexivity helped me in my efforts to create suitable spaces within which the participants felt empowered to use their own terms and language. For instance, at the first diagramming activity design stage, I was clearly aware of the advantages and restraints available to me as a member of St John's to design this activity. Therefore, I

took advice not only within St John's but also outside of St John's. In analysing the results and comments from the diagramming workshop pilot with other church members, critical reflexivity helped me to successfully identify how to modify the exercise for the research focus group. When I was designing the second and third diagramming activities, I reflected less deeply on my positionality as a Chinese environmental studies Masters student. Had I done so, I might have realised more fully that even though the participants and I shared a similar subject position as members of St John's community, we differed significantly in our academic training and cultural backgrounds. At this point, I failed to critically reflect on my positionality because, in part, I had an unconscious confidence in the education-related design resulting from my prior teaching qualification and seven years' professional experience in education. Such confidence became a barrier to critical self reflexivity. The relative failure of Diagramming Activity 3 awakened my awareness of the need for critical self reflexivity, through which I successfully designed Diagramming Activity 4. As a researcher therefore, I recognised how important to restrain one's own subjectivity³⁰ in order to extend participants' subjectivities through critical reflexivity since Freire (1997[1970], cited in Cahill, 2007b:275) "insists that participants must engage in the struggle, the process of conscientization as subjects not objects". From my position as a Christian, I see this restraint as an act of love. Christian love and Taoist philosophy of *Wu wei* helped me to build rapport with the participants, but I also needed critical reflexivity to enable participants to empower themselves as discursive subjects and to engage with participants in terms with which they were familiar.

From Foucault's (1972) point of view, discourses involve a power/knowledge relationship which defines the meaning of experience, so that some meanings "become dominant and others are excluded" (Kosmidou & Usher, 1992:84). Thus, discourses might result in conflict. In the last workshop when referring to the draft St

³⁰ Subjectivity involves the insertion of personal opinions and characteristics into research practice (Dowling, 2004:25).

John's programme, one participant translated my "enormous amount of work" into her own terms of "who, what, why, when, where, and how" (Sheila, Workshop 4 data, 26/03/07). Here she used her terms to emphasise the value she placed on discursive simplicity that she could more easily engage with.

From her point of view, her simple discourse was more practical than mine because "[people will abort the programme] if they cannot read [it] in 5 minutes" (ibid). This presented a conflict for me and this conflict can be resolved according to Freire (1996) by educator-learner dialogical relations in education, which I discuss more fully in the next section.

6.2 *The Dialogue of Education*

In accordance with Freire (1996), dialogical education has two main characteristics. One is a practice of freedom – liberation; another is a joint inquiry and learning process of both educators and learners through equal dialogue. I attempted to foster "liberation" by encouraging participants to critically inquire about their relations to and with God's world and with each other in a praxis of reflection and action. This encouragement started from posing problems about what God requires us to do when we are facing climate change and how we can fulfil this requirement. This approach is identified by Freire (1996) as a "problem-posing" approach as introduced in Section 2.3.2.

In the process of exploring the problems that I posed, there was a conflict between one participant and myself as mentioned in the previous section, and I wish to reflect further on it here. While the participant challenged my discourse, this conflict functioned as a means for our mutual learning. First of all, my discourse of the draft St John's programme induced that participant's critical thinking. She thought about the way that we could explore the problems that I posed. Then her discourse

stimulated group discussion and drove me to more critically reflect on my discourse and positionality. Such mutual learning has to be based on mutual trust between educator and learners because mutual trust “leads the dialoguers into ever closer partnership in the naming of the world³¹” (Freire, 1996:72). With this process in mind, the St John’s programme was designed as a dialogical education programme in which Green coordinators and group leaders could work as educators and co-learners with other participants in the congregation to engage praxis.

The St John’s programme aimed to help Green Coordinators and group leaders to apply experiential learning cycles. However, these learning cycles will not necessarily be carried through into the implementation phases due to institutional constraints. For instance, the programme will not necessarily start in September 2007 as planned because it is hard to estimate when the Session will get the programme implemented although it has been approved. At present, both the positions of Minister and Assistant Minister are vacant at St John’s, so the Session’s work is currently focused on trying to fill these positions. The implementation of the programme is not necessarily dependent on the appointment of these ministers, but their presence and commitment to it could enable it to occur more quickly and to achieve greater support.

While challenging, I would argue that experiential learning cycles could be created in the implementation process if the educators have the necessary consciousness. This consciousness would include the critical awareness of their positionality to resolve conflicts in dialogical education. As participants, the Green Coordinators and group leaders are now in a position to interpret the programme in their own ways; but as educators, they are also required to develop the means through which their fellow learners can empower themselves to “be truly human” (Freire, 1996:53). Thus, the problem is “producing the teachers to produce the situations to produce the experience to produce the teachers” (Kosmidou & Usher, 1992:88). As such, there appears to be a dilemma: to produce “the teachers” or “the situations” first? This research as a PAR

³¹ “Naming the world” is in the sense of both reflecting on the world and transforming the world (Freire, 1996).

process produced “the situations” first. Through them the participants have experienced critical reflection and action. Their experiences in this research have helped them to build the critical capacity which may inform the later practice of the St John’s programme as an AR project (Section 5.4).

The idea of designing EE programmes to be AR projects in which teachers work as action researchers was first proposed by Stenhouse (Gough, 1997, based on Carr & Kemmis, 1986). However, this suggestion was overlooked by EE curriculum developers mainly because its outcomes are hard to assess (Gough, 1997). For the St John’s programme educators, this will not be an issue because they do not have the same assessment pressure as school teachers. Also, some programme activities such as “group theological study on ‘sustainability’” and “group eco-discussion” set up an arena for the educators to employ a problem-posing approach through which the critical consciousness of the learners and the educators can be awakened. More importantly, the research workshops have already engaged the participants in a democratic EFS process, in which they showed their awareness of dialogical education. For instance, in workshop discussions, Emma said that it was important to encourage other St John’s members to discuss sustainability issues (Workshop 3 data, 26/02/07) and this translated into the “group eco-discussion” activity in the programme.

In this study, the engagement of the participants in EFS was in relation to existing social, cultural, and political contexts. The uniqueness of PAR in this regard is that it is “a sort of ...critical educational process which ‘jumps scales’ (Smith, 1993) by drawing connections between embodied personal experiences and larger social processes” (Cahill, 2007b:279). In the second workshop, from the personal lifestyle reflection activity to the SWOT analysis of St John’s Church, the participants were facilitated to quickly situate their personal actions in institutional, social and political contexts (see Section 5.2); in the last workshop, the identification of “participant reaction objectives” and “programme outcome objectives” showed such

“connections”. The following excerpts show how the discussion situated personal concerns in wider social and cultural contexts:

Nell: The participant benefit may not [be] relating to a personal benefit, but they relate to the reason why we’re doing [a] faith-based [EFS programme]. We are doing this because of our faith that this is what God wants us to do...

Sheila: [it is] a sense of integrity.

...

Carol: The idea of integrity, you can take it as personal faith but [it builds on] the integrity of churches as well. It gives emphasis to why churches shouldn’t be silent about it.

...

Nell: It’s a major mindset change that has been required, that’s not just small changes at the edges ... you really have to plug into [reflect on] a big concept to get people to really overturn their lives.

Donald: ... so it needs to be a kind of mindset change to the extent of “yes, it has been given by God, but not just for ourselves to use as we see fit, but it’s about changing and so it can be used sustainably.”

Sheila: In the general interest.

Carol: It’s thinking about [the programme’s] context that gives you something to relate ...

Nell: ... pull people back to some of the very basic core values and doctrines of Christian faith with the one like “all people are created by the image of God” ... these things are engrained in the society. When you want to change, you have to resonate with those engrained basic structures and beliefs. And then here you need to resonate with the faithfulness to God...

Matthew: In this context, it’s important that people can translate this case quite quickly from that faith-based proceeding to a secular-based proceeding. The two maybe different, but it doesn’t have to be a conflict in any sense.

Nell: If I ask the congregation to take the programme, I wouldn’t be stressing the financial benefit...you might mention it as an additional reason...

Sheila: It’s a by-product.

Matthew: It’s a longer term. Short term, there might be some cost...

Nell: The bonus of savings you would want comes from a different angle but ends up at the same place.

(Workshop 4 data, 26/03/07)

Accordingly, we designed the St John's programme activities that aimed to situate personal concerns in their wider social, cultural, political contexts, so that participants would be able to address the interdependence of economy, society and the environment. This independence is stressed in the *Tbilisi Declaration* but seldom addressed in EE practice according to Chapman (2004). For example, the rationale of the series of activities including Eco-seminars, Eco-forums, and Creation Evening Services was to integrate elements of Huckle's (1991) three forms of EE and to strengthen the linkages between the ecumenical community and the wider community. Moreover, the group activities in the St John's programme were designed to function as a collective process of critical reflection, in which personal conscientization can be encouraged by the group. This is also a unique aspect of PAR and AR in contrast with Freire's individual-based conscientization leading to liberation (Cahill, 2007b; Kindon et al., 2007).

However, regardless of whether liberation occurs in a group or individually, it is not easy. Freire (1996:31) states that liberation is "a childbirth, and a painful one" for it is painful to critically reflect on one's old concepts and lifestyle or to overturn one's life. Two participants tried to escape from this type of discomfort with comments like 'I am doing well', 'little greenhouse gas can be generated at a personal level'. But they were encouraged by other participants to engage in more critical inquiry through group discussions. One still left after the third workshop³² and the other participant didn't say anything in the workshop impact assessment activity. Another participant indicated that his old biblical/theological concepts towards sustainability were not revised as a result of his participation in the study.

Nevertheless, these responses are not surprising. It is understandable that learning sometimes does not happen according to experiential learning theory because learning, which is a personal choice, is decided by personal histories and one's ability to experience possibilities (Malinen, 2000). Yet, the participant who did not say anything

³² This participant turned up in the middle of the second workshop.

in the workshop impact assessment activity was the one who challenged my discourse in the draft St John's programme. Therefore, she might not have changed her behaviour with respect to climate change, but her critical thinking had already been stimulated through the PAR approach and dialogical education process. As such, this study as a PAR process functioned as a place where the participants and I could critically reflect on the interface between education, the issue of climate change and understandings of sustainability. This PAR project generated a loop of praxis that started from applying PAR theories and methods and is currently being completed through the critical reflection on the methodology offered in the next section. It was hoped that this process would bridge the 'rhetoric-reality' gap of the critical approach in EFS practice. Or, put it in Freire's (1996) words, it was about naming the world through reflection and transformation.

6.3 Transforming the World

Freirian based critical pedagogy has been applied in this PAR process as a means of transforming the world. However, the pedagogy as well as participatory research does not lack its criticisms. Some have argued that Freirian based critical pedagogy "provokes new forms of dependency and oppression" through "a fairly artificial way with utopian images of freedom, justice and equality" because it is not able to address crucial issues in classroom practice (Ellsworth, 1989, cited in Wildemeersch, 1992:28). Elsewhere, drawing on Foucault's (1980) argument that power exists everywhere instead of just at the macro and central levels, Kothari (2001:142) claims that participatory practitioners themselves are "conduits of power" working invisibly through simplified participatory techniques. She suggests that this practitioner-participant power relationship is hidden by participatory discourse that draws people's attention to power relationships at macro levels and away from the micro effects of

power through the use of binary opposites such as “uppers” and “lowers”³³.

Responding to the above criticisms, I would argue from two perspectives. Firstly, according to Kothari’s (2001) statement that power is everywhere, I would argue that participants empower themselves to exercise freedom and to seek justice and equality. This can be realised through the choice of research methods in PAR such as diagramming and other participatory activities. This is illustrated in the following exchange between myself and a participant:

Xiaoming: Do you think the second and third workshops would have gone better if we had simply discussed things instead of constructing diagrams?

Ronald: Then you would not have a structure to put up. You would’ve got a very vague statement. The structure is something that you need to make any academic reasoning... we have had the diagram in the first workshop; I think you would be better to stick with [constructing] diagrams...

Xiaoming: Should we use a diagramming activity in the last workshop?

Ronald: What are you going to ask us in the last workshop?

...

Ronald: You have to keep the same activity skeleton in the last workshop.

Xiaoming: But I think the most important thing is if people enjoy it.

Ronald: That’s not the point. You’re conducting a serious academic exercise... Therefore, we take it seriously... we enjoy making a serious contribution to improve your academic work...

(Interview data, 07/03/07)

The above dialogue demonstrates that Ronald sacrificed his freedom of verbal discussion to achieve the freedom of “conducting a serious academic exercise”. Indeed, nobody can escape the truth that freedom, justice and equality exist relative to and in relationship to others (Raes, 1992).

Therefore, my second argument is that the search for absolute freedom one inevitable

³³ “Uppers” and “lowers” are usually used by participatory literature refer to the powerful (“uppers”) and the poor, weak and vulnerable (“lowers”). For example, in Robert Chambers’s (1997) book *Whose reality counts? Putting the first last*.”

sacrifices other people's freedom as "all individuals are vehicles of power" (Kothari, 2001:141). Consequently the pursuit of justice and equality becomes in vain. The first diagramming activity was carried out by two sub-groups. It worked very well in the first sub-group (see Figure 7, p.79) as its simplicity provided spaces for the participants to engage with and create complicated knowledge (Workshop 4 data, 26/03/07). But it didn't work out in the second sub-group (see Figure 8, p.80) mainly because that group was significantly dominated by one participant, so that the other participants didn't have a chance to fully present their opinions and to construct a diagram. That dominating participant over-exercised her power and freedom, which somehow deprived the power and sacrificed the freedom of the other participants in her group. After Workshop 1, several participants from both groups expressed regret that the diagramming activity in the second sub-group was dominated by one person.

The dominating participant was a new member of the focus group and Workshop 1 was her first participation in the group activity. Some old members of the focus group were talkative but they did not dominate. On the contrary, they worked as facilitators in group activities to encourage quiet members' participation. In this regard, I did not separate the group into sub-groups in the rest of workshop activities even though the group was as big as 11 to 13 people. This created a space for every participant involved within the egalitarian group dynamic. As a result, nobody dominated after Diagramming Activity 1 and the participant who had dominated previously actively participated in the rest of research activities. In this way, the participants might have experienced a deeper liberation towards freedom through acceptance rather than resistance. Therefore, a key to seeking authentic freedom, justice, and equality through critical pedagogy and participatory methods is that practitioners must create opportunities for the theory to penetrate practice. In this case, pursuing this PAR process on the basis of the philosophy of *Wu wei* enabled me to catch "the natural flow of things" (Flower, 2005:119), so that I could find ways to accept and work with the dominating participant, rather than resist her. More importantly, a PAR approach provided spaces for all participants to empower themselves and for me to help the

participants in this process.

The spaces that PAR provides blur the inside/outside boundaries of the research project through their emphasis on “exchange” and “interaction” (Cahill, 2007b:287). EFS in St John’s community continued after the completion of this research and the roles of the research participants and myself were exchanged in the post-research EFS practice. In the research process, I was a research facilitator and they were participants as co-researchers. But in the EFS work after this research, they became facilitators and I became a participant and co-facilitator. For instance, the St John’s programme presentation to the Session Committee was organised and conducted by four participants who are St John’s elders. I only spoke for three minutes in the presentation to introduce the reason for the workshops. In the Session meeting, the four participants facilitated other elders to critically reflect on the responsibility of St John’s as a Christian church in addressing the sustainability issue of climate change; the research focus group (including myself as an ordinary group member) facilitated a creation worship evening service in early July to inform the subsequent St John’s programme implementation. In the evening service, we facilitated the participants to critically reflect on their faith of creation through our own critical reflections.

Thus the work of EFS in St John’s community has started to transfer from the PAR practice (this research) to an AR practice of the St John’s programme. There are overlaps between these two types of practice. For example, the activities of “group theological study on ‘sustainability’” and “group eco-discussion” are based on the research Workshops 1 and 2 respectively. In other words, this research partly functioned as the stages of “diagnosing” and “planning action” in the St John’s programme as an AR project (see Section 5.4).

One characteristic of AR is the integration of theory and practice (Carr & Kemmis, 1986). However, the great “practicality” of AR results in it being criticised for “too closely [conforming] to the conditions of the status quo” (Carr & Kemmis, 1986:207).

If so, the problem goes back to the issue of “movement in the same direction” (Mezirow, 1981:8) that is necessary and important as I argued in the previous two sections. Chapter Seven advances some of these points within a discussion of the conclusions drawn from this research.

CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS

This chapter returns to the original aim of the research by providing answers to the overall research questions. It also includes recommendations for similar practice in other faith-based communities. I note some possible areas for further research and provide an epilogue highlighting the role of this research as a case study of faith-based EFS concerning climate change.

7.1 Answers to Overall Research Questions

Question A: What would the practicing community of St John's Church consider to be an appropriate faith-based EFS programme (specifically addressing the issue of climate change)?

An appropriate faith-based EFS programme for St John's Church can be an AR project because an AR project, by functioning as a dialogical education programme, is able to facilitate St John's congregation to take realistic action on climate change motivated by their reflections on their faith. In other words, an AR project has spaces for creating reflection and action learning cycles, through which the St John's congregation as discursive subjects can gain the freedom to critically enquire about their relations with God's world and with each other as I discussed in Chapter Six. In this way, the empowerment and transformation aims of EFS may be achieved.

Question B: What can a practical case study of St John's Church tell us about how to develop faith-based approaches to education for sustainability?

This study demonstrated that PAR was an effective methodology to develop faith-based approaches to EFS because this PAR process achieved the aim of designing an appropriate faith-based EFS programme. It also functioned as an EFS process in itself. In this process, the participants and I critically reflected and acted on the interface between education, climate change and understandings of sustainability in social, cultural and political contexts. Therefore, this PAR process itself was also a dialogical education programme as I discussed in Chapter Six. Through the critical reflection and action (praxis), the research process provided situations for the participants to build the critical capacity which may inform the later practice of the St John's faith-based EFS programme as an AR project. Further, because of PAR's characteristic blurring of inside/outside boundaries, the participants and I were able to exchange our roles in the post-research EFS work. As such, this PAR process interacted into the AR project, with the hope of bridging the 'rhetoric-reality' gap of the critical approach in St John's EFS practice.

Question C: What lessons could be shared to support similar practice in other faith-based communities in New Zealand?

Some lessons that I learnt from the St John's programme design process may help similar EFS practice in other faith-based communities. They are:

1. Allow more workshop sessions

Time was our biggest setback. Each workshop session³⁴ was packed full, to the point where some activities were rushed. But too long a session would have left participants feeling tired and de-motivated, so allowing for more sessions is a possible way to get through all the activities at a good pace.

2. Keep diagramming activities as simple as possible

Simplicity is important for diagramming activities. It is important to set just one objective for one diagramming activity and maintaining group size within 6 people may help to keep the activity simple, so that it can provide spaces for

³⁴ Each session was planned to be 90 minutes, but it actually took between 105 and 120 minutes.

participants to create their own knowledge.

3. Employ group pre-testing for diagramming activities

Group pre-testing is more helpful than individual pre-testing for diagramming activities because group dynamics significantly influence the effectiveness of an activity.

4. Tasks of interviews

Originally I designed interviews to only identify evaluation methods for the programme design process. But actually they covered the identification of evaluation methods for the programme as well. It worked well to combine these two tasks in interviews because they can mutually illuminate each other.

5. Questions for reflecting on draft programme

The identification of “participant reaction objectives” and “organisational outcome objectives” can be used as reflection questions for *participants*; Huckle’s (1993) three forms of EE can be used as reflection questions for the *researcher*.

Based on the above lessons learnt, I would recommend that the following workshop outline be adopted by any other communities wishing to design a faith-based EFS programme (see Table 15).

Table 15: Suggested Workshop Outline

Workshop	Task	Time/Week
1	1. Introduce the issue (e.g. climate change) and secular definitions of sustainability (presentation);	Two hours/1
	2. Identify theological themes on sustainability (diagramming activity).	
2	1. Introduce existing Christian themes on sustainability and present the summary of theological themes identified in Workshop 1 (presentation);	Two hours/2
	2. Reflect on the diagram created in Workshop 1 and the themes that identified through Workshop 1 diagramming activity (group discussion);	
	3. Reflect on personal lifestyle to identify possible actions on climate change and broadly identify the faith-based EFS programme activities (personal reflection & group discussion).	
3	1. SWOT analysis of the community (diagramming activity);	Two hours/3
	2. Case studies of EFS programmes (presentation).	
4	1. Present the summary of the SWOT, the personal actions and programme activities identified in Workshop 2 and reflect on it (presentation & group discussion);	Two hours/4
	2. Specifically identify the faith-based EFS programme activities (diagramming activity);	
	3. Identify implementation processes for the faith-based EFS programme (diagramming activity).	
Interval	1. Present the summary of the programme activities identified in Workshop 4 and reflect on it(presentation & group discussion);	Half hour/5
	2. Interview: identify evaluation methods for the faith-based EFS programme and the programme design process;	---/6
	3. Researcher designs a draft faith-based EFS programme.	---/7&8
5	1. Propose a draft faith-based EFS programme (presentation);	Two hours/9
	2. Reflect on the draft faith-based EFS programme.	
6	1. Reflect on the programme design process (Workshops 1-5);	Two hours/10
	2. Assess the programmed design process impact (Workshops 1-5).	

Last but not least, the most important lesson that I have learnt through this study is to always be flexible, so that I am able to work with participants as co-researchers in a diversity of contexts.

7.2 Future Research

This research explored the critical approach to EFS in a faith-based context both theoretically and practically. However, the study was limited by its scope, so several themes remain unexplored. These themes indicate the following possible areas for targeted future researches that would build on the outcome of this study and contribute further to the advancement of this field of educational praxis.

Area one: research on environmental education discourse

Huckle's (1993) EE discourse and Mezirow's (1981) educational critical theory were parts of the theoretical framework for the study (see Section 2.3). However, Huckle's three forms of EE did not make sense to the participants (see Section 5.5.1), and Mezirow's theory has been criticised for its separation of three types of learning – instrumental, communicative/dialogic, self-reflective (Pietykowski, 1996). It seems interesting while both Huckle's and Mezirow's work are based on Habermas's critical social science that emphasises the integration of theory and practice (Carr & Kemmis, 1986), the former did not completely work out in practice and the latter was criticised for theoretical separation. For this study, it is unknown why Huckle's EE discourse did not work for the participants and whether the separation in Mezirow's theory will cause cognitive difficulty for EFS practice. Thus, research on EE discourse might help to further integrate theory and practice for the critical approach to EFS.

However, Pietykowski (1996) suggests moving attention from an emancipatory educational process highlighted by Habermas and Freire to one which aims to understand how the creation and dissemination of knowledge are influenced by power relationships through Foucault's theory of power/knowledge. This informs the second area for further research.

Area two: research on combining poststructuralist pedagogy with critical pedagogy

The combination of critical pedagogy with poststructuralist pedagogy in EE is suggested by Gough (1997) (see Section 3.3). Central to the poststructuralist pedagogy is empowerment and searching for more empowering ways of knowing, which is also a main concern of critical theorising according to Gough (1997). This study explored to some extent how the power relationships between the researcher and the participants influenced this faith-based EFS practice (Chapter Six). Further exploration of the power relationships between participants themselves may benefit EFS theory and practice by dealing with participants' contradictory opinions (see Section 4.2.6.2) and the issue of domination in group activities (see Section 6.3).

Area three: research on realising sustainability education to be a core of Christian education

The third area worthy of further research is how sustainability education could enhance the praxis of spirituality itself. In this research, although most participants indicated that their faith has been strengthened, they also emphasised that working on sustainable issues was only part of their Christian mission. In other words, if sustainability education cannot play an effective role in enhancing the 'core business' of religious practitioners, it won't gain momentum in Christian communities. Thus, it would be interesting to know if PAR could bridge the praxis of spirituality and EFS by functioning as a critical methodology, so that it could benefit both sustainability education and Christian religious education. If so, PAR can be an approach for realising Sterling's (2003) argument that sustainability education should be a core of all education (see Section 3.3).

The first two research areas can be two foci of this research area and the first two are also integrated with each other because power and knowledge are exercised through

discourse (Gough, 1997).

7.3 Epilogue

In early 2007, the Intergovernmental Panel on Climate Change (IPCC) released the summary for policy makers – its fourth assessment report (IPCC, 2007). The report shows CO₂ and other greenhouse gas emissions, global temperature and sea levels are continuing to increase quickly (ibid). The impact of climate change on New Zealand will be significant, for instance, there will be more serious and a higher frequency of storms and coastal flooding (MfE, 2006). The fourth IPCC assessment report also states that humans are responsible for these consequences (IPCC, 2007). To encourage people to take action at the community and personal levels, the New Zealand Ministry of the Environment published several documents in December 2006, such as *Taking Action on Climate Change*, and *Understanding Climate Change*. While EE is acknowledged to play a key role in encouraging action (see Section 3.1), difficulties on moving from rhetoric to action have been shown worldwide including New Zealand (Chapman, 2004). For this study, Christian faith played a significant role in motivating Christians to take action on climate change and the study achieved great support by involving community leaders as participants. As such, the study – as a case study of EFS – may contribute to the mitigation of climate change and the resolution of other interlocking issues by fostering ‘new patterns of behaviour’ in at least one faith-based community in New Zealand.

REFERENCES

- Acsehrad, H. (1999). Sustainability and territory: meaningful practices and material transformation, in Becker, E. & Jahn, T. (eds.), *Sustainability and the Social Sciences: A Cross-disciplinary Approach to Integrating Environmental Consideration into Theoretical Reorientation*. London & New York: Zed Books, pp.37-58.
- Aram, I. (2002). WCC central committee: Geneva, 26 August – 3 September 2002: report of the moderator, *The Ecumenical Review*, Oct., 54 (4): 483-495.
- Aubel, J. (1994). *Guidelines for Studies Using the Group Interview Technique*. Geneva: International Labour Office.
- BBC (2006), *Climate Change from the BBC Weather Centre*. Retrieved 13th Sep., 2006, from http://www.bbc.co.uk/climate/evidence/global_change.shtml
- Biel, A. & Nillson, A. (2005). Religious values and environmental concern: harmony and detachment, *Social Science Quarterly*, 86 (1): 178-192.
- Blanchard, P. N. & Thacker, J. W. (2004). *Effective Training: Systems Strategies, and Practice*. New Jersey: Pearson/Prentice Hall.
- Bookless, D. (2005). A new heaven and a new earth, in Tillet, S. (ed.) *Caring for Creation*. The Bible Reading Fellowship.
- Brookfield, S. (1983). *Adult Learners, Adult Education and the Community*. Open University, Milton Keynes.
- Brookfield, S. (1987). *Developing Critical Thinkers: Challenging Adults to Explore Alternative Ways of Thinking and Acting*. Open University, Milton Keynes.
- Brookfield, S. (1991). *Understanding and Facilitating Adult Learning*. Open University, Milton Keynes.
- Butkus, R. (1999). Sustainability: an eco-theological analysis, in Dempsey, C. J. & Butkus, R. A. (eds.). *All Creation Is Groaning: An Interdisciplinary Vision for Life in A Sacred Universe*. Collegeville, Minnesota: The Liturgical Press, pp.145-167.
- Cahill, C. (2004). Defying gravity? Raising consciousness through collective research,

Children's Geographies, 2 (2): 273-286.

Cahill, C. (2007a). Participatory data analysis, in Kindon, S. & Pain, R. & Kesby, M. (eds.), *Participatory Approaches and Methods: Connecting People, Participation and Place*, London: Routledge.

Cahill, C. (2007b). The personal is political: developing new subjectivities through participatory action research, *Gender, Place and Culture*, Jun., 14 (3): 267-292.

Caritas Aotearoa New Zealand (CANZ). (2007). *About Caritas*. Retrieved 19th May, 2007, from <http://www.caritas.org.nz/?sid=3>

Calhoun, C. & Karaganis, J. (2001). Critical theory, in Ritzer, G. & Smart, B. (eds.). *Handbook of Social Theory*. London, Thousand Oaks, New Delhi: SAGE Publications, pp.179-200.

Cameron, J. (2005). Focusing on the focus groups, in Hay, I. (ed.). *Qualitative Research Methods in Human Geography (second edition)*. Oxford University, pp.116-132.

Cameron, J. (2007). Linking participatory research to actions: institutional challenges, in Kindon, S. & Pain, R. & Kesby, M. (eds.). *Participatory Approaches and Methods: Connecting People, Participation and Place*. London: Routledge.

Carr, W. & Kemmis, S. (1986). *Becoming Critical: Education, Knowledge and Action Research*. London & Philadelphia: the Falmer Press.

Carrie, W. & Brian J. (2000). Experience as a foundation of environmental adult education: the Audubon expedition model, *Convergence*, 33 (4):111-123.

Caritas Aotearoa New Zealand (CANZ). (2006). Renew the face of the earth: environmental justice, *Social Justice Series*, No.11, CANZ.

Caritas Aotearoa New Zealand (CANZ). (2006), *About*, Retrieved 19th May, 2007, from <http://www.caritas.org.nz/?sid=3>

Chambers. R. (1997). *Whose Reality Counts? Putting the First Last*. London: Intermediate Technology Publications.

Chapman, D. (2004). Sustainability and our cultural myths, *Canadian Journal of Environmental Education*, Spring, 9: 93-108.

Christian World Service (CWS). (2007). *About Us*, Retrieved 19th May, 2007, from <http://www.cws.org.nz/about-us/default.asp>

- Churches' Agency on Social Issues (CASI). (2007). *A Theological Rationale for the Churches' Concern with Social Issues*, Retrieved 19th May, 2007, from <http://www.casi.org.nz/whoweare/theology.htm>
- Clover, D. E. (1995). Theoretical foundations and practice of critical environmental adult education in Canada, *Convergence*, 28 (4): 44-55.
- Clover, D. E. (1996), Developing international environmental adult education: the challenge, theory and practice, in Leah Filho, W., Murphy Z. & O'Loan, K. (eds.). *A Sourcebook for Environmental Education: A Practical Review Based on the Belgrade Charter*, Copyrighted Material, pp.92-110.
- Coghlan, D. & Brannich, T. (2005). 'Learning in action', in *Doing Action Research in your own Organization*, London: Sage, pp.32-46.
- Cotton, D. (2004). Essentials of training design (Part 4): design objectives, *Training Journal*, April: 22-27.
- Cranton, P. (1994). *Understanding and Promoting Transformative Learning: A Guide for Educators of Adults*. San Francisco: Jossey-Bass.
- Crotty, M. (1998). Critical inquiry: contemporary critics & contemporary critique, in *The Foundations of Social Research: Meaning and Perspective in the Research Process*, Allen & Union, Australia, pp.139-159.
- Dale, A. & Newman, L. (2005). Sustainable development, education and literacy, *International Journal of Sustainability in Higher Education*, 6 (4): 351-363.
- Douglas, L. (2002), *Best Practice Education for Sustainability: developing a framework for evaluating tertiary programmes in New Zealand*, Thesis, Victoria University, Wellington.
- Dowling, R. (2005). Power, subjectivity, and ethics in qualitative research, in Hay, I. (ed.). *Qualitative Research Methods in Human Geography (second edition)*. Oxford University, pp.19-29.
- Estrella, M. & Gaventa, J. (1998). *Who Counts Reality? Participatory Monitoring and Evaluation: A Literature Review - IDS Working Paper 70*, Retrieved 12th Jan., 2007, from <http://www.ids.ac.uk/ids/bookshop/wp/wp70.pdf>
- (U.S.) Environment Protection Agency (EPA). (2006). *Global Warming – News and Events*, Retrieved 15th Sep., 2006, from <http://yosemite.epa.gov/oar/globalwarming.nsf/content/newsandeventsScienceandPolicyNews.html>

- Fagan, G. (1996). Community-based learning, in Huckle, J. & Sterling, S. (eds.). *Education for Sustainability*. London: Earthscan Publications Ltd, pp.136-148.
- Fountain, P. (2002). *Christianity, Local Culture and Disaster Relief Theory and Practice in Papua New Guinea: a Case Study of the Involvement of the Combined Churches Organization in the 1998 Aitape Tsunami Disaster Relief*, Thesis, Victoria University, Wellington.
- Fowler J. (2005). *An Introduction to the Philosophy and Religion of Taoism – Pathways to Immortality*. Brighton, Portland: Sussex Academic Press.
- Fien, J. (1993). *Education for the Environment: Critical Curriculum Theorising and Environmental Education*. Geelong, Victoria: Deakin University Press.
- Fien, J. (2000). 'Education for the environment: a critique' – an analysis, *Environmental Education Research*, 6 (2): 179-192.
- Fien, J. & Tilbury, D. (2002). The global challenge of sustainability, in Tilbury, D. & Stevenson, R. B. & Fien, J. & Schreuder, D. (eds.). *Education and Sustainability: Responding to the Global Challenge*. IUCN commission on Education and Communication CEC, The World Conservation Union.
- Fien, J. & Trainer, T. (1993). Education for sustainability, in Fien, J. (ed.). *Environmental Education: A Pathway to Sustainability*. Geelong, Victoria: Deakin University Press, pp.11-23.
- Freire, P. (1996). *Pedagogy of the Oppressed*. London: Penguin Books Ltd.
- Gao, L. (2003). *A Study of Chinese Teacher's Conceptions of Teaching*. Wuhan, China: Hubei Education Press.
- Gough, A. (1997). *Education and the Environment: Policy, Trends and the Problems of Marginalization*. Melbourne: Australian Council for Education Research.
- Greenpeace (2007). *About Greenpeace*, Retrieved 19th Jul., from <http://www.greenpeace.org.uk/about>
- Greenwood, J. & Levin, M. (1998). *Introduction to Action Research – Social Research for Social Change*. London, New Delhi: SAGE Publications, International Educational and Professional Publisher, Thousand Oaks.
- Guba, E. G. & Lincoln, Y. S. (1989). *Fourth Generation Evaluation*. Newbury Park & London & New Delhi: SAGE Publications & the International Professional Publishers.

- Hall, C. & Jones, E. (2004). *Assessment and Evaluation: A Conceptual Framework for Evaluation and Training*. Victoria University of Wellington, School of Education (EDUC 569/811 class handout).
- Hallman, D. G. (1997). Ecumenical responses to climate change, *The Ecumenical Review*, Apr., 49 (2): 131-141.
- Hanson, L. & Hanson C. (2001). Transforming participatory facilitation: reflections from practice, *PLA Notes*, 41: 29-32.
- Hayes, B. C. & Marangudakis, M. (2001). Religion and attitudes towards nature in Britain, *The British Journal of Sociology*, 52 (1): 139-155.
- Herr, K. & Gary, A. (2005). 'The continuum of positionality in action research', in *The Action Research Dissertation: A Guide for Students and Faculty*. London: Sage, pp.29-48.
- Hessel, D. T. & Rasmussen, L. L. (2001). *Earth Habitat: Eco-injustice and the Church's Response*, Minneapolis, MN: Fortress Press.
- Hoggart, K. & Loretta, L. & Anna, D. (2002). Close encounters: interviews and focus groups, in Hoggart et al., (eds.). *Researching Human Geography*. London: Arnold Publishers, pp.201-250.
- Hopkins, C. & Mckeown, R. (2002). Education for sustainable development: an international perspective, in Tilbury, D. et al. (eds.). *Education and Sustainability: Responding to the Global Challenge*, Switzerland: IUCN.
- Huckle, J. (1993). Environmental education and sustainability: a view from critical theory, in Fien, J. (ed.). *Environmental Education: A Pathway to Sustainability*. Geelong, Victoria: Deakin University Press, pp.43-68.
- Huckle, J. (1996). Realizing sustainability in changing times, in Huckle, J. & Sterling, S. (eds.), *Education for Sustainability*. London: Earthscan Publications Ltd, pp.3-17.
- Hunter, L. M. & Toney, M. B. (2005). Religion and attitudes toward the environment: a comparison of Mormons and the general U.S. population, *The Social Science Journal*, 42: 25-38.
- Intergovernmental Panel on Climate Change (IPCC). (2007). *Climate change 2007: the Physical Science Basis, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel of Climate Change*, Retrieved 19th Jul., 2007, from <http://ipcc-wg1.ucar.edu/wg1/wg1-report.html>.

- Jackson, E. T. & Kassam, Y. (eds.). (1998). *Knowledge Shared: Participatory Evaluation in Development Cooperation*. USA & Canada: IDRC/Kumarian Press.
- Jickling, B. & Spork, H. (1998). Education for the environment: a critique, *Environmental Education Research*, 4(3): 309-327.
- Kanagy, C. & Willits, F. (1993). A “greening” of religion? Some evidence from a Pennsylvania sample, *Social Science Quarterly*, 74 (3): 675-683.
- Kates, R. W. & Parris, T. W. & Leiserowitz, A. (2005). What is sustainable development? - goals, indicators, values, and practice, *Environment*, Apr., 47 (3): 8-21.
- Kindon, S. (2005). Participatory Action Research, in Hay, I (ed.). *Qualitative Research Methods in Human Geography*. Melbourne: Oxford University Press, pp.207-220.
- Kindon, S. & Pain, R. & Kesby, M. (eds.). (2007). *Participatory Approaches and Methods: Connecting People, Participation and Place*, Chapters 1 & 2. London: Routledge.
- King, C. M. (Carolyn, M.) & Australia Theological Forum (2001). *Habitat of Grace: Biology, Christianity and the Global Environmental Crisis*. Hindmarsh, S. Australia: Australian Theological Forum.
- Kosmidou, C. & Usher, R. (1992). Experiential learning and the autonomous subject: a critical approach, in Jansen, T. & Wildemeersch D. (eds.). *Adult Education, Experiential Learning and Social Change: The Postmodern Challenge*. VUGA Uitgenerij B. V, pp.77-92.
- Kothari, U. (2001). Power, knowledge and social control in participatory development, in Cooke, B. & Kothari, U. (eds.). *Participatory: The New Tyranny*. London: Zeal Books, pp.139-152.
- Lai, C. A. & Rivera Jr., J. C. (2006). Using strategic planning tool as a framework for case analysis, *Journal of College Science Teaching*, 36 (2): 26-31.
- Langhelle, O. (2000), Sustainable development and social justice: expanding the Rawlsian framework of global justice, *Environmental Values*, 9, 3 (1) Aug.,: 295-323.
- Law, B. (2004). Environmental education/Education for sustainability, *Asia Pacific Environmental Education Research Seminar*. UNESCO/JAPAN.

- Law, B. (2005). Education for sustainable development in New Zealand, *Applied Environmental Education and Communication*, 4: 277-281.
- Lele, S. M. (1996). Sustainable development: a critical review, *World Development*, 19 (6): 607-21.
- Littig, B. & Griessler, E. (2005). Social sustainability: a catchword between political pragmatism and social theory, *International Journal of Sustainable Development*, 8, 1 (2): 65-80.
- Malinen, A. (2000). *Towards the Essence of Adult Experiential Learning: A Reading of the Theories of Knowles, Kolb, Mezirow, Revans and Schon*. University of Jyväskylä, SOPHI.
- Martin, N. (1999). New way of knowing and being known, in Dempsey C. J. & Butkus, R. A. (eds.). *All Creation Is Groaning: An Inter-disciplinary Vision for Life in A Sacred Universe*. Minnesota: A Michael Glazier Book & the Liturgical Press Collegeville, pp.21-45.
- Martin, R. (2002). Justice – the heart of sustainability: “talking points” on the World Summit on sustainable development: an introduction, *The Ecumenical Review*, Jul., 54 (3): 271-278.
- Mezirow, J. (1981). A critical theory of adult learning and education, *Adult Education*, Fall, 32 (1): 3-24.
- Mezirow, J. (1991). *Transformative Dimensions of Adult Learning*. San Francisco & Oxford: Jossey-Bass Publishers.
- Migliore, D. L. (2004). *Faith Seeking Understanding: An Introduction to Christian Theology (second edition)*. Grand Rapids, Michigan & Cambridge, U.K: William B. Eerdmans Publishing Company.
- Ministry for the Environment (MfE). (1999a). *Towards a Set of Principles for Effective Environmental Education Strategies and Programmes and Their Evaluation: A Review of the Literature*. Wellington: MfE.
- Ministry for the Environment (MfE). (1999b). *Learning to Care for Our Environment – A National Strategy for Environmental Education*. Wellington: MfE.
- Ministry for the Environment (MfE). (2006). *Preparing for and Adapting to Climate Change*, Retrieved 10th Jul., 2007, from <http://www.mfe.govt.nz/publications/climate/preparing-for-adapting-climate-change-dec06/html/>

- Ministry for the Environment (MfE). (2006). *New Zealand's Greenhouse Gas Inventory 1990-2004: The National Inventory Report and Common Reporting Format*, Wellington: MfE.
- Moltmann, J. (1981). *The Trinity and the Kingdom of God: The Doctrine of God*. London: SCM Press.
- Mohammad, R. (2001). 'Insiders' and 'outsiders': positionality, theory and praxis, in Limb, M. & Dwyer, C. (eds.). *Qualitative Methodologies for Geographers: Issues & Debates*. London: Aruold, pp.101-120.
- Nature Step (2007). *The Nature Step Framework: Overview*, Retrieved 19th May, 2007, from <http://www.naturalstep.org.nz/tns-f-overview.asp>
- New Zealand Climate Change Office (NZCCO). (2006). *The Kyoto Protocol*, Retrieved on 3rd Jul., 2006, from <http://www.climatechange.govt.nz/about/kyoto.html>
- New Zealand Association for Environmental Education (NZAEE). (2007). *New Zealand Association for Environmental Education*, Retrieved on 19th May, 2007, from <http://www.canterbury.cyberplace.org.nz/environment/nzenved.html>
- Orr, D. (1992). *Ecological Literacy: Education and the Transition to a Postmodern World*. State University of New York, Albany.
- Otto-Bliesner, B. L. et al. (2006). Stimulating Arctic climate warmth and ice field retreat in the last interglaciation, *Science*, 311 (5768): 1751-1753.
- Overpeck, J. T. et al. (2006). Paleoclimatic evidence for future ice-sheet instability and rapid sea-level rise, *Science*, 311 (5768):1747-1750.
- Parliamentary Commissioner for the Environment (PCE). (2002). *Creating Our Future: Sustainable Development for New Zealand*. Wellington: PCE.
- Parliamentary Commissioner for the Environment (PCE). (2004). *See Change: Learning and Education for Sustainability*. Wellington: PCE.
- Palmer, J. A. (1998). *Environmental Education in the 21st Century: Theory, Practice, Progress and Promise*. London & New York: Routledge.
- Payne, P. (2006). Environmental education and curriculum theory, *Essay & Analysis*, Winter, 37 (2): 25- 37.

- Petersen, K. L. (2003). The educational imperative of creation care, *Christian Scholar's Review*, Summer, 32 (4): 433-454.
- Pietrykowski, B. (1996). Knowledge and power in adult education: beyond Freire and Habermas, *Adult Education Quarterly*, Winter, 46 (2): 82-97.
- Qizibash, M. (2001). Sustainable development: concepts and rankings, *The Journal of Development Studies*, Feb., 37 (3): 134-161.
- Raes, K. (1992). Critical theory in a 'disenchanted world': the challenge of anti-theoreticism, in Jansen, T. & Wildemeersch D. (eds.). *Adult Education, Experiential Learning and Social Change: The Postmodern Challenge*. VUGA Uitgenerij B. V, pp.35-49.
- Rasmussen, L. L. (1996). *Earth Community, Earth Ethics*. Maryknoll, New York: Orbis Books.
- Ray, T. (1997). Brundtland and beyond, *Alternatives Journal*, Spring, 23 (2): 1.
- Redclift, M. (2005). Sustainable development (198-2005): an oxymoron comes of age, *Sustainable Development*, Sust. Dev., 13: 212-227.
- Redclift, M. (1993). Sustainable development: needs, values, rights, *Environmental Values*, 2: 3-20.
- Reitan, E. (1998). Pragmatism, environmental world views, and sustainability, *Electronic Green Journal*, Dec., PN, PAG, Retrieved 18th Apr., 2007, via database: MasterFILE Premier.
- Santmire, P. H. (2000). In God's ecology, *The Christian Century*, Dec. 13, 117 (35): 1300-1302.
- Sense, A. (2006). Driving the bus from the rear passenger seat: control dilemma of participative action research, *International Journal of Social Research Methodology*, 9 (1): 1-13.
- Scharper, S. B. (1994). The Gaia hypothesis: implications for a Christian political theology of the environment, *Cross Currents*, Summer, 44 (2): 207-222.
- Schon, D. A. (1983). *The Reflective Practitioner: How Professional Thinking in Action*. New York: Basic Books.
- Schultz, P. W. & Zelezny, L. & Dalrymple, N. J. (2001). A multinational perspective

- on the relation between Judo-Christian religious beliefs and attitudes of environmental concern, *Environment and Behaviour*, 32 (4): 576-591.
- Scott, W. & Oulton, C. (1999). Environmental education: arguing the case for multiple approaches, *Education Studies*, Apr., 25 (1); 89-98.
- Social Justice Commission of the Anglican Church (SJCAC). (2006). *God's Earth • Our Home: 5 Studies Based on Faith and the Environment*, SJCAC.
- Social Justice Commission of the Anglican Church (SJCAC). (2007). *About Us*, Retrieved 19th May, 2007, from <http://justice.anglican.org.nz/about/>
- Stoeker, R. (1998). Are Academics Irrelevant? Roles for Scholars in Participatory Research, Retrieved on 9th Jan., 2001, from <http://comm-org.utoledo.edu/papers98/pr.htm>
- Sterling, S. (1993). Environmental education: a view from holistic ethics, in Fien, J. (ed.). *Environmental Education: A Pathway to Sustainability*, Geelong, Victoria: Deakin University, pp.69-98.
- Sterling, S. (1996). Education in change, in Huckle, J. & Sterling, S. (eds.). *Education for Sustainability*, London: Earthscan Publications Ltd, pp.19-39.
- Sterling, S. (2001). *Sustainable Education: Re-visioning Learning and Change*, U.K: Green Books.
- Sterling, S. (2003). *Whole Systems Thinking as a Basis for Paradigm Change in Education: Explorations in the Context of Sustainability*, Submitted for the degree of PHD of the University of Bath, Retrieved 16th Apr., 2007, from <http://www.bath.ac.uk/cree/sterling.htm>
- Sustainability Trust (2007), *The Sustainability Trust*, Retrieved 19th July, 2007, from http://www.trashpalace.co.nz/index.cfm/About_Us/Sustainability_Trust
- Taylor, R. (2005). *Promoting Behaviour Change through the Sustainable Households Programme*, Paper presented at national Zero Waste Conference, Kaikoura.
- Tilbury, D. (1995). Environmental education for sustainability: defining the new focus of environmental education in the 1990s', *Environmental Education Research*, 1 (2): 195-212.
- UNESCO-UNEP (1976). The Belgrade charter: a global framework for environmental education, *Connect*, 1 (1): 1-9.

- UNESCO-UNEP (1978). The Tbilisi declaration, *Connect*, 3 (1): 1-9.
- USAID Center for Development Information and Evaluation (1996). *Performance Monitoring and Evaluation Tips*. No. 1, Washington D.C: U.S Agency for International Development.
- Veale, A. (2005). Creative methodologies in participatory research with children, in Sheila G. & Diane H., *Researching Children's Experiences: Methods and Approaches*, London: Sage, pp.253-272.
- Vischer, L. (1997). Climate change, sustainability and Christian witness, *The Ecumenical Review*, Apr., 49 (2): 142-161.
- Walter, G. A. & Marks, S. E. (1981). *Experiential Learning and Changes: Theory and Practice*. New York: Wiley.
- World Commission on Environment and Development (WCED). (1987). *Our Common Future*. Oxford: Oxford University Press.
- World Council of Churches (WCC). (1998). *Justice • Peace • Creation: History*, Retrieved 19th May, 2007, from <http://www.wcc-coe.org/wcc/what/jpc/hist-e.html>
- World Council of Churches (WCC). (2002). *Justice: the Heart of Sustainability – WCC Sends Delegation to the World Summit on Sustainable Development*, Retrieved 19th May, 2007, from <http://www2.wcc-coe.org/pressreleasesen.nsf/index/pr-02-22.html>
- Worldwide Fund for Nature – New Zealand (WWF-NZ). (2007). *Environmental Education*, Retrieved 19th July, 2007, from <http://www.wwf.org.nz/enviroEd/index.cfm>
- Wildemeersch, D. (1992). Ambiguities of experiential learning and critical pedagogy: the challenge of scepticism and radical responsibility, in Jansen, T. & Wildemeersch D. (eds.), *Adult Education, Experiential Learning and Social Change: The Postmodern Challenge*. VUGA Uitgenerij B. V, pp.19-34.
- Wilson, D. & Syme, C. & Knight, S. (2000). *Here Today, Where Tomorrow: Sustainable Development in New Zealand: A Discussion Paper*. Auckland: Pacific Rim Institute of Sustainable Management.
- White, Jr. L. (1967). The historic roots of our ecological crisis, *Science*, 55: 1203-1207.

- Winchester, H. P. M. (2005). Qualitative research and its place in human geography, in Hay, I. (ed.). *Qualitative Research Methods in Human Geography (second edition)*. Melbourne: Oxford University, pp.3-18.
- Wolkomir, M. et al. (1997). Substantive religious belief and environmentalism, *Social Science Quarterly*, 78 (1): 96-108.
- Woodrum, E. & Hoban, T. (1994). Theology and religiosity effects on environmentalism, *Review of Religious Research*, 35 (3): 193-206.

APPENDIX 1: WORKSHOP ONE PROCESS

1. Workshop One Overview

Table 16: Workshop 1 Overview

Task	Time³⁵
1. Opening prayer and introduction to the workshops - Explain workshop objectives and overviews	10 minutes
2. Presentation: Secular definitions of “sustainability” (see below Power point slides) - Brainstorm: what is your understanding of “sustainability”? - Introduction to the existing definitions of “sustainability”; - Explain the diagramming activity of “Creation Narrative”	15 minutes
3. Diagramming activity: Creation Narrative - Divide the group into two sub-groups; - Each sub-group draws a diagram to show how ‘God’, ‘Jesus’, ‘Human’, ‘Non-human’ relate to each other using supplied cycles as much as needed (see below “Diagram format”); - Use biblical/theological (bible passages or theological concepts) and non-biblical/theological knowledge (if it is helpful) to support the relationships shown in the diagram; - Some supportive bible passages will be supplied (see below “Supportive bible passages”).	60 minutes
4. Interview diagram “Creation Narrative” - Explain your group diagram to the other group; - Identify the themes of “sustainability” from a biblical/theological perspective in one group.	20 minutes
5. Closing prayer and tea - Handouts “just.living (August 2006)”	15 minutes

2. Diagramming Activity One (Creation Narrative)

(1) Supportive bible passages for the activity

- The goodness of creation
Genesis 2:2-3 (Sabbath)
Psalm 148
- Human as priests of creation
Psalm 8
- Dominion means human as stewards of creation

³⁵ It is the actual time that we used.

Genesis 1:26

Psalm 8:6

- Disordered relations between God and human, and between human being themselves
Genesis 3:17
Ecclesiastes 2:11
- Creation groans in labour pains and waits for God's glory
Romans 8: 18-23
- The new creation in Christ
Colossian 1:15 - 20

(Source: Graham Redding, Sermons: "Climate Change and the New Creation" 14/05/2006, 21/05/2006, in St John's)

(2) Diagram format

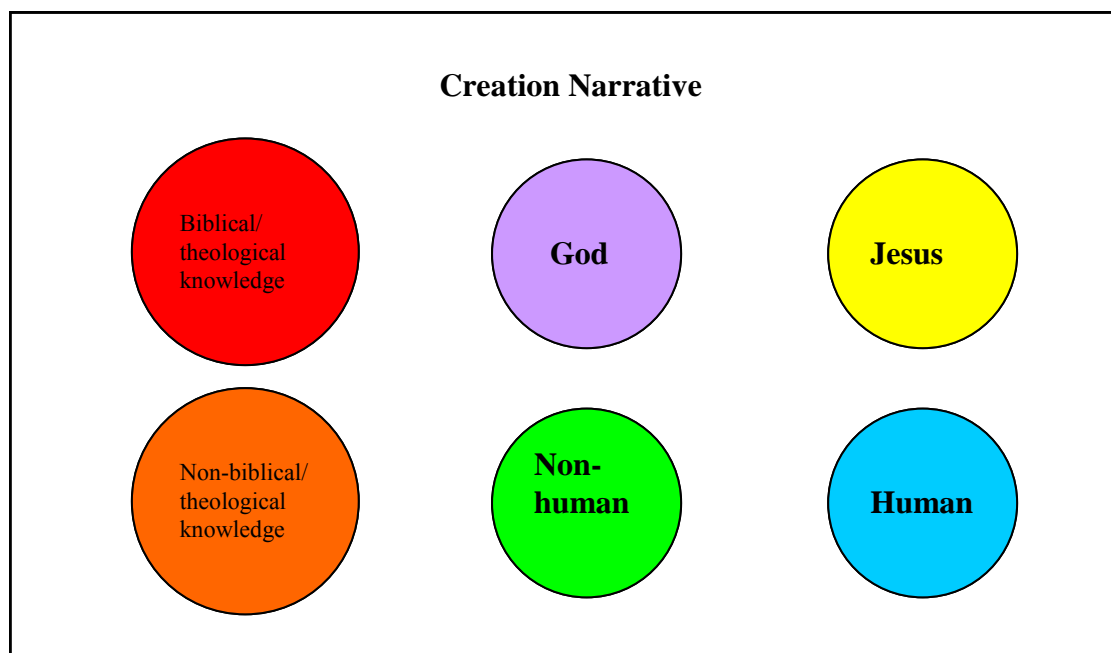


Figure 12: Diagram Format - Creation Narrative

3. Secular definitions of “Sustainability” (Power point)

Introduction to “sustainability”

Brainstorm: what is your
understanding of “sustainability”?

The well accepted definition

- “Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.”

--Brundtland Report of World Commission on
Environment and Development 1987)

strengths and problems of Brundtland definition

- Strength- It shows the common future of the whole humanity.
- Problem- Our responsibility should not be limited for humanity because non-human has its intrinsic values.
- Strength- It views “the problems of environment, poverty and energy as a single connected crisis” (Vischer 1997), which provides spaces to view the present crisis holistically.

- Problem- What does it really mean to take the interests of future generation into account?
- Problem- “How can continued economic growth solve the problems of global poverty and environmental degradation when even present levels of resources use are unsustainable” (Fien & Trainer 1993)?

... ..

A similar Christian faithful understanding

- “Sustainability means taking from earth’s resources what is sufficient for today’s needs, for all creatures, without compromising the ability of future generations, of all creatures, to live with sustainable sufficiency”

Source: Echlin 2003, Sustainability: Theology and Practice. In:
Franciscan - May 2003 (the Society of Saint Francis
<http://www.franciscans.org.uk/2003may-echlin.htm> Accessed on Feb
4th, 2007

Other secular definitions

- Leave the world better than you found it, take no more than you need, try not to harm life or the environment, make amends if you do.

--- Paul Hawken (an environmentalist, entrepreneur, journalist, and best-selling author)

- Sustainability is the [emerging] doctrine that economic growth and development must take place, and be maintained over time, within the limits set by ecology in the broadest sense – by the interrelations of human beings and their works, the biosphere and the physical and chemical laws that govern it ... It follows that environmental protection and economic development are complementary rather than antagonistic process.

--- William D. Ruckelshaus, "Toward a Sustainable World", Scientific American, September 1989

- The word sustainable has roots in the Latin *subtenir*, meaning 'to hold up' or 'to support from below'. A community must be supported from below – by its inhabitants, present and future. Certain places, through the peculiar combination of physical, cultural, and perhaps, spiritual characteristics, inspire people to care for their community. These are the places where sustainability has the best chance of taking hold.

--- Muscoe Martin, "A Sustainable Community Profile", from *Places*, Winter 1995

- Sustainability is the ability to achieve continuing economic prosperity while protecting the natural systems of the planet and providing a high quality of life for its people. Achieving sustainable solutions calls for stewardship, with everyone taking responsibility for solving the problems of today and tomorrow – individuals, communities, businesses and governments are all stewards of the environment.

--- Environmental Protection Agency

- A sustainable society is one that lives within the self-perpetuating limits of its environment. That society is not a 'no growth' society – it is, rather a society that recognizes the limits of growth and looks for alternative ways of growing.

--- James Coomer

- Our responsibility for achieving sustainability is "a commitment to the greatest possible care and restraint in dealing with God's creation".

--- the World Council of Church

- Sustainable development provides a framework under which communities can use resources efficiently, create efficient infrastructures, protect and enhance quality of life, and create new businesses to strengthen their economies. It can help us create healthy communities that can sustain our generation, as well as those that follow ours.

--- Smart Communities Network

Source: Earth Day Mural & Book Project
<http://www.re-store.org/mural/sustainability.htm>
Accessed on the 6th of Feb. 2007

APPENDIX 2: WORKSHOP TWO PROCESS

1. Workshop Two Overview

Table 17: Workshop 2 Overview

Task	Time ³⁶
1. Opening prayer and reflection on themes identified in Workshop 1 (handouts) - Introduce Workshop 2 tasks; - Introduce existing themes of Christian thought relating to sustainability (see below Power point slides); - Present the summary of the themes identified in Workshop 1 (see below “Our themes”); - Discuss on the summary.	25 minutes
2. Pre-diagramming activity: Lifestyle reflection - Explain the activity (see below “Lifestyle reflection activity”); - Contemplation: close eyes, let the Spirit guide us and give us the ability to reflect on our life-styles (music); - Personal work: reflect on your lifestyle (1) Use “just.living” if it is helpful; (2) Please leave the sheet to me before the workshop finishes. I will return it to you in the last workshop.	20 minutes
3. Diagramming activity: SWOT stepping-stones - Explain the diagram activity (see below “Diagram format”); - Activity questions: (1) What actions can St John’s people take in daily lives? (2) What Strengths and Weakness does St John’s have and what Opportunities and Threats does St John’s face to teach the themes and help people to take actions? (see below “Introduction to SWOT analysis”) (3) Based on the SWOT, what activities can St John’s use to teach the themes and help people to take actions (very broadly identify the activities. We will detail them in the next workshop)?	60 minutes
4. Closing prayer and tea	15 minutes

³⁶ It is the actual time that we used.

2. Themes of Christian Thoughts Relating to Sustainability (Power point)

Themes of Christian thought relating to "sustainability"

- Affirms of non-human rights through re-examining Christian scripture and tradition.
- Re-discovers human's role in the dynamic system of universe and Earth's nature by exploring the complex relation between cosmology, spirituality and morality.

- explores human-earth relation in modern philosophy, religion, technology, and politics by connecting paradigm of contemporary physics and ecology with eco-justice sensibility of the biblical Sabbath and kingdom of God version.
- Notes that in theology and praxis, sacramental sensibility and covenantal commitment are joined together because both are for a sustainable community.

- leads to praxis of humility, esteem, and justice toward all through transformation of Christian ecological virtue ethics and affirmations about God, Christ, soul/body relations, sin, evil, redemption, and so on.
- emphasizes human obligations in every place, expresses respect and care for Earth as God's creation and life's home, while seeking justice for biodiversity, non-human as well as human.

Source: Forum on religion and ecology
<http://environment.harvard.edu/religion/religion/christianity/index.html>
Accessed on 6th of Feb, 2007

3. Our themes on sustainability (Power point)

Our Themes

Theme one: Creation and Redemption

- Originally creation is good and orderly;

- Creation is being redeemed towards the new creation because the order of creation is destroyed by human who is a part of the creation;
- Jesus heals things back to goodness through bodily resurrection in the new creation which is not the original one but it is good and orderly.

Theme two: Stewardship and Dominion

- We must get a biblical model of stewardship which is balanced with dominion and away from greed because greed leads to political and social mismanagement;

- We have to challenge generational and cultural differences and be aware of the limitations of science to find our Christian path towards tomorrow;
- When we follow Jesus and guided by Holy Spirit, we have the ability to reconcile human and redeem creation in God's order.

- God gave us the responsibility of stewardship and the privilege of dominion at the same time, which means we should see nature as valuable creation while yet also having the right to use it as resources;
- People are mutually interdependent with each other and with nature, so we have responsibility to take care of the poor and the vulnerable without harming creation,

Theme three: Capability and Limitation

- God created humanity with the potential to address problems theoretically and practically. But human's ability has limitations because God's system is different from our ecological context;
- Affected by original sin, we have limited generational and cultural perspectives and there are ethical limits to science;

4. Lifestyle Reflection Activity

(1) Reflection questions

- What actions could you take in your daily life to confront climate change?
- What resources do you have to support those actions?
- What difficulties would you face to take those actions?
- How do you make it really happen (solutions towards the difficulties)?

(2) Reflection form

Please fill in the following form (identify as many actions as you can):

Actions	Resources	Difficulties	Solutions

5. Diagramming Activity Two (SWOT stepping-stones)

(1) Diagram format

SWOT Stepping-stones

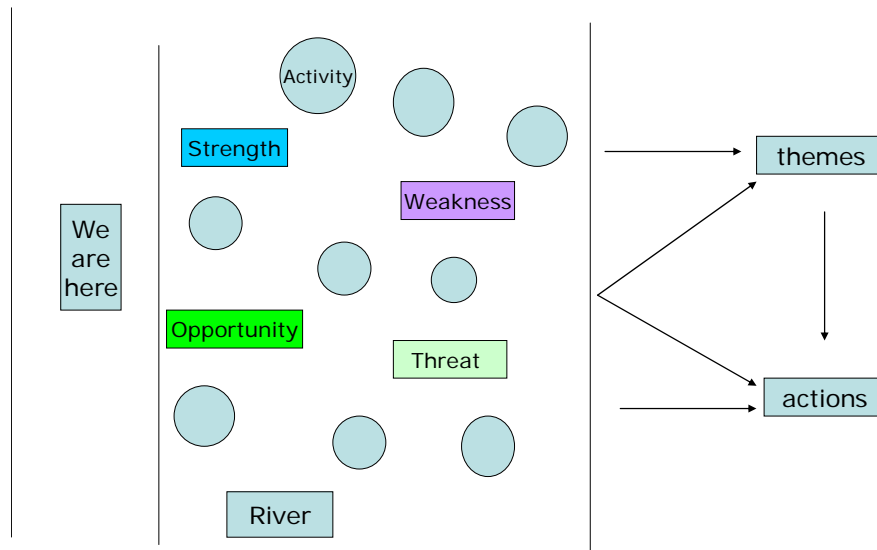


Figure 13: Diagram Format – SWOT Stepping-stones

(2) Introduction to SWOT analysis (Power Point)

What is "SWOT"		
	Internal	External
Helpful	Strengths	Opportunities
Harmful	Weaknesses	Threats
Churches' direct control	Yes	No

Examples of "SWOT"	
• Strength	– a well-educated congregation
• Weakness	– dependent on private cars
• Opportunity	– existing community (educational) programmes
• Threat	– media advocates high consumption life style/bus routes are cancelled (the external factors can be regional, national and international)

APPENDIX 3: WORKSHOP THREE PROCESS

1. Workshop Three Overview

Table 18: Workshop 3 Overview

Task	Time ³⁷
1. Opening prayer and reflection on SWOT analysis of St John's (handouts) - Introduce Workshop 3 tasks; - Present the summary of "SWOT analysis of St John's Church" from Workshop 2 (see Figure 5, p.64); - Discuss on the summary; - Present case studies of EFS programmes (see below power point slides); - Explain the following diagramming activity.	30 minutes
2. Diagramming activity: Education and evaluation co-ordinates	75 minutes
(1) Draw 'venue and time co-ordinates' for implementing the educational activities, and identify the start and end time, and some possible venues of a faith-based EFS programme (see below "Diagram format");	15 minutes
(2) Specifically identify the aim, format, and delegate person of each educational activity based on SWOT analysis and write them on colour post-it notes; (3) Start from the actions and activities identified in Workshop 2 (the summary see below); (4) Complete the 'venue and time co-ordinates' and stick the activities on the appropriate co-ordinates;	40 minutes
(4) Identify evaluation methods from five angles and write the 'aim', 'format' and 'who' of each evaluation on post-it notes, and then stick them on the co-ordinates.	15 minutes
3. Closing prayer and tea - Interview time sign up	15 minutes

³⁷ It is the actual time that we used.

2. Case Studies of EFS Programmes (Power point)

Case studies of EFS programmes

Eco-congregation

- Eco-congregation is an ecumenical programme helping churches make the link between environmental issues and Christian faith, and respond in practical action in the church, in the lives of individuals, and in the local and global community;

- It is going on in England, Wales, Ireland, and Scotland;
- Participating churches are drawn from a variety of denominations and working together through networks

(1) General organizational methods

- Annually hold a 'Green Sunday' to help maintain the momentum of the creation care ministry through the year;
- Set up a Green Co-ordinator in church.

(2) Activities focusing on encouraging actions in daily lives

- Publish 'green tips' in church magazine/posters/fliers;
- Tell stories from other churches;
- Transport: provide a practical road map for individuals and families; challenge current habits and set a goal within a timeframe; **check performances and calculate collective contribution**;
- Energy: develop two strands of activity-one for church as an organization, another for individuals;

- Waste: besides use local recycling centre, church helps to collect some old appliances for the distribution to charities;
- Shopping locally: church holds a 'Parish Eco Day' to encourage the congregation to change their personal lifestyles. Part of the day focuses on how our personal lifestyles can contribute to global problems. The congregation learn about food by example the refreshments are entirely home grown, locally produced, or fairly trade goods.

(3) Activities combine theological learning and practical actions

- Hold an annual Environment Sunday (e.g. the 5th June – World Environmental Day). This Sunday service could focus on creation issues and be accompanied by an appropriate display and task or challenge for the congregation (e.g. distribute eco-bulbs for people to replace normal bulbs at home);

- Integrating environmental concern with the concern of poverty and development through some special studies (e.g. a Lent series exploring Christian ethics and environment and practical projects);
- Times to celebrate God's creation: focus on creation issue at particular times in the church calendar;

(4) Activities focus on Bible studies and theological reflections

- Places to celebrate God's creation: outdoor worships (e.g. worship in Gardens, prayer walk);
- House group studies: reflect on some key texts from different parts of the Bible;
- Reflections on Bible stories and share stories from other churches' worship;

Source: <http://www.ecocongregation.org/scotland/who/index.shtml>
Accessed on Jan. 26, 2007

Sustainable Household Programme (SHP)

- SHP is a community education programme for adults on domestic sustainability issues. Its pilot stage (July 2001 – June 2004) was completed within 12 council areas including Greater Wellington;
- The programme focuses on practical domestic-scale actions including waste, water, energy, shopping, gardening, travel, organic food growing, and more sustainable building materials.

• How it works – implementation

Step one: Recruitment

- Recruit individuals or existing groups to take simple specific actions as start and register their interest in learning more

Step two: Make a commitment

- Pre-enrolling and pay a small amount of fee

Step three: Select topics

- Select interested topics and ideal length and frequency of session by questionnaires

Step four: Study sessions

- A timetabled day or evening series of 5-10 study sessions, each of two hours;
- A mix of formal evening classes (tutored), informal self-help study groups (facilitated), single topic seminars, and a public website;
- The facilitators, tutors, and group leaders can get support from the programme co-ordinator and the back-up materials.

Step five: Evaluation

- Evaluation of tutoring and facilitation: monitoring by phone, email and an **evaluation visit** from the co-ordinator; **questionnaires** were completed by participants at the end of the series;
- Evaluation of action taken and knowledge increase: participants self-completed **questionnaires** at entry and exit from their study period and followed by **scripted telephone interviews**.

(Source: SH pilot programme 2001-2004:final evaluation report)

Evaluation methods focus on learning

- **Individual interviews:** individuals elicit information, opinions, and experiences through answering open-ended questions.
- **Focus group interviews:** a moderator facilitate the participants freely discuss issues, ideas, experiences.
- **Community group interviews:** the interviewer asks questions in a community public meeting, following an open-ended questionnaire.

- **Direct observation:** observers record what they see and hear about physical surroundings or about ongoing activities, processes, or discussion.
- **Case studies:** they record anecdotes that illustrate a programme shortcomings or accomplishments and tell about incidents or concrete events, often from one person's experience.
- **Community imaging:** a community group draw maps or diagrams to identify or visualize problems and solutions.

(Edited from USAID 1996)

3. Diagramming Activity Three (Education and evaluation co-ordinates)

(1) Diagram format

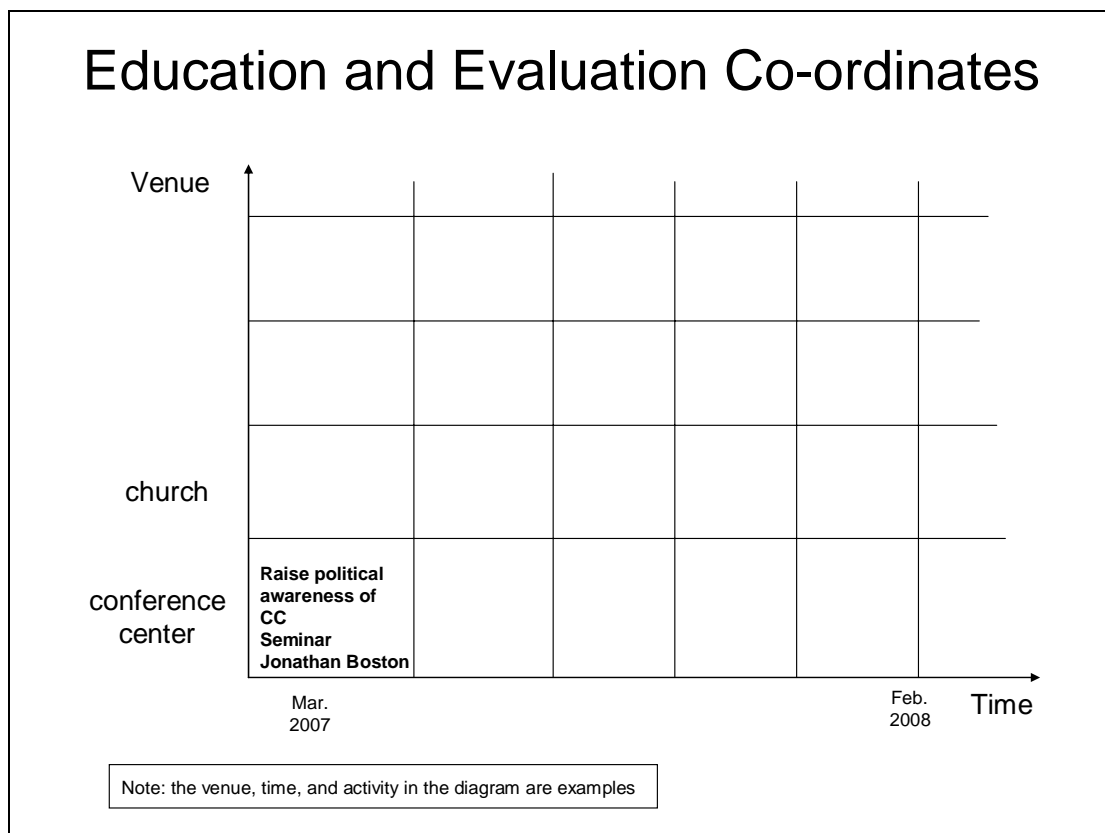


Figure 14: Diagram Format – Education and Evaluation Co-ordinates

(2) Actions and activities identified in workshop 2

Table 19: Actions and Activities Identified in Workshop 2

	Action	Activity
Transport	Car pooling	Car pooling at St John's
	Plan your journey	---
Waste	Recycling & compost	Recycle paper & green waste at St John's (e.g. recycling bin in conference centre toilet; compost bin in kitchen); learn where to source tips and information about recycling, such as old appliances
	Reduce	Reduce paper use at St John's (e.g. white paper & shorten bulletin & sharing bulletin & use of computer)
Energy	Hang on to old cars & other appliances	Pass on information about energy consumption in appliance manufacture and house building
	Insulation	Share benefits; tips of keeping house warm
	Solar energy	Learn knowledge and cost of it
	Turn off appliances when not in use (troubles of resetting appliances is a difficulty)	Turn off lights & heaters at St John's (e.g. timing switches or someone is in charge of it); train children to turn off & reset the appliances
	Use of eco-bulbs & change high frequency lights	---
	Short shower time	---
	Wash dishes once a day	---
General		Education on changing life philosophy (going back to the old way of making things go longer; run housework efficiently and economically)
		Raising political awareness of climate change

Table 20: Educational Activities for St John's Faith-based Programme (Workshop 3 data summary)

Stage	Aim	Activity/ Method	Timeframe	Venue	Who	Why (relating to SWOT)
Spring (Sep.-Nov.) 2007	1. Set up a Green Committee including coordinators of waste, transport, and energy and discuss sustainable issues at St John’s through church groups;	- Recruit coordinators of waste, transport, and energy on “Green Sunday”; - Initiate discussion on green waste management and car pooling issues at St John’s.	The first Sunday of Sep. could be “Green Sunday”; From Sep. to Nov.	Church/ House groups	Minister; Group leaders	-Commitment to church; -Lack of responsibility and delegation.
	2. Focus on green waste (paper) management at St John’s;	- Reduce the use of paper at the church office;	From Sep.	Church office	Minister	-Willing to change; -Slow to change.
		- Set up recycling collection points;	From Oct.	Conference centre	Waste coordinator	
		- Reduce the use of bulletins on Sundays (this activity needs pre-activity education).	From Nov.	Church	Minister, Waste coordinator & the rest of Green Committee	
	3. Plan on car pooling at St John’s.	- Update church diary; - Learn individuals and families’ activities;	From Sep. to Nov.	Church/ outside church	Transport coordinator & the rest of Green Committee	
		- Create friendly car pooling atmosphere (a lot of investigation and communication work needs to be done).				

Summer (Dec.-Feb.) 2007-08	Focus on car pooling; (Waste management activities are on-going.)	<ul style="list-style-type: none"> - Organise offering and receiving of car pooling; - Organise car park; - Organise financial support of car pooling. 	From Dec. – Feb.	Church	Transport coordinator	<ul style="list-style-type: none"> - Congestion; - Bus routs have been cancelled; - Car parking issue; - Geographically scattered congregation
Autumn (Mar.-May) 2008	Focus on energy efficiency; (Waste management and transport activities are on-going.)	- St John's Eco-seminar (talk about energy issues such as insulation, solar energy within wider community);	The last Saturday of Mar.	Conference centre/ House groups	Energy coordinator	<ul style="list-style-type: none"> - Members work in areas related to the sustainable issues; - Location of the church;
		- St John's Eco-forum (share energy efficiency stories within St John's).	From Apr. to May			
Winter (Jun.-Aug.) 2008	1. Focus on raising political awareness of climate change (All other activities are on-going.)	- How?³⁸ <ul style="list-style-type: none"> - Relating environmental issues to other issues (e.g. save money from taking actions in the above areas to help the international poor); St John's Climate Change Foundation? 	From Jun. to Aug.	Where?	Minister;	<ul style="list-style-type: none"> - Members work in areas related to the sustainable issues; - Part of Presbyterian Body; - Political climate is (sometimes) not suitable for taking environmentally friendly actions;
	2. Information dissemination.	<ul style="list-style-type: none"> - Advertise Eco-seminar information and distribute a report of the programme with photos through Presbyterian network (regional, national, international); - Publish the relevant documents on St John's website. 	Aug.	---		

³⁸ The bold questions were for the data checking with the participants.

Notes (from Table 20):

1. Bible study and theological reflection activities could **scatter** through all stages and combine with seasonal activities; the format can be formal sermons and informal group studies; venue could be indoor or outdoor.
2. Worship could be cooperatively conducted with other churches.
3. All activities could appropriately involve kids and youth.

APPENDIX 4: WORKSHOP FOUR PROCESS

1. Workshop Four Overview

Table 21: Workshop 4 Overview

Task	Time ³⁹
Opening prayer and draft programme reflection	80 minutes
Workshop (programme design) process reflection	20 minutes
Diagramming Activity: Workshop impact assessment	20 minutes
Closing prayer and tea	15 minutes

1. Draft Programme Reflection

Step one: Participants ask questions on the programme

Step two: Reflect on “theological learning objectives” (including “theme explanation” and “Creation Narrative” diagram) and identify “participant reaction objectives” & “organisational outcome objectives”

Step three: Reflect on the programme evaluation methods;

Step four: Reflect on the programme based on the following questions

- (4) Will the programme provide knowledge and skills for St John’s community to take action on waste, transport and energy? If yes, what knowledge and skills? If no, how can we improve the programme from this perspective?
- (5) Will the programme increase the awareness of the climate change issue by providing spaces for St John’s community to exam their beliefs, attitudes and values towards the environment? If yes, how? If no, how can we improve the programme from this perspective?
- (6) Will the programme enable St John’s community to reflect and act on the paradigms and mechanisms which shape their social use of nature? If yes, how? If no, how can we improve the programme from this perspective?
- (7) Are the programme activities, implementation processes, and evaluation methods ‘doable’ in St John’s? If yes, why? If no, how can we improve the programme from this perspective?

³⁹ It is the actual time that we used.

2. Workshop Processes Reflection

Step one: Read the following “Workshop process summary table”

Workshop Objective	Activity
Workshop 1: to identify the theological themes on sustainability.	Introduction to relevant knowledge: Secular definitions of sustainability
	Diagramming Activity: Creation narrative
Workshop 2: to identify (1) the actions that St John’s people could take; (2) the activities that St John’s church could organise to encourage people to take action; (3) SWOT of St John’s Church.	Introduction to relevant knowledge: Existing themes of Christian thought relating to sustainability
	Summary of theological themes on sustainability identified in Workshop 1
	Personal reflection on lifestyle
	Diagramming Activity: SWOT stepping-stones
Workshop 3: to identify (1) the educational activities, (2) implementation processes, (3) evaluation methods for St John’s faith-based EFS programme.	Summary of “SWOT analysis of St John’s Church”
	Introduction to relevant knowledge: Case studies of EFS programmes
	Summary of personal actions and church activities that were identified in Workshop 2
	Diagramming Activity: Education and evaluation co-ordinates
	Summary of activities for St John’s faith-based EFS programmes

Step two: Reflect on the workshop process based on the following questions

- (1) The 1st diagram worked well, why? Are there other ways to make it better?
- (2) The 2nd diagram didn’t work as well as the 1st diagram, why? How could we make it work better?
- (3) We didn’t finish the 3rd diagram. Except for the time limitation, what are other reasons? How could we make it work better?
- (4) Did the diagram activities help to achieve the workshop objectives? If yes, how? If no, why they didn’t work?
- (5) Did introductions to relevant knowledge at the beginning of the workshops help to achieve the workshop objectives? If yes, how? If no, why they didn’t work?
- (6) Did the summaries of previous workshops help to achieve the workshop objectives? If yes, how? If no, why they didn’t work?

3. Workshop Impact Assessment

Step one: Answer the following questions on the colour paper (return “lifestyle reflection” sheets):

(1) Have you gained new theological understandings of “sustainability” as a result of participating in the workshops?

Or: Have you found new ways to develop your Christian faith as a result of participating in the workshops?

Or: Have you found how your theological understandings of sustainability could fit with the rest of your faith as a result of participating in the workshops?

If so, please write up to three examples on the blue paper;

(2) Have you made any changes in your daily lives as a result of participating in the workshops (it could be any changes relating to climate change such as thought or behaviour)?

Or: Have you found things that you can do to manage the climate change issue better as a result of participating in the workshops?

Or: Are you contributing to sustainability as a result of participating in the workshops?

If so, please write up to three examples on the green paper;

Step two: Present your examples to the group and pass your paper to the facilitator;

Step three: Facilitator groups those pieces of paper and stick them on a big piece of paper.

APPENDIX 5: INTERVIEW QUESTIONS AND DATA

SUMMARY

1. In Workshop 3, we identified some activities for the St John's faith-based EFS programme (green waste management, car pooling, Eco-seminar, Eco-forum, and raising political awareness). What activities you think need to be evaluated?
2. Why do you think it's important to evaluate the activity (activities)?
3. What might be the most suitable methods to evaluate the activity (activities)?
4. What might be the most suitable time and place to carry out the evaluation?
5. Who could be responsible for the evaluation?
6. The aims of these activities are not only to encourage the church to take action but also to increase people's awareness of taking action in daily life. Do you think the activities' impact on people's personal life should be assessed? If yes, questions 9-12; If no, why?
7. In the programme, there will also be some Bible and theology studies. Do you think those studies should be evaluated? If yes, questions 9-12; If no, why?
8. We have done three workshops, which part you think went well and which part didn't work?
9. I used three diagram activities in the three workshops, do you think those activities helped to achieve the workshop objectives?
10. At the beginning of each workshop, I introduced relevant knowledge. Do you think that knowledge helped to achieve the workshop objectives or helped people to do the diagram activities?
11. At the beginning of the 2nd and 3rd workshops, I also gave my summaries of the previous workshop. Do you think those summaries helped to achieve the workshop objectives or helped people to do the diagram activities?
12. What are appropriate methods to know if we have successfully designed the St John's faith-based EFS programme or not?
13. In the workshops, we also learnt about sustainability and reflected on our life-styles, how can we assess the impact of the workshops on our lives?

Interview Aim 1 (to fulfil research objective three): What are suitable evaluation methods for St John's faith-based EFS programme?

Table 22: Interview Data Summary (1)

Possible evaluation area (based on Workshop 3 data)	Participants' response			
	Need to be evaluated? Yes, how?	Need to be evaluated? No, why?	Supplement to programme activity	General principle for evaluation⁴⁰
Theological learning	(1) Youth groups make quiz to test theological knowledge;	Too much pressure for busy people	Other house/church groups discussion	(1) The criteria for deciding evaluation area can be: <ul style="list-style-type: none"> ● which activity would make a big difference for greenhouse gas mitigation (e.g. car pooling); ● which activity evaluation would be more manageable (e.g. energy efficiency at home might be hard, but we could check what people's baseline is and then go back and ask about changes in, say, six months);
	(3) Get feedback from participants;			
	(4) On second year's Green Sunday to discuss how people think about the climate change issue, which may show how people have picked up the theological themes.			
Reduce paper use at the church office/ Sunday bulletin	(1) Monitor through storage facility to know how much paper used (for 3-6 months);	---	House/church groups take part in planning	(2) The evaluation areas and methods can be decided with the Green Committee who will get a sense of ownership.
	(2) See if church cuts down paper consumption.			

⁴⁰ Evaluation aims are also shown in this column and in the 'how to evaluate' column with the evaluation methods.

Recycling in conference centre	Monitor how often we empty the recycling bin (for 3-6 months).	It is hard to monitor because too many different people use the conference centre	Advertise the available recycling facilities.	(3) All activities need to be evaluated because we need to identify the barriers to doing the activities; (4) Evaluate if people change behaviour in church and at home by using interview/questionnaire to ask people after 3/6 months time if they changed anything as a result of the programme; after this amount of time we also can see if they maintain the changes; (5) Evaluation should not be only based on hard data; (6) Only observation (rather than asking people) can provide true (trustable) information; (7) Don't give people too much pressure, otherwise they will switch off. (8) Generally, waste, transport and energy coordinators are responsible for the evaluations in the three areas respectively.
Car pooling	(1) Keep record on those who are offering car pooling and those who are receiving;	---	House/church groups take part in planning	
	(2) Free chat to know how it is going and find the difficulties after Green Sunday service at tea time;			
	(3) Use questionnaires to ask what people's transport patterns were in the activity period;			
	(4) Observation through the use of car parks for car pooling to know how many people are car pooling.			
Eco-seminar	(1) Count the number of participants; (2) On-line/on-site questionnaires to ask questions like: <ul style="list-style-type: none">● What was effective in the seminar?● How to improve the seminar better?● What information/knowledge provided in the seminar would help you to go home to carry on what action?	---	A series of seminars; time: 5pm on Sundays; shared meal; followed by evening services.	
Eco-forum	---	It is a story sharing	Can be combined with Eco-seminar.	
Raising political awareness of climate change	(1) Ask questions like: what sorts of things were done subsequently (it can be several years down the track);	---	Hold a seminar, and advertise it; link it to regular prayer	
	(2) Count the number of participants.			

Interview Aim 2 (to fulfil research objective six):

Identify appropriate evaluation methods for the design process of St John's faith-based EFS programme.

Table 23: Interview Data Summary (2)

Evaluation area and aim	Participants' response	
	How to evaluate?	Suggestion to workshops (1-3)
The effectiveness of the programme design	(1) Through the effectiveness of the St John's programme, to know the effectiveness of the programme design process. Use questionnaire/discussion to ask questions like: are St John's people comfortable with the programme? Do they want to do it? Does the programme cover the issues that they would like to think about? (2) If we can set up the programme at St John's; (3) To see if a valuable faith-based EFS programme would emerge for the wider church (this programme is for St John's per se. St John's somehow is a pilot).	(1) Spend a bit more time at the beginning to find how participants understand "sustainability"; (2) Give more time for diagramming activities and reflections on the created diagrams; (3) Ask more practical questions (e.g. how many recycling bins should we put in the church yard?); (4) Allow more workshop sessions (e.g. four workshops rather than three).
The effectiveness of the sustainability learning	(1) Test how much information we have attained; (2) Try to get us to look at our ways of doing/thinking things critically by asking questions like: <ul style="list-style-type: none"> ● Are we making a contribution to sustainability? What is it? ● What have we done that did not contribute to sustainability? How can we change it? ● How much did we change our behaviour? ● Did we change our thoughts about this area? Have we been challenged to explore new concepts? ● Do we have a long-term plan in this area (change our lifestyles on a permanent basis) at the individual and collective levels? ● Did we find new ways to develop our Christian life? ● Did we find things that we can do to manage environmental issues? ● Have the workshops raised our awareness about sustainability? ● How did we change our thinking and attitude towards the issue of climate change? 	

APPENDIX 6: DIAGRAM “CREATION NARRATIVE”

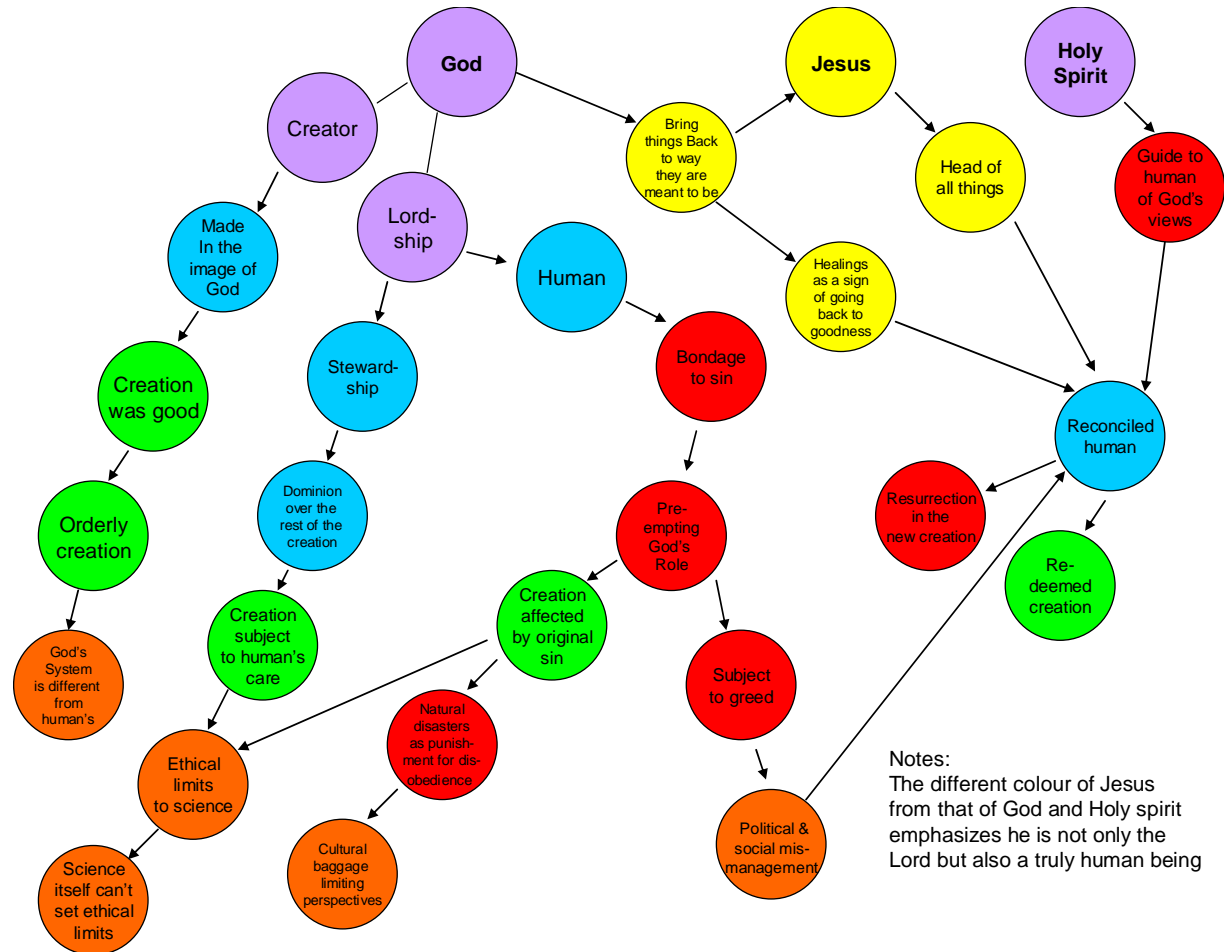


Figure 15: “Creation Narrative”

APPENDIX 7: HUMAN ETHICS APPROVAL FORMS

VICTORIA UNIVERSITY OF WELLINGTON

Te Whare Wananga o te Upoko o te Ika a Maui



Designing a Faith-based Education for Sustainability Programme

at St John's in the City Presbyterian Church, Wellington

Information Forms for Participants

Research Project:

Church involvement in education for sustainability: using participatory action research to design a faith-based education programme (specifically addressing the issue of Climate Change) for a Christian community in New Zealand.

Researcher:

Xiaoming (Catharine), Gong. Masters student in Environmental Studies, School of Geography, Environment and Earth Sciences, Victoria University of Wellington

Dear _____,

As part of my Masters degree, I am undertaking a research project to design a Christian faith-based education programme for sustainability at St John's Church. This programme specifically addresses the issue of climate change and will be developed in four workshops and a workshop-related interview. The workshops and the interview process have received ethics approval from the Human Ethics Committee, Victoria University of Wellington. I would like to invite you to participate in the workshops and an interview.

In the workshops and the interview, I want to find out objectives, appropriate facilitation methods, implementation processes, and evaluation methods for a faith-based education programme for sustainability for St John's Church community (details see the attached "workshop outline"). In other words, you are being invited to represent St John's congregation to design a programme for the community.

I will design the workshop activities and overall interview questions. I will also

conduct presentations in the workshops and the interview. However, I will not facilitate the diagramming/mapping activities because of the language limitation. The facilitator is a Masters student in development studies at Victory University of Wellington, who is also a participant of St John's Youth group.

The workshops will be video recorded (The facilitator and I will be the video persons), and the interview will be conducted by telephone and recorded. The recordings of these interactions are for information analysis and all information will be kept confidential. No other person besides me and my academic supervisors will see the workshop video tapes and listen to the audio tapes from interviews.

Responses collected will be put into a written Masters thesis which will be submitted to the School of Geography, Environment and Earth Sciences for marking and deposited in the University Library. All written interview notes will be kept in a locked file and all electric information will be kept in a password-protected file. All data will be destroyed two years after the thesis is completed. You can access the thesis copy through St John's church office and request the workshop guideline copy from me.

In addition to the thesis, the workshop resources may be used for production of a guideline for running faith-based education for sustainability programme design workshops in other communities. What you and others say in the workshops and interviews may be quoted in the thesis and the workshop guideline using a pseudonym of your choice. By participating in the workshops, you're asked to keep any *personal* information shared by others to yourself.

If you have any questions about this project and the treatment of your information within it, please do not hesitate to ask me, or contact my supervisors. Our contact details are below.

Thanks,

Yours sincerely

Xiaoming (Catharine) Gong

gongxiao1@student.vuw.ac.nz

Supervisors:

Dr Sean Weaver Sean.Weaver@vuw.ac.nz Tel: 463-5392

Ms Sara Kindon Sara.Kindon@vuw.ac.nz Tel: 463-6194



Designing a Faith-based Education for Sustainability Programme
at St John's in the City Presbyterian Church, Wellington

Information Form for Facilitator

Research Project:

Church involvement in education for sustainability: using participatory action research to design a faith-based education programme (specifically addressing the issue of Climate Change) for a Christian community in New Zealand.

Researcher:

Xiaoming (Catharine), Gong. Masters student in Environmental Studies, School of Geography, Environment and Earth Sciences, Victoria University of Wellington

Dear _____,

As part of my Masters degree, I am undertaking a research project to design a Christian faith-based education programme for sustainability at St John's Church. This programme specifically addresses the issue of climate change and will be developed in four workshops and a workshop-related interview. The workshops and the interview process have received ethics approval from the Human Ethics Committee, Victoria University of Wellington. I would like to invite you to participate in the workshops as a facilitator.

In the workshops and the interview, I want to find out objectives, appropriate facilitation methods, implementation processes, and evaluation methods for a faith-based education programme for sustainability for St John's Church community (details see the attached "workshop outline"). You are being invited to facilitate the diagramming/mapping activities of the workshops. In order to successfully facilitate the activities, you are asked to attend workshop preparation meetings. You are also asked to assist workshop information analysis by providing a written self-introduction and a post-workshop reflection.

The workshops will be video recorded for information analysis and all information will be kept confidential. No other person besides me and my academic supervisors

will see the workshop video tapes. Responses collected will be put into a written Masters thesis which will be submitted to the School of Geography, Environment and Earth Sciences for marking and deposited in the University Library. All written preparation meeting notes, your self-introduction and post-workshop reflection will be kept in a locked file and all electric information will be kept in a password-protected file. All data will be destroyed two years after the thesis is completed. You can access the thesis copy through Victoria University Library or St John's church office and request the workshop guideline copy from me.

In addition to the thesis, the workshop resources may be used for production of a guideline for running faith-based education for sustainability programme design workshops in other communities. What you and others say in the workshops and interviews may be quoted in the thesis and the workshop guideline using a pseudonym of your choice. By participating in the workshops, you're asked to keep any *personal* information shared by others to yourself.

If you have any questions about this project and the treatment of your information within it, please do not hesitate to ask me, or contact my supervisors. Our contact details are below.

Thanks,

Yours sincerely

Xiaoming (Catharine) Gong

gongxiao1@student.vuw.ac.nz

Supervisors:

Dr Sean Weaver Sean.Weaver@vuw.ac.nz Tel: 463-5392

Ms Sara Kindon Sara.Kindon@vuw.ac.nz Tel: 463-6194



CONSENT TO PARTICIPATION IN RESEARCH

Research Project:

Church involvement in education for sustainability: using participatory action research to design a faith-based education programme (specifically addressing the issue of Climate Change) for a Christian community in New Zealand.

•I have had an explanation of the project and have had any questions about it answered clearly.

•I understand how the information generated in the workshops will be treated and that I will not be personally identified in any reports or papers that are produced.

•I understand that some photographs may be taken (to include in the thesis and other publications) and (tick one of the following):

I am happy to be photographed as long as I am not clearly visible/identifiable.

I do not wish to have my photo taken at all.

•I understand that my words may be quoted in a written thesis and a workshop guideline

I wish to use the pseudonym as_____.

I give my consent to participate in the workshops and an interview.

Signed:

Name of participant (please print it clearly):

Date: