

**EXPERIENCES OF LAOTIAN TEACHERS OF THE HUMAN VALUES WATER,  
SANITATION AND HYGIENE EDUCATION TRAINING PROGRAMME**

By

**SILVERANI PADAYACHEE**

submitted in accordance with the requirements  
for the degree of

**MASTER OF EDUCATION - WITH SPECIALISATION IN ADULT EDUCATION**

at the

**UNIVERSITY OF SOUTH AFRICA**

**SUPERVISOR: PROF M. M. NIEMAN**

**JANUARY 2012**

Student number: 32277318

I declare that

**Experiences of Laotian teachers of the Human Values Water, Sanitation and Hygiene Education Training programme** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

---

Ms S. PADAYACHEE

---

DATE

# Acknowledgements

My sincere appreciation goes to the following people and organisations for their assistance and support:

- My promoter, Professor M. M. Nieman, for her patience, guidance, encouragement and immense tolerance throughout.
- UN-Habitat, specifically UN-Habitat Lao PDR for commissioning and inviting me to conduct this research as well as for permitting me to use this study for my Master of Education studies. My appreciation to Mr A. Dzikus and Mr A. Sarkar for their kind assistance. My most sincere thanks to Vatlana Bouphe (Nana) for being a great translator and research assistant for this study.
- The organisations, SPW for their cooperation and hospitality during the study; and the NCA (Lao PDR) for their assistance and cooperation.
- To the Laotian teacher participants for their willingness to participate, cooperate and share in their experiences.
- Linda Thomson who has been good friend through troublesome times and a helpful language editor.
- My family and friends, especially to my mother, Velima Padayachee for her continuous love and support and my brother Perumal Padayachee for helping clarify matters of education policy.

Most importantly I wish to express my sincere gratitude to the all pervasive DIVINITY.

# Summary

Access to safe water and improved sanitation remains threatened by the ever increasing demand in urbanised cities of the world. Adequate management of this problem could not be achieved through technical and regulatory methods alone. A human values-based education approach, namely the Human Values Water, Sanitation and Hygiene Education (HVWSHE) programme, was considered a suitable intervention strategy to bring about the desired changes in attitude and behaviour by the water users.

This research involves an empirical case study approach that explores the experiences of Laotian teachers as adult learners of the HVWSHE intervention as well as a literature study on adult education, adult learning facilitation, human values-based education and teacher beliefs. Focus group meetings, lesson observations, participant observation, field notes and a researcher journal was used to collect data.

This study revealed that the HVWSHE training programme had a positive effect on the adult learners' attitude and behaviour towards a better water-use and sanitation-friendly ethic.

## **KEY TERMS**

Adult education; adult learners; adult learning facilitation; adult learning theories; human values; human values-based education; teacher beliefs; change in attitude; water, sanitation and hygiene education; Lao PDR.

# Dedication

*Dedicated to Bhagavan Sri Sathya Sai Baba*

# Table of Contents

<b>DECLARATION</b>	i
<b>ACKNOWLEDGEMENTS</b>	ii
<b>SUMMARY</b>	iii
<b>DEDICATION</b>	iv
<b>TABLE OF CONTENTS</b>	v
<b>ACRONYMS</b>	xiv
<b>LIST OF FIGURES, DIAGRAMS AND TABLES</b>	xvi
<b>LIST OF ANNEXURES</b>	xviii

## **CHAPTER 1**

1.	ORIENTATION TO THE STUDY	1
1.1	Introduction	1
1.1.1	A brief overview of the emergence of UN-Habitat's human values-based approach	4
1.1.2	The role of the teacher as an adult in the implementation of a human values-based approach in education	7
1.1.3	The researcher's involvement with HVWSHE	10
1.2	A brief overview of Lao People's Democratic Republic	11
1.3	The role of UN-Habitat and HVWSHE in Lao PDR	14
1.3.1	UN-Habitat's Water for Asian Cities (WAC) programme	14
1.3.2	UN-Habitat's cooperation agreement with the Society for the Preservation of Water (SPW)	14
1.3.3	UN-Habitat's cooperation agreement with the Norwegian Church Aid (NCA) in Lao PDR	15

1.4	Motivation for and contribution of the study	15
1.5	Research problem, aims and objective of the research	16
1.5.1	The problem statement	16
1.5.2	Aims of the research	17
1.6	Study design	18
1.6.1	Data gathering techniques	18
1.7	The multidisciplinary–interdisciplinary–transdisciplinary nature of the research	19
1.8	Concept definition	20
1.8.1	Values	20
1.8.2	Human values education	21
1.8.3	Attitude	21
1.8.4	Beliefs	21
1.8.5	Behaviour and behaviour modification	22
1.8.6	Adult learner	22
1.8.7	Experience	22
1.9	Summary of chapters	23
1.10	Conclusion	23

## **CHAPTER 2**

2	ADULT LEARNING AND HUMAN VALUES-BASED TRAINING	24
2.1	Introduction	24
2.2	Adult education, adult learners and learning	24
2.2.1	Defining adults	24
2.2.2	Adult education and the adult learner	25
2.2.2.1	Characteristics of the adult learner	26

2.2.3	Defining learning	28
2.2.3.1	Theoretical perspectives of learning	28
2.2.3.2	Theoretical perspectives and values-based education	32
2.2.3.3	The learning process	32
2.2.3.4	Adult learning	33
2.2.4	Characteristics of adult learning	34
2.2.5	Conditions of adult learning	35
2.2.6	Adult learning facilitation	37
2.2.7	Implications for facilitators of adult learners	38
2.2.8	Pre-requisites for teacher (adult learner) change	40
2.3.	Teacher beliefs and attitudes	41
2.3.1	Teacher beliefs about their own abilities: Self-efficacy	41
2.3.2	Teacher beliefs about the nature of learning and teaching	42
2.3.3	Teacher thinking and beliefs	42
2.3.4	The role of teachers' beliefs and knowledge in the adoption of reform programmes	44
2.4.	Understanding human values-based education	45
2.4.1	The five basic human values	46
2.4.1.1	Truth	46
2.4.1.2	Right conduct	47
2.4.1.3	Peace	47
2.4.1.4	Love	47
2.4.1.5	Non-violence	47
2.5.	Human Values-based Water, Sanitation and Hygiene Education (HVWSHE)	49
2.6	The Human Values Integrated Instructional Model	51



2.6.1	The role of the teacher as role model	51
2.6.2	Collaborative learning	51
2.6.3	The role of the student	51
2.6.4	The process of instruction	52
2.6.5	Assumption of the Human Values Integrated Instructional Model	53
2.6.6	The Human Values Integrated Instructional Model and other values-based models	54
2.7	The role and relationship of the HVIIM in the HVWSHE training programme	55
2.8	Conclusion	56

### **CHAPTER 3**

3	RESEARCH DESIGN AND METHODOLOGY	58
3.1	Introduction	58
3.2	Scope of the empirical research	58
3.3	Research approach	59
3.3.1	Justification for choosing a qualitative research approach	59
3.3.2	Qualitative evaluation research	61
3.3.3	Case study as a type of qualitative research designs	62
3.4.	Research methods	64
3.4.1.	The research participants and sampling procedure	64
3.4.2	Data collection methods	65
3.4.2.1	Focus group interviews	65
3.4.2.2	Observations	68
3.4.2.3	Field Notes	69

3.4.2.4	Researcher journal (research memos)	70
3.5.	Analysis of data	70
3.5.1.	Analysis of data collected by focus group interviews	71
3.5.1.1	Transcription	71
3.5.1.2	Data reduction	71
3.5.1.3	Coding	71
3.5.2	Analysis of data collected by observation	72
3.6	Interpretation	73
3.7	Synthesis of the findings	74
3.8	Measures to ensure research accuracy	74
3.8.1	Trustworthiness of qualitative research	74
3.8.1.1	Credibility	74
3.8.1.2	Transferability/Applicability	75
3.8.1.3	Dependability	75
3.8.1.4	Confirmability	75
3.8.2	Trustworthiness of the human instrument	75
3.8.3	Personal values and biases	76
3.9	Ethical considerations	76
3.10	Limitations of this study	77
3.11	Conclusion	77

## **CHAPTER 4**

4	FINDINGS AND ANALYSIS	79
4.1	Introduction	79
4.2	Gaining entry to the research site	79
4.3	The research environment	80
4.4	Profile of the research participants	81

4.5	The training programme	82
4.6	Research findings relating to focus group interviews	85
4.6.1	Influence of the training programme on Laotian teachers' knowledge and awareness of water, sanitation and hygiene issues	85
4.6.2	Influence of the training programme on Lao teachers' attitudes and beliefs towards water, sanitation and hygiene issues	86
4.6.3	Laotian teachers' attitudes towards the use of a values-based approach to education	88
4.6.4	Lao teachers' willingness to implement values education in their classrooms	89
4.6.5	Lao teachers' confidence to implement values education in their classrooms	90
4.6.6	Barriers to implementing values-based education	91
4.6.7	Teaching strategies used by teachers before the training intervention	92
4.6.8	Teaching strategies teachers intend to use in future	93
4.6.9	Teachers' opinions on the role of the environment in ensuring successful implementation of a human values-based approach	94
4.6.10	Role modelling	95
4.6.11	The need for follow-up training	96
4.6.12	Administrative issues regarding the training programme	97
4.6.13	Summary	98
4.7	Research findings related to the observation of participants	100
4.7.1	Influence of the training programme on Laotian teachers'	100

	knowledge and awareness of water, sanitation and hygiene issues	
4.7.2	Influence of the training on Laotian teachers' attitudes and beliefs about water, sanitation and hygiene issues	101
4.7.3	Laotian teachers' knowledge about values in education	102
4.7.4	Participants' awareness of the role of the environment	102
4.7.5	Programme-related elements	103
4.7.6	Adult learner experiences and learning	104
4.7.7	Summary of the findings based on observation of participants	105
4.8	Research findings relating to lesson plans and lesson observations	105
4.8.1	Qualitative analysis of lesson observations and lesson plans	106
4.8.1.1	Prayers	107
4.8.1.2	Meditation	107
4.8.1.3	Thematic approach (based on interest of the students)	107
4.8.1.4	Discussion of human values by students	107
4.8.1.5	Summary and delegating homework	107
4.8.1.6	Classroom environment	108
4.8.1.7	Strategies used to elicit or integrate values	108
4.8.1.8	Activities	109
4.8.1.9	Role modelling	109
4.8.2	Teachers' attitude, knowledge, confidence and motivation to implement a human values-based approach in their teaching	109
4.8.2.1	Attitude towards the use of a values-based approach to teaching	110
4.8.2.2	Knowledge/Awareness	110

4.8.2.3	Confidence	110
4.8.2.4	Motivation	110
4.8.3	Summary of the findings relating to lesson plans and lesson plan observations	111
4.9	Post-training activities: Visit to a Laotian school	111
4.10	Reflexivity	112
4.11	Limitations	113
4.12	Conclusion	114

## **CHAPTER 5**

5	SUMMARY, INTEGRATION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	115
5.1	Introduction	115
5.2	Summary of the problem and rationale for the study	115
5.3	Summary of the research question and sub-questions	117
5.4	Summary of the aim and objectives of the investigation	118
5.5	Overview of the investigation	119
5.6	Conclusions of the study	121
5.6.1	Conclusions drawn from the literature study	121
5.6.2	Conclusions drawn from the findings in the empirical investigation	122
5.6.2.1	Experiences with regard to knowledge and awareness	123
5.6.2.2	Influence of the training intervention on teachers' attitudes and beliefs	123
5.6.2.3	Participants' experience of the use of a values-based approach to education	124

5.6.2.4	Laotian teachers' willingness to implement the values-based approach in their classrooms	124
5.6.2.5	Laotian teachers' confidence to implement values-based education in their classrooms	125
5.6.2.6	The Laotian teachers' as adult learners, experiences of the training programme	126
5.6.2.7	Improving the training of teachers in using a human values-based approach to water, sanitation and hygiene education.	128
5.7	Integration and summary of the findings and conclusions	129
5.7.1	Summary of findings and conclusions of the literature study	129
5.7.2	Summary of findings and conclusions of the empirical study	130
5.8	Recommendations	131
5.9	Limitations of the study	133
5.10	Recommendations for further research	133
5.11	Closing remarks	133
	<b>BIBLIOGRAPHY</b>	135
	<b>ANNEXURES</b>	149

## Acronyms

ADB	Asian Development Bank
EFA	Education for All
EHV	Education in Human Values
HVIIM	Human Values Integrated Instructional Model
HVWSHE	Human Values Water Sanitation and Hygiene Education
IWE	Institute of Water Education
Lao PDR	Lao People's Democratic Republic
MDG	Millenium Development Goals
NCA	Norwegian Church Aid
NPA	National Plan of Action
RWSS	Rural water supply and sanitation sector in Lao PDR
UNICEF	United Nations Children's Fund
UN-Habitat	United Nations Human Settlements Programme
SPW	Society for the Preservation of Water (Thailand)

SSEHV	Sathya Sai Education in Human Values
SSSIHL	Sri Sathya Sai Institute of Higher Learning
SSS	Sathya Sai School (Thailand)
SSSWF	Sri Sathya Sai World Foundation
SEAMEO	South East Asian Ministers of Education Organisation
TAISSE	The African Institute of Sathya Sai Education
TUP	Teacher Upgrading Project
WAC	Water for Asian Cities



## **LIST OF FIGURES, DIAGRAMS AND TABLES**

<b>NUMBER</b>	<b>TITLE</b>	<b>PAGE</b>
<b>LIST OF FIGURES</b>		
1.2	Map of Lao PDR	11
2.1	Concept of Human Values in Water, Sanitation and Hygiene Education	50
4.1	Scenic environments at SSS	80
4.2	Lesson demonstration (Day 6): SSS learners involved in group activity	83
4.3	Demonstration of water purity testing	84
4.4	Several demonstrations on water distillation and filtration	84
4.5	Demonstration of Hydroponics	84
4.6	Information on hydroponics in both English and Thai	84
4.7	Atmosphere at focus group meeting	85
4.8	Findings of lesson observations	106
4.9	Findings on teacher attributes	109
4.10	Typical sanitation facilities in a school	112
4.11	Playground area of learners	112
<b>DIAGRAMS</b>		
3.1	Diagrammatic illustration of the research phases	78

## LIST OF TABLES

2.1	Basic values and related values or modes of expression	48
3.1	Rating scale for items present in the lesson according to the Human Values Integrated Instructional Model.	72
3.2	Rating scale of behavioural attributes in Annexure C	73
4.1	Participant representation	81

## LIST OF ANNEXURES

<b>ANNEXURE</b>	<b>TITLE</b>	<b>PAGE</b>
A	Letter of invitation by UN-Habitat	149
B	Informed consent form: English translation	150
C	Lesson observation checklist	151
D	Semi structured questions used for focus group meeting	155
E	Example of completed lesson observation	157
F	SPW blank lesson plan and list of values	160
G	Example of completed SPW lesson plan	163
H	The three training programme schedules	165
I	Transcription of focus group meeting (2 <sup>nd</sup> Group)	171

“*Water is Life, Sanitation is Dignity.*” (UN-Habitat: 2005)

## ORIENTATION TO THE STUDY

### 1.1 Introduction

Access to water supply and sanitation is a basic need and a human right which is vital for the dignity and health of all people (WHO 2000:1). However, according to Castelletti and Soncini-Sessa (2007:3) water demand is increasing in many parts of the world, but availability and quality of water resources are decreasing because of human activities, the growing world population, ongoing urbanisation, industrialisation and intensification of agriculture. Access to water supply and sanitation are a luxury for most of the poor people in the world (WHO 2006:1).

According to Stein (2008:123), even though only 0,0001 percent of the earth's water is fresh water that is accessible, there is enough water for all of us, but the reality is that the accessible consumable water is not evenly distributed across the globe. The global supply and demand of water is grossly unbalanced, for instance the Americas have the largest amount and Oceania (Australia, New Zealand and the Pacific Islands) the smallest. However Oceania being thinly inhabited has the greatest per capita supply and Asia the lowest (Sterling 2007:5; Stein 2008:vii).

In global terms the water and sanitation coverage can be reflected as follows: Africa contains 28% of the world's population without access to *improved water supply* and 13% of people without access to *improved sanitation*. Asia's water coverage accounts for the vast majority of people in the world being the second lowest, after Africa, without access to improved services. Improved drinking water sources are for example public taps/standpipes, protected dug wells, protected springs or rain water collection, whereas unimproved drinking water sources are unprotected dug wells, unprotected springs, tanker trucks with water and surface water (a river, dam, pond canal or stream). Improved sanitation facilities are inter alia ventilated improved pit latrines, pit latrines with a slab and composting toilets, whereas

unimproved sanitation facilities are pit latrines without a slab, open pits, buckets or no facilities at all (WHO 2006:4).

People appropriate more than half the world's available surface water. It is predicted that by 2025 this would rise to more than 70 percent as demand increases with increasing population growth and consumption. The United Nations (UN) estimates that by 2025, forty eight nations with a combined population of 2,8 billion will face fresh water scarcity, where scarcity is defined by the UN as having less than 500 cubic meters (132 000 gallons) per person per year. Water shortages already impede development, perpetuate poverty and damage health in low income countries (Sterling 2007:5).

According to Sterling (2007:8) policy makers have focussed on technological solutions to increase water supply. These solutions have often high costs, both monetary and environmental, therefore the focus has now shifted to reducing demand through appropriate water resource management. Sterling (2007:9) indicates that changes in everyday behaviour could significantly contribute to reducing water wasted.

Although water resource management is a global problem, it seems to be the worst in Africa and Asia where urban sustainability are seriously threatened by the growing water and sanitation problem on the one hand and the fast growing population on the other. This is evident from a report by the World Health Organisation (WHO 2000) which states that in the year 2000, one-sixth (1.1 billion people) of the world's population had no access to improved water supply and two-fifths (2.4 billion people) were without access to improved sanitation. According to the World Health Organisation (WHO) report the majority of these people live in Asia and Africa (WHO 2000:1).

Acute shortages in improved water and sanitation cause high rates of water borne disease and death. UNICEF (2008:8) states in this regard: "Unsafe water, poor hygiene practices and inadequate sanitation are not only the causes of the continued high incidence of diarrhoeal diseases, they are significant contributing factors in under-five mortality rate ..." In a study done by Esrey, Potash, Roberts and Shiff (1991:609) on the effects of improved water supply and sanitation on a number of diseases it was found that "... child mortality fell by 55%, which suggests that water and sanitation have a substantial impact on child survival."

Against the backdrop of increasing urbanisation, the perception is that city dwellers enjoy better services than those in smaller urbanised centres. This perspective soon changes

when the reality echoed at the end of the previous century was that more than half the population in most large cities in sub-Saharan Africa and many in Asia, still lacked water piped to their homes and good quality toilets. In a UN-Habitat (2003:1) report it is estimated that more than 100 million city dwellers worldwide have to defecate in open spaces or into plastic bags.

This situation prevails in spite of the fact that in 1977 representatives from the world's governments committed themselves to ensuring that everyone would have adequate water and sanitation by 1990 (Cann & Jones 2006:10). Because governments world-wide failed to achieve this goal, the goal posts were moved to 2000, but once again could not be met. With the development of the Millennium Development Goals (MDG), which arose from the United Nations Millennium Declaration that was adopted in September 2000, these targets were moved to 2015 (Cann & Jones 2006:10). The MDGs most relevant to water and sanitation address the following targets:

- Target 10: to halve, by 2015, the proportion of people without sustainable access to safe drinking water.
- Target 11: to achieve, by 2020, a significant improvement in the lives of at least 100 million slum dwellers (UNO 2010:9; 58-59).

The United Nations Human Settlements Programme (hereafter referred to as UN-Habitat) is the lead agency for implementing the 'Habitat Agenda'. The Habitat Agenda is a global plan of action in which governments have committed themselves to the goals of adequate shelter for all and sustainable urban development. UN-Habitat is the focal point for implementing the agenda, assessing its implementation and monitoring global trends and conditions. UN-Habitat is also responsible for helping the international community to meet the MDGs. In doing so UN-Habitat supports and works in partnerships with governments, non-governmental organisations (NGOs) and the private sector (UNDP 2008:190).

UN-Habitat is committed to meet the MDG target set to halve the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015. However, at the same time expectations are that by 2015 nearly 60% of the world's population will make cities their homes (UN-Habitat 2003:1). Meeting rapidly growing demands on infrastructure continue to challenge existing strategies.

Often initiatives for water, sanitation and hygiene succumb to problems such as increasing donor dependence, lack of aid effectiveness due to rampant corruption, absence of trust between communities and public authorities and lack of motivation to pay for public services.

These ultimately affects service delivery and threaten the sustainability of these initiatives (Cann & Jones 2006:10; Nanan, White, Azam, Afsar & Hozhabri 2003:2).

Tibaijuka (2001:iii) eludes that “There is growing understanding that managing water demand cannot be accomplished by technical and regulatory measures alone. They have to be complemented by advocacy, awareness-raising and education initiatives.” The importance of education in water management was echoed by Prof. Kader Asmal, former Minister of Education in South Africa, who at an expert group meeting (EGM), convened by UN-Habitat in collaboration with United Nations Environment Programme and the Stockholm International Water Institute in Johannesburg in 2001, emphasised the role that formal and informal education can play to help conserve water and manage it in a wise manner so that future generations will not suffer from our mistakes today (Asmal 2001). This expert group meeting (EGM) recommended that a **human values-based approach** to water education as a strategic entry point to developing a new ethic of water governance was necessary (UN-Habitat 2003:200-201 & UN-Habitat 2001:iii).

### **1.1.1 A brief overview of the emergence of UN-Habitat’s human values-based approach**

The implementation of an environmental policy goal determined by policy experts to enable regulation often results in efficiency and ethical concerns whereby communities feel that policy makers interfere or offer too limited a scope of public participation in decisions. A way to bring about broader change in behaviour of the public is to educate the public addressing various responsibilities and engaging the participation of the public to motivate people toward environmentally friendly ways (Ölander & Thøgersen 1995:350). The environmental policy making should be a negotiated process implying that the best way to bring about behavioural changes amongst people is to work alongside them. Thus cooperative, participatory learning-based approaches are better motivators than are coercive approaches. This collective participatory approach has called for a new view of governance that embraces the notion and significance of the public/social contribution in bringing about an understanding of the desired social and environmental reform. The recognition of responsibilities, of behavioural expectations and shared values in the process of effective environment and natural resource management comes from empowering people. Empowerment through learning enables more informed decision-making processes (Allen, Kilvington, & Horn 2002:12).

With the realisation that improvement in water management and sanitation cannot be achieved by technical or regulatory measures alone, it was accepted that education,

awareness-raising, understanding and ownership should play an important role. The understanding of human behavioural processes and limitations of simple policy approaches has drawn emphasis to the need for a more contextual learning approach (Allen, *et al.* 2002:12). It was therefore a wise decision when UN-Habitat decided to follow an inclusive approach by introducing an additional component to the education framework that would simultaneously elicit awareness and understanding with specific emphasis on water, sanitation and hygiene issues. It was recognised that positive attitudinal and behavioural changes toward water management could lead to a new water-use and sanitation-friendly ethic (UN-Habitat 2003:202-203).

UN-Habitat's (2005) focus towards a new water-use and sanitation-friendly ethic in society has resulted in their adoption of a **human values-based approach** in education. The approach was considered as a unique and strategic approach that would enable a fundamental change in behaviour and personal attitudes with the underlying values bringing about positive attitudinal change. Victor Kanu and his task team of The African Institute of Sathya Sai Education (TAISSE) based in Zambia demonstrated the human values in education approach to water-related environmental education at the African cities expert group meeting held in Johannesburg in 2001. This approach was the first to pioneer the application of human values-based education to water, sanitation and hygiene issues (Manshishi 1998:5-7; SSSWF 2007:139).

According to Kanu (2000:2-3), the impact delivered by the approach was attributed to the emphasis that was placed on human values in education. The *Education in Human Values* (EHV) approach is based on the *Sathya Sai Education in Human Values* (SSEHV) model. This originated in India and is operational in more than 160 countries (Kakkar & Taplin 2001). The model promotes five universal values namely; peace, truth, love, right conduct and non violence, which has as the ultimate goal the holistic development of the student (Kanu 2000:4). The potential of the EHV approach to bring about positive changes in the behaviour and attitude of learners, teachers and even parents is widely acknowledged (Padayachee 2002:48-53; Jumsai 2003:302-307).

The EHV approach was adopted by UN-Habitat to promote positive attitudes and behaviour with respect to water management and good sanitary and hygiene sense, but the approach was later named the *Human Values Water, Sanitation and Hygiene Education programme* (HVWSHE) in an effort to distinguish the human values in water, sanitation and hygiene education from other values education programmes. The programme has also been referred to in various UN-Habitat literature as the *Human Values-based Water, Sanitation and Hygiene Education programme*. In this dissertation of limited scope, reference is made to



both of these names. In the context of this study the values instructional approach used in the HVWSHE training programme is the Human Values Integrated Instructional Model (HVIIM). HVWSHE includes HVIIM and technical knowledge on water, sanitation and hygiene issues. HVIIM is not specific to water, sanitation and hygiene and can be applied on all topics. The HVWSHE training programme including the HVIIM will be expanded on in chapter 2.

UN-Habitat has in partnership with the African Institute of Sathya Sai Education (TAISSE) initiated the Water for African Cities programme (refer to sect.1.1.3). The HVWSHE training for the Water for African Cities programme included 12 countries of Africa, namely Ethiopia, Kenya, Uganda, Niger, Ghana, Senegal, Mali, Burkina Faso, Cameroon, Cote d' Ivoire, Tanzania and Zambia. The HVWSHE programme in Africa included the EHV instructional approach which is directed at elicitation of values. Hence using this approach on the existing school curriculum with topics relating to water, sanitation and hygiene showed positive results in school learners (UN-Habitat 2003:201; UN-Habitat 2005:8-9). This application progressed towards building capacity and hence the training of teachers from the participating African cities. The success of the Water for African Cities programme was widely acknowledged (SSSWF 2007:142) and resulted in the branching or sharing of this approach to the Water for Asian Cities (WAC) programme.

In the WAC programme the HVWSHE used as its values-based instructional approach the HVIIM whereas in the Water for African Cities programme the HVWSHE used as its values-based instructional approach the EHV approach.

The EHV and HVIIM have both originated from the SSEHV model. The two differ in that the HVIIM rationalises that the process by which learning takes place and hence behavioural change is based on the changes that the input (information with values) brings about on the level of the conscious and sub-conscious mind of the learner. These changes ultimately effect an attitudinal or behavioural change on the level of the super-conscious mind and hence behavioural change is observed (Jumsai 2003: 14; 105-186). The EHV model used in the Water for African Cities programme rationalises that changes in attitude and behaviour is brought about by a process of stimulation of the emotional intelligence and consequently, the spiritual intelligence in an individual (Kanu 2000:6). Zohar and Marshall (2000:23-57), from their experimentation indicate that input of information that includes elements such as values activate both the Intelligence Quotient (IQ) and the Emotional intelligence Quotient (EQ) during the process of thinking. When both the IQ and EQ are activated it results in the lighting up of an area in the brain which they called the Spiritual intelligence Quotient (SQ). When the SQ is activated the individual is inspired and behavioural change is effected. In the

case of information transmitted without values only the IQ is activated resulting in no activation of the EQ which is required to stimulate the SQ.

In December 2003 a partnership between UN-Habitat and South East Asian Ministers of Education Organisation (SEAMEO) emerged as part of the water education component of the Water for Asian cities programme. SEAMEO then declared their willingness to promote and support values-based water education (UN-Habitat 2005:7).

The HVWSHE training programme involves the training of teachers who would then apply the human values approach in their classroom teaching. This will only be effective if teachers' attitudes, beliefs and behaviour towards water, sanitation and hygiene are changed and therefore one of the aims of the HVWSHE programme is to effect such a change. The ultimate intent is to elicit (by means of human values-based education in the classroom) in learners attitudinal and behavioural changes towards better water, sanitation and hygiene management. This behavioural change would encourage learners to engage in good practices as well as share this awareness in their homes and ultimately their communities (UN-Habitat 2005:5).

### **1.1.2 The role of the teacher as an adult in the implementation of a human values-based approach in education**

From the preceding discussion it is clear that teachers will play an important role in ensuring attitudinal and behavioural changes in learners. This implies that teachers will have to undergo the necessary training to ensure that they understand and are able to apply the approach that need to be followed in their classrooms. It is also imperative that the teachers themselves should change their attitudes, beliefs and behaviour as the teacher serves as a role model for children. Teachers are, however, adult learners and training (and learning) does not always ensure a change in behaviour. Rogers (1992:139) states in this regard that in the case of adult learners, the enhancement of knowledge, skills and understanding does not in itself lead to action. Although they may know all about something, may know how to go about it and be competent to do it, they may still **not do it**. According to Rogers (1992:139) the biggest obstacle in this regard is traditional culture (the sets of beliefs and emotions which go to make up attitudes) which is reinforced by the values and the customs of the social context and which control all behaviour. To modify these attitudes and values is not easy. Rogers (1992:139) explain the role of adults' positive attitudes towards training as follows:

*It is possible to argue that attitudinal changes need to be made before a programme of education and training is begun, that the participants will only learn the new knowledge and skills and develop the new understandings when they have come to form positive attitudes towards that learning. On the other hand, it may only be during or after the process of education and training that the barriers to learning are clearly seen to lie in attitudes rather than in the lack of knowledge and skills.*

When training adult learners, their values and beliefs should thus be considered, as it will determine whether they will apply what they have learned. It should also be kept in mind that a positive attitude towards the new learning will most likely ensure a more effective learning experience. On the other hand, Taylor, Marienau and Fiddler (2000:4) remind us that adults have many experiences that influence their lives and thinking and that they differ from younger learners in that they are more able to internalise their learning: *“Adults differ from younger learners in that a younger person is still anticipating most of the responsibilities in which an adult learner is fully engaged. Adults are therefore more likely than younger students to personalize learning.”* Lawler (2003:16) states in this regard that adults want their learning connected to the here and now, to integrate it into their daily lives, to make sense and to have meaning for them.

When dealing with adult learners it should be kept in mind that the adult learners' life experiences, education and personalities shape their outlook on past and present educational experiences. These experiences in turn influence their perspective on future educational events and their motivation to be influenced by any training activities (Lawler 2003:15). Lawler (2003:17-19) therefore postulates that, when dealing with any adult learner, the following six adult learning principles should always guide the learning intervention:

- *Create a climate of respect:* This type of climate is created when both the physical and social environments are conducive to adult learning.
- *Encourage active participation:* Adults learn more effectively and efficiently when they are actively involved in the educational activity.
- *Build on experience:* Adults come to the learning event with a wealth of experience. This experience might, however, be a barrier as many adults may have had poor or ineffectual learning experiences.
- *Employ collaborative enquiry:* Because of diverse experiences, adult learners can learn from each other.
- *Learn for action:* Adults are interested in being able to apply what they have learnt and making connections between their educational experiences and their lives.

- *Empower the participants:* The goals of adult education are change and growth and therefore opportunities and strategies that empower the adult learner are essential.

According to Jarvis (2010:153), Rogers and Horrocks (2010:79) and Smith (2002) the five characteristics of the adult learner as popularised by Knowles in 1985 include self-concept, experience, readiness to learn, orientation to learning and motivation to learn. These characteristics as well as the adult learning principles (Lawler 2003:17-19) as set out above, are important considerations which are to be factored into training or learning facilitation of adults. The characteristics of the adult learner and the implications of these for the adult learner facilitator are discussed in more detail in chapter 2.

Mezirow (1990:1) states that adult learning can only be understood in terms of the making of meaning based on experiences. According to Mezirow (1990:1) to make meaning means to make sense of an experience; to interpret it. When this interpretation of experiences is used to guide decision making or action, then making meaning becomes learning. Mezirow (1990:1) goes on to explain that adults learn differently when they are learning to perform than when they are learning to understand what is being communicated to them and that reflection plays an important role in the learning process. King (2000:69) summarises Mezirow's view of transformational adult learning as

*... the process whereby adult learners critically examine their basic beliefs, assumptions, and values in light of acquiring new knowledge and beginning a process of personal and social change called "reframing" in perspective transformation.*

Rogers and Horrocks (2010:156) state that the training of adults in any sphere involves a process of providing opportunities for them to learn and of encouraging them to bring about in themselves changes in knowledge, understanding, skills and attitudes; changes that can be reflected in changed behaviour. This change in behaviour can be regarded as *learning*. As such Newby, Stepich, Lehman and Russell (2006:50) explain that learning involves *change* that is brought about through *experience* or some form of interaction with the environment. According to Newby *et al.* (2006:50) learning is measured by the amount of change that occurs within an individual's level of knowledge, performance or behaviour.

Mezirow (1990:5) alerts us to the fact that the process of reflecting back on prior learning to determine whether what was learned is justified under present circumstances is crucial in the

adult learning process. According to Mezirow (1990:5) this is unfortunately often ignored by learning theorists.

Any training programme directed at bringing about a change in adult learners' knowledge, skills, values and attitudes, should keep the characteristics of adult learners and the implications thereof in mind. As will be seen later in this chapter, the purpose of this dissertation of limited scope is to investigate Laotian teachers' perception and experience of a training programme based on human values. Information on adult learners and adult learning styles is thus relevant for this study. Adult learning will be discussed in more detail in chapter 2.

### **1.1.3 The researcher's involvement with HVWSHE**

During 2000, I volunteered to work as an 'A' Level chemistry teacher at the Sathya Sai School in Ndola, Zambia. As the school implemented the Sathya Sai Education in Human Values (SSEHV) approach, it was required that all teachers working at the school be trained and develop the necessary skills to be applied during their lessons. I therefore completed the Education in Human Values (EHV) basic diploma at The African Institute of Sathya Sai Education (TAISSE) and continued with the advanced EHV diploma during 2001 and 2002.

In July 2001, I was one of the teachers who were nominated by TAISSE to participate in the first sub-regional workshop convened by UN-Habitat in Ndola. In this workshop TAISSE demonstrated the applications of human values-based education in the curricular (formal), co-curricular and extra curricular teaching using water, sanitation and hygiene related topics. TAISSE's collaboration with UN-Habitat resulted in commencement of HVWSHE training as part of the Water for African Cities programme. I have since been involved in training and lesson plan development for the HVWSHE programme. By the end of 2002, I had completed a study on the effect of the 'values elicitation' approach on teachers and learners. Values elicitation is an approach whereby the teacher is able to draw out the inherent values present in the subject content that is taught to the learners (Padayachee 2002:49).

The South East Asian Ministers of Education (SEAMEO) were introduced to HVWSHE in 2003 and this resulted in the commencement of HVWSHE in Asian countries in 2004.

As I have journeyed along with the HVWSHE training since its inception in Africa to its expansion in Asia I realised more and more that there is still much to learn about the effect of the human values in education approach and in particular on how training to implement this approach is experienced by teachers. The knowledge base on human values, its applications in education and its role in behavioural change is still in its infancy. In this study

the HVWSHE training programme involves the use of the “Human Values Integrated Instructional Model” as the values-based instructional approach. The receptivity of the teachers, as adult learners, to the HVWSHE programme would provide valuable information on the use of human values education initiatives in adult education.

Although the impact of the HVWSHE training has been established in Africa, more information was needed on the perceived influence of this programme on Asian teachers. In the light of this, UN-Habitat has extended an invitation to me [the researcher] to conduct a study on the experiences of teachers from Lao People’s Democratic Republic (Lao PDR) of the *Human Values-based Water, Sanitation and Hygiene Education (HVWSHE)* training.

Lao PDR is one of the poorest countries in Asia and in order to get a good grasp of the context in which the research project was undertaken, it is necessary to provide background information not only on water and sanitation issues in the country, but also on the education system and language situation. The Lao teachers who formed part of this research project were all shaped and influenced by the circumstances that are discussed in this overview.

## 1.2 A brief overview of Lao People’s Democratic Republic

Lao PDR is a landlocked country, divided between the relatively densely populated lowlands on the banks of the Mekong River. Vientiane is the capital. As can be seen in Figure 1.2, Lao PDR has borders with Vietnam, Thailand, Cambodia, China and Myanmar.

The entire border with Myanmar and part of the border with Thailand is formed by the Mekong River. Lao PDR or Laos as it is colloquially called, has a total population of 5,609,997 and is a predominantly rural country with an inadequate infrastructure and a largely unskilled work force (World Bank 2005:4-5).



Figure 1.2 Map of Lao PDR (Source: Answers.com 2010:8).

- **Water and sanitation in Lao PDR**

According to the World Bank (2005:1) Lao PDR remains the poorest and least developed country in East Asia and one of the ten poorest countries in the world. Lao PDR is one of the least developed countries in the world and is challenged with problems that range from poverty, lack of access to clean water and sanitation, poor infrastructure to illiteracy (Cooper 2009:28, 76-79). Bourdet (1998:635) mentions that infrastructure in Lao PDR is rudimentary and that access to safe water is poor compared to other low-income countries. Infant mortality remains high, and in remoter regions inadequate diet, poor sanitation and limited health care still give rise to debilitating and fatal diseases (World Bank 2005:23).

There is a close relationship between poverty and environmental problems, such as deforestation, pollution, and contaminated water. According to Dasgupta, Deichmann, Meisner and Wheeler (2005:630) a broader poverty-environment nexus is suggested for Lao PDR as there is an overlap in environmental problems that are directly correlated to poverty, especially in the northern and north eastern parts of Lao PDR. Poverty limits access to clean water and sanitation and at the same time sanitation related diseases exacerbate poverty by reducing productivity and increasing health costs in affected households (Dasgupta *et al.* 2005:628).

In the past decade there were many positive developments in the rural water supply and sanitation (RWSS) sector in Lao PDR. Despite the improved coverage in latrine and water supply services, health still remains a serious problem. This is attributed to the fact that improved services are not sustained or poorly maintained, while hygiene receives inadequate attention (Lahiri & Chanthaphone 2003:S107). The situation in schools is a cause for concern. School upgrading and water sanitation initiatives reflect that of 700 target schools from 1992-1995, only 174 received support of reconstruction or upgrading; 95 received support for construction of simple water systems, 20 had simple toilets installed. In some districts there is a clear need to link sanitation issues to hygiene education (MOE Lao PDR 2006:2-17).

The National Centre for Environment Health and Water Supply of the Ministry of Health responsible for rural water supply and sanitation in Lao PDR had devised a strategy for promoting hygiene awareness and development of rural water supply and sanitation. It was realised that the focus on technical issues were ineffective for sustainability of water supply and sanitation systems and resultantly behaviour change and increased awareness on hygiene promotion became the focus (Lahiri & Chanthaphone 2003:S108). The realisation that purely technical and regulatory measures were not sufficient to manage water,

sanitation and hygiene issues was also reached by UN-Habitat at the Johannesburg, expert group meeting in January 2001. It was then concluded that a change in behaviour amongst users were necessary to bring about the desired water-use and sanitation-friendly ethic. This is discussed later in this chapter.

- **Language in Lao PDR**

The Laotian population comprises of a variety of ethnic groups (LeBar & Suddard 1960:36). Currently there is no standard or national form of the Lao language although Vientiane Lao is or should be the language of instruction in schools. What is interesting is that the majority of Laotians tune into Thai television everyday and many Lao people understand Bangkok Thai better than they understand their Lao compatriots speaking a different Lao dialect (Cooper 2009:41;45).

The Laotian teacher participants of this study attended the HVWSHE programme in Thailand and the medium of instruction was in Thai and English.

- **The Lao PDR education system**

Until 1975 the Lao education system remained inherently weak. Considerable efforts were made after 1975 to extend elementary education to all ethnic groups, and an adult literacy campaign was launched, but these efforts were seriously undermined by the exodus of qualified teachers. In 1987 educational objectives were re-designed in an effort to develop an education system which could provide the skilled workforce required by a modern economy. Since that time improvements which included considerable reform in the education system have taken place. However, the sector continues to be hampered by a shortage of human resources, under-qualified teaching staff, inadequate curricula, dilapidated facilities and lack of teaching equipment (UNESCO 2005:37-43; Weinberg 1997:182).

As the study involves both the social and educational aspects of water, sanitation and hygiene management in Lao PDR, it is necessary to have an understanding of the Lao PDR national education system and the importance of teacher upgrading projects.

- **The Lao PDR Education for All National Plan of Action and teacher upgrading programmes**

In 2005 the Lao PDR Education for All (EFA) National Plan of Action (NPA) for 2005-2015 became effective (MOE Lao PDR 2005:1). Amongst others, the targets of NPA EFA is to



capacitate all teacher trainers through a training of trainers programme to suit the different modalities of teacher training; to develop a comprehensive but flexible teacher training curriculum and improve management capacity in teacher education institutions (MOE Lao PDR 2005:11). Several initiatives by the Lao PDR Ministry of Education in partnership with organisations such as United Nations Children's Fund (UNICEF) were undertaken to ensure teacher development.

### **1.3 The role of UN-Habitat and HVWSHE in Lao PDR**

In Lao PDR there is a general lack of awareness and understanding of conservation. Education is therefore of vital importance. It is in this context that UN-Habitat is motivated to build the capacities of schools and communities in order to facilitate changes in behaviour and attitude among people and to promote a better understanding of the roles that water conservation and sanitation play in human development and survival (UN-Habitat 2004:4-7). This could be achieved by means of training teachers in using a human values-based approach to teaching as part of the HVWSHE programme.

A number of collaborative initiatives had to be established by UN-Habitat to achieve its goal of improved water and sanitation in the region. These collaboration initiatives involved agreements with various organisations to enable facilitation of the introduction, testing and implementation of the HVWSHE programme in Lao PDR.

#### **1.3.1 UN-Habitat's Water for Asian Cities (WAC) programme**

The Water for Asian Cities (WAC) programme is a collaborative initiative of the UN-Habitat, the Asian Development Bank (ADB) and countries in the region. The WAC programme was developed based on regional consultations held in New Delhi in India, April 2002. The WAC programme supports the implementation of the water and sanitation related Millennium Development Goals (MDG). The programme seeks to achieve this by inter alia raising awareness through advocacy, information and **education, training** and capacity building (UN-Habitat 2005:4-9).

#### **1.3.2 UN-Habitat's cooperation agreement with the Society for the Preservation of Water (SPW)**

The Society for the Preservation of Water (SPW), based in Thailand is a non-profit institution, established with the purpose of promoting water education and water preservation through human values (UN-Habitat 2006b:1). In August 2006 a cooperation agreement of UN-Habitat with SPW was made and involved amongst others, training of

trainers (educators and service providers) in a number of Asian countries of which Lao PDR is one. The UN-Habitat and SPW collaboration is an initiative that is supportive of the Education for All National Plan of Action and Teacher Upgrading Project objectives of Lao PDR.

### **1.3.3 UN-Habitat's cooperation agreement with the Norwegian Church Aid (NCA) in Lao PDR**

The Norwegian Church Aid (NCA) is an international NGO that works to ensure the individuals basic rights (UN-Habitat 2009:5-9). The NCA is inter alia committed to create a better life for the poor, needy and the oppressed and the protection of the environment (NCA 2009:7-9). The scope of NCA's (Lao PDR constituent) activities as per the cooperation agreement with UN-Habitat are amongst others to conduct two awareness raising workshops on HVWSHE with the Ministry of Education (MoE) and other stakeholders and identify capacity building needs in selected schools and teacher training colleges. The NCA is to also identify resource persons to implement HVWSHE and training of trainers at teacher training colleges and to enable capacity building and project implementation by one international trainer and one national trainer (UN-Habitat 2009:11-15).

## **1.4 Motivation for and contribution of the study**

The teacher as an adult is considered to be an influential role player in bringing about attitudinal or behavioural changes in the learner (McCown, Driscoll & Roop 1996:183; Mwamwenda 2004:393). To achieve the goal of a new water-use and sanitation-friendly ethic in society requires that the key role players, that is, the teachers themselves be influenced by the HVWSHE approach to such an extent that they are themselves motivated to base their teaching on this approach. In so doing the teacher can bring about the desired behavioural changes in their learners. Learners could then from their side influence their family and the community in this regard (refer to chapter 2 section 2.5). Thus the extent to which the HVWSHE training contributes to the teachers' knowledge base and influences the teachers' existing beliefs, morals and values would provide much needed information as to whether the programme can be expanded to other cities within the eighteen provinces of Lao PDR and whether adult learners (teachers) in these provinces would be receptive to this values education approach.

From the UN-Habitat's perspective, they need the results of the investigation to enable them to establish whether this intervention would bring about the desired change in the water-use ethic of these adult learners and whether they would be equipped with the necessary

knowledge and skills to be able to implement the HVWSHE approach in their own teaching practice. The information generated from the study would inform UN-Habitat, SPW and NCA on whether to expand, modify or eliminate particular programme activities or interventions. They also need relevant information to use in prioritising further programmes to other cities and countries as the research endeavoured inter alia to establish whether the teachers who have been trained were able and willing to apply the techniques in their own teaching practice.

It was therefore necessary to explore the Laotian teachers' experiences with their training in using a human values-based approach to water, sanitation and hygiene education. It was also important to determine whether they were of the opinion that they had acquired sufficient knowledge and a change in attitude towards a human values-based approach to water, sanitation and hygiene education as a result of the training. Recognition of these facts, as well as the commission by UN-Habitat (refer to sect. 1.1.3) motivated an investigation into the Laotian teachers' perception of the effect of the HVWSHE programme on their knowledge, attitude and behaviour towards water-use, sanitation and hygiene management.

## **1.5 Research problem, aims and objective of the research**

As eluded to in the preceding discussion, the threat to urban sustainability due to poor management of water resources and sanitation is imminent and requires an intervention that would bring about a change in a new water-use ethic amongst the users. The use of technical and regulatory methods has not brought about a significant improvement and therefore the use of human values education as an intervention to bring about this awareness and change in behaviour towards water management is regarded as a suitable complement to existing strategies. The HVWSHE intervention seeks to build capacities of schools and communities in order to facilitate changes in behaviour and personal attitude among people and to promote a better understanding of water, sanitation and hygiene management. The teacher plays an important role in achieving this vision.

It should, however, be kept in mind that teachers are adult learners and that adult learners bring a wealth of knowledge and experience with them to the classroom. They have established values and beliefs based on their own traditional culture and the values and customs of the social context in which they find themselves.

### **1.5.1 The problem statement**

It is evident that the research project revolves around the following key question:

- What are the Laotian teachers' experiences and perceptions of the effect of a training programme using a human values-based approach to water, sanitation and hygiene education on their knowledge, attitudes and beliefs towards a new water-use and sanitation-friendly ethic?

To find answers to the above problem, it was necessary to establish the following:

- What are the prevailing theories with regard to adult learning and training?
- What does the UN-Habitat's HVWSHE programme involve?
- What are human values and what does human values-based education entail?
- How did Laotian teachers experience the training in using a human values-based approach to water, sanitation and hygiene education?
- What is the likelihood of Laotian teachers adopting the HVWSHE approach in their classrooms?
- How can the findings assist in improving training of teachers in using a human values-based teaching approach to water, sanitation and hygiene education?

### **1.5.2 Aims of the research**

This research has the following general and specific aims (objectives):

**The general aim** was to investigate what the Laotian teachers' perceptions of the human values-based approach was and whether they have experienced any changes in their knowledge, attitudes and beliefs towards water, sanitation and hygiene issues during and after the HVWSHE training intervention.

The objectives of the study were to:

- Investigate the prevailing theories on adult education and training.
- Establish what the UN-Habitat's HVWSHE programme entails.
- Establish what human values and human values-based education involve.
- Determine what changes in knowledge, attitude and beliefs towards a new water-use and sanitation ethics were experienced by Laotian teachers who received training in the HVWSHE programme
- Investigate the likelihood of Laotian teachers adopting the HVWSHE approach in their classrooms.
- Determine how the findings of the study can assist in improving the training of teachers in using a human values-based approach to water, sanitation and hygiene education.

These aims were regarded as suitable for the purposes of writing a dissertation of limited scope.

## **1.6 Study design**

I have opted to use a qualitative evaluative case study approach. This approach was chosen because the qualitative case study approach involves observation of a process, activity, event, programme or individual bounded within a specific time and setting (Cresswell 2005:273). Merriam (1988:25) further extends that in education, a case study of an individual, programme or event might be informed by a psychological aspect such as human behaviour. Yin (2009:18-20) supports the use of case study as an empirical enquiry which examines contemporary events in depth and within its real-life context.

As my study is an inquiry process of understanding, interpreting and judging participant behaviour, the end product would therefore be a holistic description both interpretive and evaluative derived from analysis of words providing detailed views of the participants. As such the advantage of qualitative research in this study was the possibility to obtain information on how Laotian teachers thought and felt and what their perceptions were regarding the influence that the HVWSHE training programme had on their awareness, knowledge and attitudes towards water, sanitation and hygiene education. The study was conducted at the Society for Preservation of Water (SPW) facility in Thailand for the duration of the HVWSHE training of the Laotian teachers.

### **1.6.1 Data gathering techniques**

The use of the following data gathering techniques was implemented in the study:

- **A literature study**

A literature study which provided a theoretical background to human values education, the propositional model used in the HVWSHE training programme, the theory of adult learning and facilitation and theories relevant to understanding and interpreting behavioural changes in adult learners was done. As the study was commissioned by UN-Habitat and the HVWSHE training programme is a brain child of UN-Habitat, many of the sources that were consulted, were compiled by UN-Habitat. The literature study enabled me to answer the first three research sub-questions.

- **Focus group interviews**

A focus group consists of a small group of people. The purpose of a focus group interview is to explore attitudes and perceptions, feelings and ideas about a topic (Denscombe

2005:169). Focus group interviews were employed because according to McMillan and Schumacher (1997:453) a focus group interview is a strategy for obtaining a better understanding of a new product, programme or idea by interviewing a purposefully sampled group of people rather than each person individually. By holding focus group interviews teachers' perceptions of the effect of the HVWSHE programme could be established.

- **Observation**

McMillan and Schumacher (1997:268) state the following about observations: "As a technique for gathering information, the observational method relies on a researcher's seeing and hearing things and recording these observations, rather than relying on subjects' self-reported responses to questions or statements." In this research project teachers' lesson presentations were observed.

- **Field notes**

As advised by Denscombe (2005:204) field notes were written up as soon as possible after each lesson presentation. Field notes regarding my observations of the research participants' verbal and non-verbal reactions to the training intervention during the research period were made on a regular and prompt basis.

- **Researcher's journal**

Liamputtong and Ezzy (2005:273) indicate that keeping a journal about our experiences, theoretical ideas and impressions is very useful when doing qualitative research. Such a journal is separate from and additional to other forms of record keeping such as field notes and interview transcripts.

The above mentioned data gathering techniques allowed me to get information on:

- participants' perceptions of knowledge, attitudinal and behavioural changes in them as a result of the HVWSHE training programme;
- the likelihood that research participants would adopt a HVWSHE approach in their classrooms;
- additional factors that promoted/hindered the application of the approach.

## **1.7 The multidisciplinary–interdisciplinary–transdisciplinary nature of the research**

The close link and interrelatedness between our society and the environment has become apparent in recent years and has resulted in a move away from the strict disciplinary-based

research of the past. The notion of integration across multiple social perspectives and fields of knowledge (Allen 2011) has therefore become more important. Multidisciplinary-interdisciplinary-transdisciplinary (MIT) research is a newly established research approach and definitions trying to capture the essence of this approach are still emerging. Allen (2011) views the following synthesis of various definitions of MIT research as postulated by Tress, Tress and Fry (2005) as very descriptive:

*We define interdisciplinary studies as projects that involve several unrelated academic disciplines in a way that forces them to cross subject boundaries to create new knowledge and theory and solve a common research goal. By unrelated, we mean that they have contrasting research paradigms. We might consider the differences between qualitative and quantitative approaches or between analytical and interpretative approaches that bring together disciplines from the humanities and the natural sciences.*

Although the field of specialisation in which this dissertation of limited scope falls is adult education, it also touches on the field of environmental education and psychology of education. As such the interdisciplinary nature of this research should be acknowledged.

## **1.8 Concept definition**

Certain important concepts that recur in the text need to be clarified. The ensuing discussion serves as a mere introductory clarification of concepts. In the text more detail will be provided.

### **1.8.1 Values**

The Concise Oxford Dictionary (2004:1597) defines values as the principles or standards of behaviour and judgement of what is valuable and important in life. This can be associated with James' (2000:3) definition of values as being desirable qualities of character such as honesty, integrity and respect.

In this study specific emphasis is placed on values or human values as the agent of behavioural change. Values or human values form the underlying building blocks of human values-based education and will be discussed in detail in chapter 2.

### **1.8.2 Human values education**

Jumsai (2003:7) argues that the term “values” is different to “human values” in that the human values are unique to human beings and not to other living beings. Human values are regarded as fundamental to human existence and are integral to any society whilst animal values for instance are more instinct driven such as for survival and procreation. As the study focus is on human behavioural and attitudinal changes the use of values and human values will be assumed both to be relevant and interchangeable. Human values education makes reference to the use of human values in teaching and learning. The role of human values education in this study is discussed in chapter 2.

### **1.8.3 Attitude**

Mwamwenda (2004:480) defines attitude as “a relatively stable and enduring predisposition to behave or react in a certain way towards persons, objects, institutions or issues.” McCown, Driscoll and Roop (1996:529) refers to Gagné to define attitude as a learned capability that influences a person’s choice of personal action. The derivative “attitudinal” is used to describe the way of thinking. In this study I define attitude as the way the participant thinks or feels about something or someone.

### **1.8.4 Beliefs**

According to Hill (2008:102) "beliefs" and "values" are two terms which in ordinary usage tend to be used interchangeably, but for purposes of clarity in this study it is necessary to distinguish between them. Hill (2008:102) explains that to have a value is to have a tendency to act in ways consistent with certain beliefs about the nature of the reality one inhabits; this is further qualified by the act of valuing something. Individuals are not necessarily aware of the beliefs implicit in the way they are acting, but on reflection can bring them to awareness that such beliefs constitute truth claims about the world as the individual sees it. This is consistent with the Concise Oxford (2004:100) dictionary definition of beliefs as a firm opinion or acceptance of a thing, fact or statement which is usually followed by trust and confidence.

Vartuli (2005:76) on the other hand indicates that beliefs are formed from one’s personal experiences, education and values. As this study involves understanding the role of teacher beliefs and its effect on their classroom practices, it would therefore be appropriate to consider Richardson’s (1996:103) definition as relevant in this context, as he describes beliefs to be personal constructs important to the teacher’s practice and that these beliefs are connected to planned and enacted instructional practices in the classroom.



### **1.8.5 Behaviour and behaviour modification**

Behaviour according to the Concise Oxford Dictionary (2004:123) is the way in which an animal or person responds to a situation or stimulus. Mwamwemda (2004:2) indicates that in psychology we cannot observe a person's feelings and thoughts, but we can observe and measure a person's behaviour. Not only can behaviour be seen, it can be recorded and studied. Psychologists concern themselves mainly with the measurable and the observable, which is behaviour (Mwamwemda 2004:3).

In this study I consider behaviour in the context of "behavioural" which relates to or emphasises the way in which the participants respond to the training programme. Behaviour modification can be brought about by systematic application of antecedents and consequences to change behaviour (Woolfolk 2001:592). In this study it was not possible to study the long-term behavioural changes in the research participants. As it was a qualitative study, research participants merely reported on how they intended to change their behaviour in future.

### **1.8.6 Adult learner**

Jarvis (2006:32) refers to the adult learner as much more than the acquirer of knowledge, they are persons who seek to enhance and improve themselves so as to become the people they are meant to be. According to Connolly (2008:1) adult learners' involvement in learning is about attaining new knowledge which is focused around the idea of improvement, development, enhancement or advancement. Adult learning is underpinned by the adult learners' aspirations of being a better self, developing their potential and adult learning is a means of becoming the person the individual can be. Development of the potential is a commitment to become more fully human which includes the adult concern about attitudes, values and beliefs. In this study the Laotian teachers are perceived as the adult learners whose involvement in the training programme would contribute to their development.

### **1.8.7 Experience**

The Collins Cobuild English Learner's Dictionary (1994:329) defines experience as "the act of seeing, doing or feeling something or the fact of being affected by it". It also states that "If you experience a situation or feeling, it happens to you or you are affected by it." In this study the purpose was to establish how teachers had experienced the HVWSHE training and how they were affected by it.

## **1.9 Summary of chapters**

In the first chapter an orientation of the study is provided. The research problem, aim of the research and research design were also explored in this chapter.

Chapter two includes literature on human values education and related concepts. Theories and models on human values and adult learning were discussed. The relevant applications are explored, the role of teachers' thinking, feelings, attitudes and beliefs on learning which forms an essential part of the programme success and further is critical in assessment of the programme. The Human Values Integrated Model as the model used by SPW for the HVWSHE programme is discussed in detail.

Chapter three includes details of the research methodology. The decisions that affected the research design, the research strategy and data gathering processes are elaborated on.

Chapters four focuses on the findings of the study and the interpretation of the collected data.

Chapter five provides a summary and conclusion of the Laotian teachers' experience of the HVWSHE training on the Lao PDR teachers. Additional limitations identified, recommendations and areas of further research are discussed.

## **1.10 Conclusion**

The present research work was undertaken in the specific context of determining the effect of a HVWSHE training programme on one of the most poorly developed Asian countries, Lao PDR. The history of Lao PDR reflects that the country is challenged socio-economically with a poor understanding of environmental development. The study occurs against the backdrop of global concern for the poor management of water and the use of human values education as the agent of attitudinal change. There are several educational initiatives that are acting on various facets of development in Lao, such as the Lao MoE engagement with the EFA initiative and TUP initiatives for improving capacity of teachers as well as government collaborations with UN-Habitat in support of the Water for Asian Cities (WAC) programme which involves the educational interventions through NGOs such as NCA locally.

*“Adult education is not just literacy.” (Rogers 1992:19)*

# ADULT LEARNING AND HUMAN VALUES-BASED EDUCATION

## 2.1 Introduction

In this chapter, four main themes are presented. Since the Laotian teachers who formed part of this study were adults, note had to be taken of the uniqueness of adult learning. The first section of the chapter, therefore takes a thorough look at learning, learning theories, adult learning, the characteristics of adult learners and the implications thereof for the facilitation of adult learning. The second section looks at several aspects relating to the teachers' beliefs and attitudes and the possible influence thereof on their teaching practices are discussed. The training programme that the Laotian teachers were exposed to is based on human values and therefore a thorough discussion of human values is provided next. The last part of the chapter discusses the instructional model, namely the Human Values Integrated Model (HVIM) that was used in the Human Values-based Water, Sanitation and Hygiene Education (HVWSHE) training programme.

## 2.2 Adult education, adult learners and learning

The teacher as an adult, belongs to the community of adult learners and should be treated as adults under all circumstances (Jarvis 2010:134). The learning and teaching of adults are explored in the sections to follow.

### 2.2.1 Defining adults

In pursuing a discussion on the “adult learner” and “adult learning” it is necessary to begin with the definition of the concept “adult”. According to Gravett (2005:7), it is difficult to pinpoint a moment when a person becomes an adult; because the concept of adult is socially constructed and is understood differently in different societies. It can generally be described in terms of the extent to which the person fulfils the social role that is typically assigned to an adult in a particular society and the extent to which a person takes responsibility for their own lives and livelihood (Gravett 2005:7).

Muller (1993:239) alludes that the definition of an adult should be considered within the framework of adulthood. According to Rogers (in Muller 1993:239) three main clusters of ideas depict an adult within adulthood, these are:

- the idea of maturity, of full development, personal growth and expansion and utilization of all the individual's talents;
- the idea of a sense of perspective leading to sounder judgments' about oneself and about others; and
- the idea of autonomy, responsible decision making, voluntariness rather than involuntariness.

Knowles (1984:55) defined an adult in relevant social and psychological terms as follows:

- *the social adult*: "we become adult socially when we start performing adult roles, such as the role of full time worker, spouse, parent, voting citizen, and the like" and
- *the psychological adult*: "we become adult psychologically when we arrive at a self concept of being responsible for our own lives, of being self directing, to have self-confidence."

In this study both the social and psychological definitions are considered since the Laotian teachers are responsible for enabling social reform through a process of individual reform.

### **2.2.2 Adult education and the adult learner**

Rogers (1992:19) clarifies that "adult education is not just literacy" and that it is unsatisfactory to equate adult education with adult learning literacy. According to Rogers (1992:20), adults have in terms of their social role already become established in society and are not being "brought into society" and therefore adult education is not "schooling for unschooled adults". Adult education is therefore wider than teaching of literacy and can be viewed as the provision of educational opportunities for adults and covers more or less all forms of planned and systematic learning which adults experience in living their adulthood (Rogers 1992:20; Muller 1993:239).

According to Connolly (2008:4) learning plays an important role in adult participation in their communities and personal lives. Connolly (2008:4) therefore views adult education

as inclusive of all education that adults undertake after they are completed with their compulsory education.

Foley (2004:5) on the other hand defines adult education as having four categories namely, a) incidental adult education which is almost as a result of an unintentional outcome of an activity, b) formal adult education which consists of programmes for adults and are run by professional adult educators and service providers and which may culminate in awards, certificates and in qualifications, c) non-formal includes all adult educations without qualifications and usually comprise leisure type courses such as painting, and lastly d) informal adult education which are not necessarily organised by adult education organisers, nor do they have a facilitator and curriculum. The training programme that the Laotian teachers attended in this study may be considered as formal adult education.

#### **2.2.2.1 Characteristics of the adult learner**

Unlike traditional pedagogy adult learners learn with the intent of improvement and development and these notions are derived from aspirations of being a better self (Connolly 2008:1).

Many theorists used theories of learning derived from studies done on children and animals and extrapolated these theories to the adult learner. Connolly (2008:16) indicates that these theories do not satisfactorily illuminate how adults learn. According to Connolly (2008:16) adult learning is fundamentally social, that is the adult learners are drawing on the knowledge outside themselves engaging with their experiences of the world and reflecting on those experiences.

Jarvis (2006:3-8) in his existential view indicates that human learning consists of a complex set of processes which include body and mind and is largely based on conscious experience. As our existence is in the social world, meaning is derived of these experiences through the norms and values of society.

According to Knowles (1984:52) andragogy relates to “the art and science of helping adults learn”, therefore adult learning facilitation is informed by the way teachers of adults are trained, the way programmes are designed to suit the adult learner and the way in which adults are helped to learn. The andragogical model makes reference to several assumptions that distinguish it from the pedagogical model. According to Smith (2002:11), these are:

- *Self concept.* Adults unlike children have a deep psychological need to be self-directing. Thus adults would resist a situation where courses in which the trainer and design shove trainees into a dependant role of children.
- *Experience.* Adults have accumulated experiences through life that acts as a resource for learning and acts as a base or schema to which new learning can be added or built upon.
- *Readiness to learn.* Adults are ready to learn things they need to know or be able to do in order to fulfil their role in society, i.e. worker, spouse, parent, etc.
- *Orientation to learning:* Adults tend to have a problem centred orientation as opposed to the subject-oriented approach of children. Children master content to pass a course whilst adults seek the skills or knowledge they need to apply to real life situations.
- *Internal motivation:* Adults are more motivated to learn by internal factors, such as increased self-esteem rather than by external rewards.

According to Shacham and Od-Cohen (2009:282) other cognitive elements of adult learning involve:

- Challenge, which creates cognitive dissonance and assumes a gap between the learners and their surrounding and this gap is to be filled by the learners' readiness and intrinsic motivation.
- Choice is required for adults to realise a feeling of self worth and respect. Motivation can be increased through participation in selecting the content of learning. The adult learner need to know the objectives of their learning and what, how and why they learn.
- Vision is created through being aware of the current and proposed situation. A change in beliefs and concepts as well as following a path that lead there is important in creating a vision. Adults are motivated to learn by need and interest.

The implications for applying these assumptions to planning and conducting programmes for adult education are described by Knowles in his andragogical model (Knowles 1984:117). This model demonstrates how a unified model can incorporate principles and technologies from various theories and still maintain its own integrity. It also emphasises the role of the adult educator as facilitator who will act in support of the adult learner in pursuit of his vision (Shacham & Od-Cohen 2009: 282). According to the andragogy theory of Knowles (Knowles, Holton, Elwood & Swanson, 1998:57-71) adults are usually intrinsically motivated to learn. Their determination to learn stems from an

inner need to know and to develop. The learning content must therefore be relevant, authentic, and meaningful and directed at raising the self-esteem, self-confidence, and self-fulfilment of the adult learner. Thus the role of the adult educator is focussed on assisting adult learners in providing them with relevant experiences that will help them clarify and realise their intellectual goals,

Adult learners generally have established personalities and habits that include specific and established learning styles and may therefore be less susceptible to change, in spite of their wealth of past experience (Shacham & Od-Cohen 2009:282; Muller 1993:243-245).

Knowles *et al.* (1998:122) argue that another feature that characterises the adult learner is the need to learn through experimentation, involvement and activation. For them, learning situations constitute opportunities for social networking as well as an opportunity to be active.

### **2.2.3 Defining learning**

In this section I do not attempt to provide an in-depth exploration into learning but to examine the concept of learning which would provide the necessary basis for understanding the process of learning and learning facilitation in the context of adult education. A discussion of learning is important because according to Rogers (2007:6) the emphasis on learning is an essential principle of teaching adults: "This is the first essential principle of teaching adults successfully and it's a paradox. Teaching is about learning. Therefore your task as a lecturer of adults is to become a designer of learning."

#### **2.2.3.1 Theoretical perspectives of learning**

There is a need to understand the concept of human values and the role it plays within the context of human behaviour and learning. Allen *et al.* (2002:14), equates the process of learning as bringing about a change and explains that in order for change to occur learning would have to take place. Thus it can be assumed that if a person changes his or her behaviour, it is as a result of new learning that requires him or her to change. Learning is therefore a vital pre-requisite if people were to change their behaviour. Kilvington and Allen (2001) quoted in Allen *et al.* (2002:14) suggested a behaviour change equation:

***Behaviour Change = Knowing what to do + Enabling Environment + Imperative (motivation)***

From the equation it can be established that in order to know what to do, one needs to learn about the situation and that this learning is important so as to understand how the social and physical environment can support the behavioural change. It surmises that learning is also important for developing motivation for making the change. Thus learning about water as a limited resource provides an understanding of the crisis and this would motivate for acting differently towards water management.

The need to bring about a new water-use and sanitation-friendly ethic in addressing the water and sanitation global crisis impresses upon a change in the attitude and behaviour of humans towards water and sanitation. This implies that learning has to take place. It is important to take note of a number of theories that underpin adult learning. According to Alemu (2010:21) learning theories attempt to explain how learners think and what factors determine their behaviour and learning. Learning theories are the basic raw materials, which are applied in the teaching-learning process. In order to understand the dynamics of attitudinal and behavioural change (as a result of learning) with regard to human values-based education, it is important to understand the relevant learning theories. The theories discussed in the following section represent major trends in the way learning is conceptualised and inform practice in many ways. Each theoretical perspective has different views of what learning entails, and how learning should be facilitated (Newby *et al.* 2006:27).

- **Behaviourist perspective**

Behaviour change is a multi-faceted field, particularly where there are many different perspectives on a problem, as is the case with water, sanitation and hygiene (UN-Habitat 2005:8-10). The behaviourist perception whereby conditioning through stimulus with the necessary re-enforcement to elicit a particular behaviour is not adequate as the individual is required to internalise the situation and decide on the most appropriate way to act (Skinner in Prilleltensky 1994:128-130). The approach of seeing learning as a process of conditioning, whereby human behaviour through habit formation may be useful in teaching children good habits such as washing hands after using the toilet, however this does not change the attitude of the individual towards sanitation habits. The intent of an attitude change is for the individual to understand why it is necessary to wash hands after using the toilet and realise the consequences of not performing this act. Clearly what is being sought is the implicit learning that results in the behaviour change. Thus if a person is changing their behaviour it should be because of new learning, however to go a step further, for sustainable behavioural change to take place it



should go beyond just acquiring new knowledge but an attitudinal change should occur in the process to ensure a sustained change in behaviour (Prilleltensky 1994:133; Higgs 1996:44; UN-Habitat 2006b:2-3). The extrapolation of behaviourist approaches to achieving the desired attitudinal change in adult learners would in fact need to move away from the teacher-centred control and consider Rothkopf's approach on two way communication which may prove to be more applicable with emphasis on what happens within the person during the learning process (Van Rooy, Claasen & Schulze 2000:6-7).

- **Cognitivist perspective**

Cognitive psychologists in contrast to behaviourists are more concerned with the processes and structures occurring in the brain. They deal with the perception of the brain continuously categorising experiences and the interpretations of these experiences. In contrast to the behaviourist they engage the learner as a more active participant in the learning process (Smith 2002:7).

According to Ross and Nisbett (1991:49-53), an individual's behaviour emerges from the sense of what they make of what is happening, their ideas of what should happen and what might happen if their behaviour would change. Individuals use a wide range of information to develop their understanding of a situation. Thus for participants to confidently engage the process of accepting information given, the information would have to be relevant and credible. They mostly would accept information from people they know and trust, such as friends (Allen *et al.* 2002:15). The human values approach to water, sanitation and hygiene education uses peer interaction; group activities and role-play to facilitate behaviour change.

- **Constructivism**

Constructivism can be considered as a cluster of related views that are based on the assumption that learning is an active process of constructing meaning and making sense of their experiences (Newby *et al.* 2006:34; Schulze 2003:6; Gravett 2005:18; Spigner-Littles & Anderson 1999:205). Doolittle and Hicks (2003:74) extends that constructivism is a more flexible, culturally relativistic, and contemplative perspective, where knowledge is constructed based on personal and social experiences, unlike the "traditional search of knowledge" that placed emphasis on the search for "truth"; that is, the acquisition of knowledge that corresponds to a singular "reality".

Doolittle and Hicks (2003:76) emphasise the active role of the learner in the construction of knowledge and the fact that the “realisation that the knowledge obtained by the learner may vary in accuracy as a representation of an external reality.”

There is no consensus on how the construction of knowledge occurs. Some constructivist theories focus on the individual learner, while others focus on social interaction among individuals which leads to a shared interpretation (Newby *et al.* 2006:35). Based on this three main divisions namely; radical constructivism, social constructivism and cognitive constructivism are often distinguished.

Schulze (2003:6) indicate that constructivist views influenced by Piaget placed emphasis on the mental processes of individuals in meaning making. Von Glasersfeld, an important proponent of *radical constructivism* describe it as being based on the concept that while reality external to the individual may exist, the true nature of this reality is unknowable. Knowledge then becomes the subjective construction of the individual, resulting from the cumulative experiences of the individual (Piaget 1973,1977; Von Glasersfeld (1995) in Doolittle & Hicks 2003:77).

According to *social constructivists* such as Vygotski, the construction of individual meaning takes place in social contexts (Gravett 2005:20). Social constructivism emphasises social interaction as the source of knowledge, rather than individual cognising therefore *social constructivists* emphasise the role of language, dialogue, and shared understanding (Schulze 2003:6; Doolittle & Hicks 2003:77). Ultimately, for social constructivism, truth is adaptive and socially determined and "is not to be found inside the head of an individual person, it is born *between people* collectively searching for truth, in the process of their dialogic interaction" (Bakhtin 1984:110).

*Cognitive constructivism* represents a conservative form of constructivism, emphasising the *external* nature of knowledge. Cognitive constructivism embraces the notion that one can come to know reality, or truth, as it exists external to the individual. Knowledge acquisition is viewed as the (re)construction of external reality into internal mental structures. Therefore, the cognitive constructivist world view reflect the search for knowledge as the search for how the world really works and the value of knowledge is determined by its correspondence with the real world (Doolittle & Hicks 2003:78).

In this study emphasis is placed on the teacher as an adult learner rather than on the trainer which is consistent with the constructivist approach. Thus the adult learner is

central to the learning process since the adult learner actively constructs his own knowledge while the trainer functions as facilitator. The purpose of this study was to investigate Laotian teachers' experience of the HVSWE approach. According to Newby *et al.* (2006:35), from a constructivist perspective learning is viewed as a continuous process of experience and reflection in which learners create, test and refine mental models that will synthesise their experience.

### **2.2.3.2 Theoretical perspectives and values-based education**

A synthesis of these theories asserts that humans have a natural desire to learn, that learners are empowered and take control over the learning process, and that this occurrence is used in exploration and facilitation of behaviour change.

The human values approach as a foundation for sustainable behaviour change sees values as essential for good living and as being integral to oneself. It also perceives all human beings as capable of assessing the values within themselves. The management of behaviour change (learning) involves facilitation through modelling good values, and creating a climate that is conducive to character development by drawing out the values through the learning process described as elicitation (Padayachee 2002:5;50-51).

### **2.2.3.3 The learning process**

According to Jarvis (2010:17) learning is an existential process that begins with sense experience and is both individual and social, whilst learning, according to Galbraith and Fouch (2007:36), is defined as a permanent change in behaviour or simply knowledge that is acquired by study. Gravett (2005:18) qualifies learning in an educational context as not incidental but purposeful and engages the acquisition of knowledge with understanding.

According to Gravett (2005:18) many learners and educators have a tendency to equate all learning in an educational situation with memorisation. This may be viewed as learning being a process of information consumption, however on the other hand if information makes sense to the learner, it is categorised and organised. In so doing the information can easily be accessed and applied in real life situations. Thus the distinction is drawn between rote learning and - as Gravett phrases it - "meaningful learning". Shacham and Od-Cohen (2009:280) concur by eliciting the argument of Burkitt, Husband, McKenzie, Thorn and Crow (2001), that to learn is more than being made aware of concepts, facts and structures. It is considered an embedded, contextualised performance that is probably immersed in the practise world. Thus the community of

practise referred to are conceptualised and organised around engagement in learning, development and sharing (Shacham & Od-Cohen 2009:280).

According to Kegan (2000:49) much of our learning is informative, which is a learning that changes what we know by increasing our knowledge skills and capacities. On the converse side of informative learning is transformative learning that refers to learning as “revision” of significant aspects of our worldview or our view of ourselves (Gravett 2005:26). The constructivist perspective to learning (in section 2.2.3.1) is based on the assumption that learning is a process of constructing knowledge and that knowledge is constructed when learners build on or transform their existing knowledge through their experiences. Mezirow’s theory of transformative learning is a constructivist theory which is briefly explored in the section to follow on adult learning.

#### **2.2.3.4 Adult learning**

Adult learning according to Muller (1993:241), is voluntary and intentional. Adult education takes the perspective that adult learning is fundamentally social, thus if a person is self-taught, they are drawing on the knowledge generated outside themselves, engaging with their experience of the world and reflecting on that experience in a human way (Connolly 2008:16). The interaction of the adult learner exist in the social world, the social world gives meaning through experiences, through norms and values of society that facilitates learning through reflection on these experiences. It is thus perceived that the idea of learning goes beyond the brain of an individual, their training, social institutions and even beyond the idea that human learning only occurs in schools and colleges (Jarvis 2006:8).

Although adult learning is perceived as fundamentally social it is necessary to explore how adults learn effectively. Mezirow’s theory of transformative learning is located within social constructivism. Mezirow distinguishes between two domains of learning namely, communication learning, which is learning how to understand something and instrumental learning which is learning how to do something (Mezirow (1991:44). There are four kinds of learning that can be differentiated within the domains of instrumental and communicative learning. These are (Mezirow 1991:45-47):

- Learning involves addition, modification or integration of ideas within a pre-existing scheme.
- Learning involves learning a set of beliefs, feelings, judgements, attitudes and knowledge.

- Transformation of a point of view can be as a result of reflection on assumptions which can result in a change in certain beliefs and attitudes.
- Learning takes place as a result of critical reflection of assumptions which is a result of an experience that is incongruent with one's habits.

Mezirow (as discussed in King 2000:70-72) identified certain stages that adults progress through as they experience change (transformation). It starts with a 'disorientating dilemma' and then progress through self-examination (reflection) and critical assessment of values, beliefs and assumptions. The result is a changed frame of reference from which the adult will try to adopt new ways of acting and behaving.

Mezirow's theory is a relevant consideration in adult learning process and facilitation in this study as the study endeavours to learn about transformational changes in the adult learners' (Laotian teachers) attitudes, behaviour, knowledge and beliefs after their experience of the HVWSHE training programme. In the process Laotian teachers had to reflect on certain experiences and assumptions – an important premise of Mezirow's theory.

#### **2.2.4 Characteristics of adult learning**

Muller (1993: 242-246) makes reference to the characteristics of adult learning and includes the following:

- *Adult learning is learner centred*

Adults focus on direct application and the idea of immediacy is relevant, whereby the adult learner does not resist learning as the application of the learning is relevant and immediate to their life needs. Given their daily obligations in job, profession, family and community they learn to cope with the challenges and problems they are faced with. As a result the adult educator must consider the needs and interests of the learners. "Andragogy (adult education) calls for program builders and teachers who are person-centered, who don't teach subject matter but rather help persons learn" (Knowles 1984:73). The interests of adults are often based on their real needs and often the adult educator has to engage the adult learner in negotiating what is relevant or applicable to the learners. These real needs must correspond to the experience of adult learners, should an adult get the impression that his experience is not being valued he feels rejected as a person. New learning takes on meaning as adults are able to relate them to their life experience. Adult educators should therefore build into the design of their

programme a way in which the learners learning experiences as well as new learning applies to their day-to-day lives or duties and combine training with transfer and application.

- *Adult learning is social learning*

The social expectation acts as motivation for an adult to search for more knowledge, better proficiency and more suitable performance. Adult learning engages the experience of the learners' and others and therefore the adult educator would ensure that the learning settings of adults have a participatory and collaborative element. Adults prefer to meet as equals in small groups to explore issues and concerns and then decide on common action as a result of dialogue and inter-learning by discourse. The group of adult learners may be construed as a "learning co-operative".

- *Adult learning is active learning*

Adult learning is life-centered and is considered a process of learning through doing, by application and experience. Adults do not simply receive knowledge created by outsiders, but examine their own reality and make assertions about it. "Praxis" is the focus of effective adult learning and praxis means analysis on reflection of reality in order to transform it. Adults interpret ideas, skills and knowledge through the medium of their life-experience and test them in their real-life settings.

- *Adult learning is acquiring knowledge and competence*

The learning process contributes largely to the success of learning. Adults are participative in the learning process and hence learning takes place through participation rather than the traditional process of knowledge transmission. According to Muller (1993: 243) successful learning means to keep the balance between the learning process and the learning outcome so that the results justify the efforts and if they are not excellent they should be at least and always "good enough".

The adult education facilitator would therefore consider the characteristics of adult learning in designing programmes for adult learning.

## **2.2.5 Conditions of adult learning**

Jarvis (2010:133) mentions the following conditions of adult learning:

- Learning is a basic human need.

- Learning is especially motivated when there is disharmony between an individual's experience and his or her perception of the world.
- Adult learners like to participate in the learning process.
- Adult learners bring their own experiences, needs and meaning system to the learning and teaching situation.
- Adult learners bring to the learning situation their own self confidence, self esteem and self perception.
- Adults learn best when the self is not under threat.
- Adult learners need to feel that they are treated as adults.
- Adult learners have developed their own learning styles.
- Adult learners have had different educational biographies so they may learn at different speeds.
- Adults have developed a crystallised intelligence.
- Adults bring different physiological conditions to the learning situation, e.g. declining visual and/or audio acuity, less energy, failing health.

When training teachers (adults) with the aim of changing their behaviour and ensuring that they follow a particular approach to teaching (in this case a values-based approach), it is important to keep the conditions of adult learning in mind and adapt the training to these conditions, as this will enhance the learning experience and the likelihood that teachers will implement the human values-based approach when teaching. Jarvis (2010:153) explain in this regard that adult learners like to participate in the learning process and that teaching methods used to train adults should therefore be facilitative rather than didactic. Jarvis (2010:153) and Rogers and Horrocks (2010:79) also make it clear that adults bring their own experiences, needs, meaning systems, self-confidence and self-esteem to the learning situation.

Adult trainers should therefore not only use adults' experiences as a learning resource, but also help adult learners to be aware of the relevance of what they are learning. It is also important to take into consideration that adult learners learn best when the self is not under threat and that adults should be treated as adults under all circumstances (Jarvis 2010:134).

Like Jarvis (2010:153) and Malcolm Knowles (1998:31), Gravett (2005:8) also refers to the fact that adult learners bring accumulated experiences with them into the educational events and that adults' readiness to learn is usually linked to their life roles and life tasks.

Gravett (2005:14-16) explains that learners' accumulated experiences can be utilised by exploring their existing knowledge, linking new knowledge to their existing knowledge, assisting them to reflect on their existing knowledge that might impede meaningful learning, providing opportunities for interaction with learners in small groups, creating experiences that can be utilised to stimulate reflection as a base for the construction of meaning and assisting learners to learn from experience with a view to personal or professional transformation.

Gravett (2005:16) further explains that adults usually engage in educational activities with the intention to extend their knowledge, attitudes and skills for coping with life problems or life tasks. Because they want to be able to apply what they learn in their life world, they want to experience the immediate usefulness of newly-acquired knowledge and skills. This need for immediacy implies that adult learners will be more likely to learn when they believe learning content to be relevant and beneficial to their life situation. The application value of the learning content is therefore important when training adults. It is further important to use illustrative examples that bear upon the life-world of the adult and to invite learners to indicate how the new learning can be applied (Gravett 2005:16).

### **2.2.6 Adult learning facilitation**

Spigner-Littles and Anderson (1999:204) indicate that adults respond best to collaborative learning environments in which the instructor and students provide and share information. They found that the collaborative setting provides students with the greatest opportunity to connect new information to their existing knowledge base and real-life experiences. They are then able to reconstruct and transform their prior knowledge and cognitive processes to enhance their understanding of the subject being explored and that these experiences paralleled other well established theories such as the cognitive learning theory and constructivist learning theory (Spigner-Littles & Anderson 1999:204).

Delahaye and Ehrich (2008:650), in their observations of adult learners, found that adult learners thrive when classroom activities are structured so as to help them develop new skills; challenge their pre-conceived notions, attitudes and beliefs; help revise their world views; and encourage and promote self-regulation in the learning process. In most instances the adult learner has well formed expectations and tends to approach classes with stronger commitment.



### **2.2.7 Implications for facilitators of adult learners**

Spigner-Littles and Anderson (1999:206) have put together their findings to be considered when learning facilitation is to be organised for adults. These involve the facilitator recognising that the facilitation process is more effective when new information is connected to the learners' prior knowledge and real-life experiences. According to Knowles (1984:117) bringing in previous life experiences into the classroom activities that encourage and permit learners to share their ideas and experiences with fellow students, is very successful when teaching adults. Learning is most effectively achieved when knowledge is constructed and not only transmitted. Knowledge construction almost always occurs when information is relevant and when the learner understands why and how to use the new information (Spigner-Littles & Anderson 1999:203-209; Truluck & Courtenay 1999:222).

Adult learners' instructors are really facilitators who help organise information around problems so as to stimulate active participation. The role of the facilitator is to effectively help adult learners to develop knowledge-building skills to enable them to construct their own understanding of each concept and relate that understanding to real-life situations (Delahaye & Ehrich 2008:652).

Adult learners are often emotionally attached to their beliefs, values and worldviews and thus would reject new information that contradicts that. Further, older learners are accustomed to exercising judgment in allocating their time, hence they seek more flexibility in the scheduling of and control over their learning experiences (Spigner-Littles & Anderson 1999:203-209; Shulman 2000:131).

The adult learner is more effectively facilitated by being introduced to new learning styles, including self-directed learning, goal setting, self-evaluation, project management, critical thinking, group participation and how to access information resources (Knowles 1984:64,119; Spigner-Littles & Anderson 1999:203). According to Chappell, Hawke, Rhodes and Soloman (2003:122) adult learning facilitation can be aided through a number of strategies such as effective questioning techniques, encouraging co-operative learning, utilising discussion groups and encouraging the adult's active involvement.

The andragogical teacher who, according to Knowles (1984:109-125), is referred to as a facilitator, prepares in advance a set of procedures which involves the learners in a process with the following elements:

- Establishing a climate conducive to learning
- Creating a mechanism for mutual planning
- Diagnosing the needs for learning
- Formulating programme objectives that will satisfy these needs
- Designing a pattern of learning experiences
- Conducting these learning experiences with suitable techniques and materials
- Evaluating the learning outcomes and re-diagnosing learning needs

Jarvis (2010:132-133) proposes approaches to teaching as is relevant to the conditions of adult learning discussed in section 2.2.5. As learning is a basic human need, the teaching approach is not essential but may involve facilitating the learning process.

- The learning process is to be structured by both the facilitator and learner together so that the process of learning is relevant to the experience or problem that created the need for learning.
- The facilitator should consider the experiences brought by the learner as a learning resource. The facilitator should try to build on the meaning system that the adult learner brings into the learning situation rather than working contrary to it, the learner may thus be able to integrate their new knowledge with the old. Thus the facilitator should engage methods that enable learners to use their prior knowledge as a resource.
- Facilitators should assist learners to be aware of the relevance of what they are learning, therefore applications of the subject matter must be considered rather than pure transmission of knowledge.
- As each learner brings to the learning situation their own self-confidence, the facilitator should be empathetic towards the learner at all times and always anticipate a successful learning outcome.
- As learners come to the learning situation with their own self-esteem, it is important that facilitators 're-enforce' all 'correct' knowledge and understanding in order to enable the learners to maintain a high level of self-esteem and self-confidence.
- The facilitator should provide opportunities for the learners to reflect on 'incorrect knowledge' so that they can correct it for themselves where possible. Self-assessment should be encouraged rather than teacher-assessment is important as the learner is cognisant of their own self-perception.

- The facilitator should create an ethos in which the learner feels safe and uninhibited. This is especially important at the start of any new programme of learning. The facilitator should encourage co-operation rather than competition.
- The facilitator must not give the impression that s/he is the source of knowledge but to attempt to facilitate teaching and learning engagement for all participants.
- Facilitators should be aware that different learning styles exist and encourage learners to develop effective and efficient learning. Thus facilitators must be flexible and adopt facilitation techniques that are relevant to the teaching and learning situation.
- The facilitator must acknowledge that learners learn at different speeds and should encourage their adult learners to learn at their own pace.
- Facilitators should not be influenced by previous academic record of the learners, especially from initial education.
- The facilitator should ensure that the physical environment in which teaching and learning occurs is conducive to adult learning.

### **2.2.8 Pre-requisites for teacher (adult learner) change**

An action research study reported by Taplin, Ng and Huang (2006:2) was done in Guangdong Province, China and involved the evaluation of the impact of a collaborative model for curriculum restructuring on teachers' professional growth. It involved values integration across the curriculum while simultaneously helping teachers to adopt current theories of learning. The values-based education framework adopted for this project was the Sathya Sai Education in Human Values (SSEHV) model (similar to the model in this study). In this study the teacher as the learner, adopter, reaffirmer or rejecter of the programme revealed amongst others, that a pre-requisite to teacher change is that the teachers needed to be motivated to know and explore how change can affect their practice and that understanding and developing within them a genuine belief was necessary to motivate this change.

Amongst some of the challenges encountered by the teachers as adult learners in the Guangdong Province project, was the understanding of the concept of values-based education. An example was when teachers in the mathematics group were given an example of re-phrasing a text-book problem to include values, they were reluctant and the teachers questioned whether changing the wording of a text book problem were allowed. This showed the inhibition that they had and that perhaps they had never previously been permitted to change even the wording of the examples in the text book.

Challenges expressed in this project revealed a sense of mismatch with implementing the innovation, the teachers required support from various partners such as the subject experts to give them ideas for incorporating the maximum of values education while making minimum change to lesson content and on the other hand the supportive input from the local education department officials that their credibility as teachers would not be compromised when trying out new ideas.

Taplin *et al.* (2006:20) explained that once the teachers adopted the integration of values in their lessons, those who gave demonstrations showed evidence of a considerable increase in their incidental modelling of values that had not been there previously. At this stage apart from the teachers understanding the process of values integration, their sense of confidence has increased and they showed a positive attitude towards the approach.

Thus consideration of the relevance of learning, the teachers' past experiences, the teachers' attitudes and beliefs all are influential in the understanding, adoption and implementation of a new programme, especially if it is a programme based on human values. The creation of a suitable, collaborative learning environment is not to be ignored when planning an adult learning programme.

The action research study conducted in Guandong, China has also re-iterated the need for teachers to understand the programme, to believe in the programme so that it effects change in the attitudes and behaviour (this occurred through much support). The process of adult learning is an active and engaging one and hence there should be strong collaboration with the teachers and facilitators as well as other stakeholders (Taplin *et al.* 2006:8-21).

## **2.3 Teacher beliefs and attitudes**

According to Vartuli (2005:76) teacher beliefs influence teacher's perception, judgements and decisions even though these beliefs are implicit and unarticulated. This is supported by a study done by Roehrig and Kruse (2005:420) that clearly indicated that beliefs play a significant role in teachers' classroom practices.

### **2.3.1 Teachers' beliefs about their own abilities: Self-efficacy**

Vartuli's (2005:75) review on beliefs as being the heart of teaching indicates that a teacher's behaviour, feelings and motivation are strongly influenced by their self-efficacy.

By self-efficacy she means the person's judgement of their capabilities to organise and execute the courses of action (Vartuli 2005:76). Vartuli's review further uncovers that teachers with high self-efficacy demonstrate positive effects on child outcomes, use effective classroom practices and engage family participation. These teachers help children develop greater self-esteem and motivate children to learn. These teachers are open to new ideas, are willing to experiment and are generally more enthusiastic. The higher teacher efficacy is associated with teachers who are more confident about their teaching abilities (Vartuli 2005:76).

### **2.3.2 Teacher beliefs about the nature of learning and teaching**

Various philosophies, theories and belief systems guide teachers' expectations about child behaviour and the decisions they make in classrooms. Teacher's behaviours are affected by their implicit theories about the nature of knowledge acquisition and this ultimately affects student learning (Vartuli 2005:79).

Teachers' beliefs vary across grade levels based on their beliefs of developmentally appropriate practice for learners in different grades. There are also variations in teacher beliefs across teacher educational levels, whereby the school culture influences practice and the teachers' practice gravitates to the common practice of the school (Vartuli 2005:80).

### **2.3.3 Teacher thinking and beliefs**

According to Isenberg (1990:322), good teachers are ones who base their actions on thinking, using a system of beliefs to logically choose a path for instruction. The modern conception of teaching is to be broadened to include teachers' thoughts and beliefs as well as their behaviour.

- **Teacher thinking**

There are several assumptions by researchers on teacher thinking and these are that teaching practice is greatly influenced by teacher thinking, that teaching is guided by the teacher's thoughts, decisions and judgements and that teaching is a higher level decision making process (Isenberg 1990:322). These assumptions portray teachers as active engaging and rational professionals who make both conscious and intuitive decisions in school contexts. Some researchers have documented teacher's thoughts before the act of teaching which includes mental plans or scripts that occur during planning. These scripts are what often guide instruction. Research also indicates that

teacher planning is guided not only by goals, attitudes and beliefs but also by the nature and complexity of the task.

- **Teacher beliefs**

Teachers' thinking may be guided by a personally held system of beliefs, values and principles or by a broad knowledge base of content and teaching strategies that inform their teaching practice (Isenberg 1990:324).

Yonemura (1986:7) examined the thinking and beliefs of one teacher documenting the thoughts and beliefs of this teacher about children, teaching, sound educational programmes and the impact of teacher beliefs and values on young children. She (Yonemura) found that the teacher's practical knowledge was central to her role as an effective teacher, she almost always gave an account of the thought that led her to these actions and these thoughts could be traced back to various values, teacher's thinking and beliefs (Yonemura 1986:7).

- **The influence of teachers' thinking and beliefs on instruction**

When teachers teach in contexts that encourage them to think about their practice and articulate their reasons for their decisions it provides a means for interpreting events predicting the implications of teacher actions and establishing a foundation for teachers' professional behaviour (Spodek 1988:166). This shows that thoughtful teaching is central to professional growth. When teachers reflect upon instruction, they can analyse the results of their decisions on such students. Isenberg (1990:325) noted that mature professional teachers endeavour to make explicit their theories and beliefs about children, learning, curriculum and content whereby they reflect on and analyse the apparent effects of their own teaching and apply the results to future plans and actions.

It can thus be noted that from research literature, teachers' thinking and beliefs are integral to understanding the mission of teaching and that increased attention is being given to teachers' thought processes and the impact thereof on their classroom instruction. The role of teacher beliefs, thinking, knowledge and attitudes have been discussed in the general context of the teachers' approach to learning and instruction, it is of interest to explore the role of the teacher's beliefs in adopting a reform-based approach.

### **2.3.4 The role of teachers' beliefs and knowledge in the adoption of reform programmes**

In a study by Roehrig and Kruse (2005:420) on the role of teacher beliefs and knowledge on a reform-based curriculum it was evident that teacher beliefs played a large role in the nature of implementation of a reform curriculum. This study is supportive of the finding of other researchers (Guskey 1985:58; Richardson 1996:105; Tobin & McRobbie 1996:223-241) that teacher beliefs have a significant impact on teachers' teaching practices.

In Roehrig and Krause's (2005:419) study it was found that teachers with the highest levels of reform-based teaching practices also exhibited the most reform-based beliefs. These beliefs were also critical in the teachers' implementation of the curriculum and associated instructional strategies. The teaching beliefs were one factor that appeared to constrain implementation of reform-based chemistry curriculum with those teachers holding predominantly traditional beliefs showing little change in classroom practices. Kagan (1992) quoted in Roehrig and Krause (2005:421) concluded that teachers' developing beliefs and practices need to be followed over a longer time frame of implementation.

In a collaborative action research study involving cross curricular teaching incorporating human values as part of the objectives of the South East Asian Ministers of Education Organisation (SEAMEO) collaboration with UN-Habitat, it was found that integration of human values in the curriculum developed for human values-based water, sanitation and hygiene education (HVWSHE) into the content of Form two science and geography lessons showed evidence of a positive attitude change in the learners. The change observed reflected enhanced awareness towards water conservation and improved responsibility of the learners towards water use (Toh, Ng, Yeap, & Haji Ismail 2008:9-13).

It is therefore imperative that the present study engages the role of the teacher's attitude, beliefs, thinking, perceptions and self-efficacy on their actions and behaviour.

At this juncture it is necessary to emphasise the importance of programme-related elements which could significantly influence the way in which participants experience the training programme. According to Caffarella (2010:15) programme planning is a practical decision making process that are dependent on "a set of interacting and dynamic elements". These include amongst others discerning the context, building solid base of

support, developing learning and program objectives, designing instructional plans, devising transfer of learning plans, formulating evaluation plans, making recommendations and coordinating facilities and on-site events (Caffarella 2010:19).

Further discussion on the aspects of programme evaluation will not be pursued in this study as the emphasis of this study is to explore the experiences of the Laotian teachers with respect to the HVWSHE programme. It should be noted that aspects of the qualitative paradigm may elicit elements of programme evaluation.

## **2.4 Understanding human values-based education**

Although chapter one provides a concept definition of values, it is necessary at this stage to explore various perceptions of this concept to provide a more concrete basis for its association and inclusion in values-based education.

According to Hawskey, Jacoby, Louw, Coetzee and Findlay (2000:8), values are considered to be beliefs and attitudes that one chooses to live by as they are things that an individual believes to be important to him/her. An individual's value system is moulded by his/her life experiences and influences the way he/she reacts to and interacts with people throughout life. Values involve general beliefs about what is preferred in respect to choosing between desirable and undesirable goals (Feather 1999:53). This implies that one's value systems influence one's beliefs about what is desirable in terms of one's behaviour.

Kanu (2001:23) indicates that values education is an explicit attempt to teach about valuing and that the approach to values education includes inculcation, moral development and analysis with the purpose of development of a higher set of values.

Values-based education places emphasis on qualities of human beings that are desirable, respected and help in making informed choices sanctioned by a given society (Kapani 2000:4). Values-based education therefore encompasses all approaches of using values in the educational process so as to achieve the ultimate goal of human excellence.

According to the Sri Sathya Sai Institute of Higher Learning (SSSIHL 2000:55), the definitions of basic human values have emerged from the Integral Philosophy of Sri Sathya Sai Baba. Five basic human values evolved from continuous experimentation in educational institutions run by the Sri Sathya Sai Organisation over the last four



decades. These were identified as truth, right action/conduct, peace, love and non-violence (SSSIHL 2000:54-55). The founder of this Integral Philosophy, Sri Sathya Sai Baba on these five values declared that:

*Since these are an integral part of a human being and have universal validity, they are appropriately designated as Human Values like the invisibility of the personality and its integrated nature; the basic human values are inter-linked and interrelated. There is an organic link between the human values and the human personality. Mental happiness comes from peace, peace comes from love, love is linked with non-violence, non-violence is the outcome of righteous conduct, righteous conduct without truth cannot be thought of (SSSIHL 2000:55).*

Thus, the five values of love, peace, non-violence, righteous conduct and truth representing five major facets of the human personality, are “petals of the same flower” (SSSIHL 2000:55).

#### **2.4.1 The five basic human values**

*Love in speech is Truth. Love in action is Right Conduct. Love in thought is Peace. Love in understanding is Non-violence (Sri Sathya Sai Baba).*

From the above expression the Sri Sathya Sai World Foundation (SSSWF) explains that all the human values are derived from the underlying principle of love. The myriad number of values that are known and the condensation of all these into five universal or thematic values are explained in terms of related values or modes of expression. Within each of the five values is a comprehensive list of related values that has been identified but not limited to those tabulated in Table 2.1. While it should be understood that these values are expansive and are not limited to any one definition, an attempt is made in Table 2.1 to summarise the five universal values as they are described in the global overview of Sri Sathya Sai Education (SSSWF 2007:7-9).

##### **2.4.1.1 Truth**

Truth is one, ultimate and universal, which can be expressed in a multitude of ways. Truth can be approached through the path of wisdom, which is through rational thought and knowledge. Truth finds expression in nature, art, music, poetry, and ancient scriptures of all faiths and through scientific discipline. The pursuit of truth requires discrimination, intuition and introspection.

#### **2.4.1.2 Right conduct**

Right conduct is said to encompass the sum total of codes of ethics, ethical behaviour and moral rectitude. Right conduct is rooted in the attitudes and habits developed from early childhood that mature into respect, responsible behaviour and adherence to the duties that comes with one's life circumstances. For example adopting a conscious effort not to waste food, water, time, energy or money can go a long way towards improving many of the imbalances that exist between the haves and have-nots of the world.

#### **2.4.1.3 Peace**

Attaining peace requires the capacity for introspection and self-awareness. Self-awareness enables mindfulness of one's thoughts, words and deeds, when self-awareness becomes habitual, one begins to monitor and modify habitual patterns of thought that obstructs one from being at peace. Silencing the mind is a process used in achieving peace.

#### **2.4.1.4 Love**

Love is best expressed as an energy permeating all life. Love refers to something much deeper than emotional attachment or desire; it is unselfish and independent of reciprocity. Love is epitomised by kindness, caring, empathy and compassion. The active nature of love is that it grows and is all encompassing.

#### **2.4.1.5 Non-violence**

Non-violence is a state of mind that is cognisant of the unity in diversity. It manifests as adherence to righteousness, respect for law and order. It naturally restrains from harm to others and nature in general. It is rooted in forbearance, morality and integrity. When all embraces non-violence there will be the much desired world peace.

Table 2.1 depicts the five basic values as described above and their modes of expression.

Table 2.1 Basic values and related values or modes of expression (not in order of importance)

TRUTH	RIGHT CONDUCT	PEACE	LOVE	NON-VIOLENCE
Curiosity	Cleanliness	Attention	Caring	Appreciation of other cultures and religions
Discrimination	Courage	Calm	Compassion	Brotherhood
Equality	Dependability	Concentration	Dedication	Citizenship
Honesty	Duty	Contentment	Devotion	Concern for all life
Integrity	Endurance	Dignity	Forgiveness	Co-operation
Intuition	Ethics	Discipline	Friendship	Equality
Memory	Gratitude	Focus	Generosity	Loyalty
Quest for knowledge	Goal setting	Happiness	Helping	Minimum harm
Reason	Good behaviour	Humility	Consideration	Nature awareness
Self-analysis	Good manners	Inner silence	Kindness	Respect for property
Self-awareness	Healthy living	Optimism	Patience	Service
Self-knowledge	Helpfulness	Satisfaction	Sharing	Social Justice
Spirit of inquiry	Initiative	Self Acceptance	Sincerity	Unity
Synthesis	Leadership	Self confidence	Sympathy	Universal love
Truthfulness	Obedience	Self control	Tolerance	Unwillingness to hurt
Understanding	Patience	Self discipline		
	Perseverance	Self respect		
	Proper use of time			
	Resourcefulness			
	Respect			
	Responsibility			
	Sacrifice			
	Self-confidence			
	Self-sufficiency			
	Simplicity			

Source: Padayachee (2002:22).

Taken together these values encompass a developmental vision of human potential. Thus the pursuit of truth will lead to right conduct, right conduct promotes peace, peace enables us to love and love expands into non-violence.

## **2.5 Human Values-based Water, Sanitation and Hygiene Education (HVWSHE)**

The human values in water, sanitation and hygiene education is linked to the proclamation of the ministerial forum held at the Hague, that “water needs to be managed in a way that reflects its economic, social, environmental and cultural values for all its users” (The Hague 2000:1). Despite water being a basic human right the reality is that water and sanitation are far from being universally available. Some of the reasons for this stems from mismanaging, gross negligence and attitudes of indifference towards this natural resource (Hanchett, Akhter, Khan, Mezulianik & Blagbrough, 2003:11; Nanan *et al.* 2003:3-7).

The Human Values-based Water, Sanitation and Hygiene Education (HVWSHE) approach is an innovative approach that not only seeks to impart information on water, sanitation and hygiene but also serve to inspire learners to change their behaviour with a view to promote wise and sustainable use of water and sanitation. The term HVWSHE was coined by United Nations Human Settlements Programme (UN-Habitat) to distinguish the human values-based water, sanitation and hygiene education from other values approaches (refer to section 1.1.1). Thus the HVWSHE is an educational initiative which includes both a human values-based approach to bring about the desired change in attitude and behaviour as well as the relevant knowledge aspects of water, sanitation and hygiene to inform and create awareness on challenges experienced. A values-based approach has many advantages as it does not add further to the current overload of the curriculum and as it can be integrated with ease to the existing curriculum. It also creates lasting impact through character development, when understood and practiced by children and young adults.

The concept of Human Values in Water, Sanitation and Hygiene Education initiative is illustrated in Figure 2.1.

## Concept for Human Values in Water, Sanitation and Hygiene Education (HVWSHE)

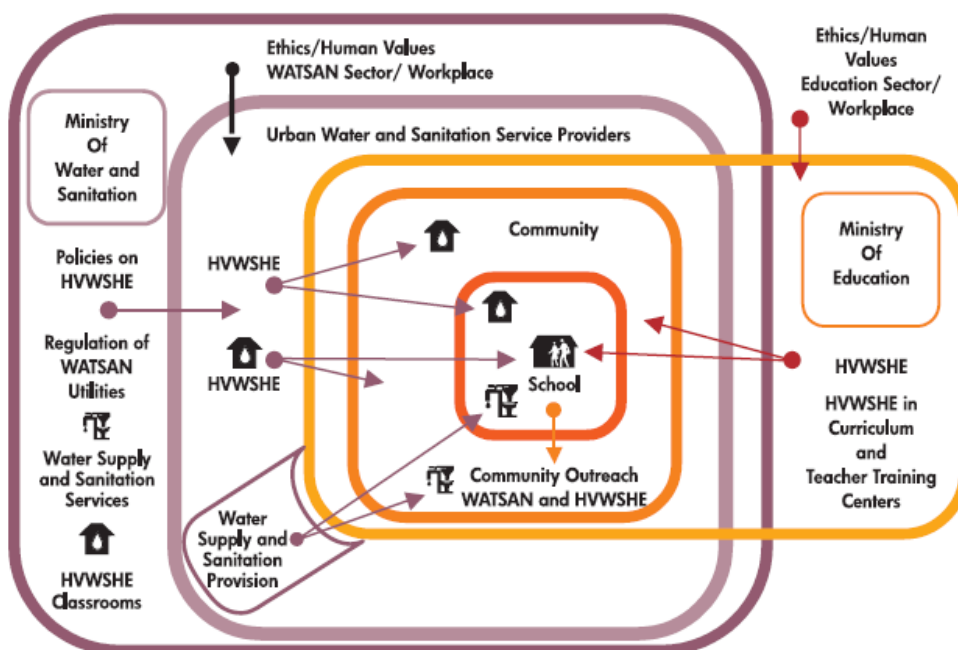


Figure 2.1 Concept of Human Values in Water, Sanitation and Hygiene Education  
Source: UN-Habitat (2006a:21)

The activities of the HVWSHE initiative is summarised as follows:

- Enhancing awareness and political will for HVWSHE in African and Asian cities.
- Building capacity to conduct HVWSHE in formal and non-formal education sectors.
- Building capacity in the Water Service Sector to conduct HVWSHE promotion and providing sustainable access to water and sanitation services for schools and surrounding communities.

The HVWSHE training programme involves the use of a values-based instructional method which is to deliver the necessary technical knowledge, create awareness and prompt behavioural change on water, sanitation and hygiene issues. The Water for Asian Cities (WAC) project has adopted the HVWSHE approach in which the approach used to bring about or facilitate the behavioural change was the Human Values Integrated Instructional Model (see section 2.6). This model was taught and demonstrated to Laotian teachers during their training. The activities of the HVWSHE initiative reflect that the HVWSHE programme has three important objectives. The second objective includes specifically the building of capacity in both formal and informal education. Thus as part of

this objective the HVWSHE training conducted for the Laotian teachers fall within the scope of the HVWSHE initiative. Therefore the HVWSHE training has apart from a facilitation approach/model (which is adopted based on the regional agreement, in this case SEAMEO) other programme sub-components such as the socio-economic and technical (practical) knowledge on water sanitation and hygiene as well as knowledge transfer or sharing to communities. The approach used in Africa was a values-based approach used by the agency TAISSE. At this point it is important to note that the HVIIM was the facilitation approach/model used by the agency (SPW) who was nominated to conduct the HVWSHE programme for the Water for Asian cities programme. The HVIIM used in the HVWSHE training of the Laotian teachers is discussed in the section to follow.

## **2.6 The Human Values Integrated Instructional Model**

The *Human Values Integrated Instructional Model* (HVIIM) uses various learning psychologies (behavioural, cognitive and constructivist) that best explains the learning which takes place that are considered holistic and instrumental in character building (Jumsai 2003:186).

The aim of HVIIM is to transform the learners into persons of character exemplifying human excellence. To achieve this, teachers must be able to inspire the learners. The teacher therefore must be a practitioner of what he/she is teaching (Jumsai 2003:33-34). Components of the HVIIM are discussed below.

### **2.6.1 The role of the teacher as role model**

Teachers play a key role in transferring human values to the students by being an exemplary model of the human values.

### **2.6.2 Collaborative learning**

The model encourages collaborative learning so as to enable an environment of information sharing, participation and group work. An environment of mutual co-operation is induced which contributes to the learners experiencing a sense of unity and love (Jumsai 2009:35).

### **2.6.3 The role of the student**

The model functions with a learner-centred approach, implying that the student or learner should have full participatory involvement in the learning process.

#### **2.6.4 The process of instruction**

The basic flow of activities during the instructional process as described by Jumsai (2009:34-38) is as follows:

- **Concentration/Meditation**

The HVIIM places emphasis on achieving a calm mind and to focus the mind or to concentrate the mind before the lesson commences. This is often referred to as silent sitting or meditation (Jumsai 2003:222). The concentration technique used in HVIIM is called the 'Light meditation'. According to Jumsai (2009:37-39) light meditation involves focussing on a light source that is mentally drawn into all parts of one's being and then expanding this light to all beings and ultimately expanding this light to the entire universe. The individual's concentration through this technique becomes focussed on the ever expanding light.

- **Inspire**

After calming the mind, an atmosphere of peace and love is established. The learners are inspired by the teacher who continues to speak from the heart to 'touch' the heart of the students.

- **Create atmosphere**

The class should have a safe atmosphere whereby students should feel safe to ask questions and to express their opinion. This would enhance the learning process.

- **Bringing out human values from within and integration of human values in all subjects and all activities**

There are many ways to teach human values in a subject which are listed below:

- Bring out the inherent values in the subject.
- Direct integration where human values are an integral part of the subject.
- Use simile and make a comparison with similar events in the life of the students.
- Change negativity into a positive lesson.
- Bring out values through discussions and brainstorming.
- Use stories to bring out values.
- Play human values games.
- Tell life stories of great personage.

- Use songs and music to integrate values.
- Use drama to depict events with human values.
- Use various activities such as service activities, field trips and clubs to draw out human values.

The model includes the use of various techniques that enables interaction of the learners and teacher enabling a cooperative learning environment. The use of visualisation, quotation, song, group activity, story-telling, role play/drama/simulation provides the external stimuli through the senses for purposes of improving understanding and creating awareness.

### **2.6.5 Assumption of the Human Values Integrated Instructional Model**

While it is apparent that the model has an integral component of various psychologies of learning, there are also several assumptions, which should be considered in the teaching and learning process. These assumptions are:

- The model assumes the existence of a subconscious and super-conscious mind and its programmability.
- The model also assumes that the teachers are inspirers and exemplars of good conduct (Jumsai 2003:27; 175-176).
- In order for teachers to have the ability to inspire learners, they should believe in the model and hence acting in conformance is a likely outcome.

The positive change in teachers' beliefs, thinking, self-confidence (efficacy) and knowledge towards human values water, sanitation and hygiene education would hence be an adequate indicator for possible positive behaviour and attitudinal change towards better water-use and management. It would also give an indication of teachers' willingness to adopt the teaching approach in their classrooms and to ensure in the process that their learners' attitudes and behaviour are also changed.

Jumsai (2003:302-310) indicates that the Human Values Integrated Instructional Model was effective with teachers (as learners) in general. However the adoption and implementation of the human values integrated concept in their classroom may be dependant on whether the teacher (adult learner) is sufficiently inspired or motivated to do so. The decision to adopt the human values integrated concept by the teacher can be attributed to Knowles' assumptions on the characteristics of the adult learner which includes being self-directed, having an increased reservoir of knowledge, being learning



oriented and having already developed morals and values they live by (Zmeygov 1998:105).

The HVWSHE programme utilises the Human Values Integrated Instructional Model that is supportive of positive attitude and behavioural change in teachers, whilst at the same time sensitising them to the urgency of good water, sanitation and hygiene practices such that the sum total of the process is generating teachers who believe in the HVWSHE programme such that they are inspired to bring about a similar change in their learners.

### **2.6.6 The Human Values Integrated Instructional Model and other values-based models**

A comprehensive model for values and moral education was proposed by Kirschenbaum (1992:1) which envisaged an improvement on the existing 'traditional' and 'new' approaches. The comprehensive model would include the synthesis of the best elements of these approaches. The traditional approach to values involved inculcation and modelling of values which was done by parents and teachers, the newer approach included the "values clarification model" which instead of simply inculcating and modelling values, educators were now encouraged to help students clarify their own values, learn higher levels of moral reasoning, and learn the skills of value analysis which made learners participate in the construction and understanding of their decisions, students would engage in discussions and activities that would allow them to experience and internalise the desired values (Kirschenbaum 1992:1-5; Lickona 1993: 6-10; Arweck, Nesbitt, & Jackson, 2005:327; 333).

In the study by Arweck *et al.* (2005:325) on values education programmes that foster moral reasoning in some schools in England, a parallel between the two models is used. One was based on the SSEHV model (refer to sections 1.1.1 and 2.2.1) and the other was the Living Values Educational Programme (LVEP) that is linked to Brahma Kumaris (Brahma Kumaris is a world spiritual organisation). According to Arweck *et al.* (2005:330) both these models share many similarities as they are both predicated on the belief that values are inherent in each person, the SSEHV makes reference to five basic human values whereas the LVEP refers to twelve essential values. Another commonality according to Arweck *et al.* (2005:329) of these approaches is that they conform to

*“...theoretical and philosophical aspects of values, as explicated in approaches like ‘values clarification’ (e.g., Kirschenbaum, 1977), ‘character education’ (e.g., Lickona, 1993) and theories of ‘moral education’ and ‘moral development’ (e.g., Kohlberg, 1981). These deal with questions of ethics and morals and how ethical/moral positions are formed and transmitted. They also link with ‘ethical literacy’ and platonic worldviews.”*

The study further indicated the attempt of the programmes to restore the balance between cognitively based education and the affective side of children and adults. SSEHV understands itself as a ‘self-development programme’ (Alderman, 1996:8), a concept which resonates with emotional intelligence and spiritual intelligence (Zohar & Marshall 2000:35-38), notions which the promoters of both programmes have incorporated (Arweck *et al.* 2005:331).

As observed the values clarification model, the SSEHV, the LVEP, the traditional model (values inculcation and modelling) have many similarities which emphasise one or more of the following components; values modelling, inculcation or cultivation of values, critical thinking, re-enforcement of good values, promotion of spiritual and moral development through strategies such as visualisations, songs, stories, plays, games, drama, discussions, as well as bringing out values from subject matter and integration in curriculum (Kirschenbaum 1992:5; Arweck *et al.* 2005:334; Alderman 1996:11; Tillman & Hsu, 2000:xii, Taplin 1998:3; Lickona 1993).

From this it is evident that the HVIIM is a synthesis of various useful strategies and can perhaps be considered a variation of the conceived comprehensive model proposed by Kirschenbaum. While literature on the HVIIM is sparse, it can be deduced that the approach is comprehensive and does involve both traditional and newer methodologies that have either singly or collectively been employed in various values and moral education programmes.

## **2.7 The role and relationship of the HVIIM in the HVWSHE training programme**

As it has been established that the HVWSHE was the values-based water, sanitation and hygiene education initiative adopted by UN-Habitat which distinguishes it from other values-based training. According to UN-Habitat (2006b:3-5) the objectives of the HVWSHE training programme are:

- impart information on water, sanitation and hygiene
- inspire learners to change their behaviour with a view to promote wise and sustainable use of water and sanitation.
- promote investments that could bring safe water and basic sanitation to formal and informal schools, as all too often schools lack these services.

In order to achieve the first two objectives a process of delivery of information in a manner that would inspire the learner to change their behaviour was necessary. In order to achieve this a values-based education approach had to be included as a component of the HVWSHE.

The Human Values Integrated Instructional Model (HVIIM) is a values-based approach of teaching/facilitation that is able to use human values with any lesson content, thus implying that it is not specific to only teaching issues relating to water, sanitation and hygiene but can be applied to any content such that the values inherent are brought out or values are integrated into the content which is necessary in inspiring and thereby transforming the learners attitudes (Jumsai 2009:175-186).

While the HVIIM is the values-based approach used in transferring knowledge and inspiring learners it is also the approach that the Lao PDR teacher participants were to learn in order to facilitate learning in their classes. Thus the HVIIM as a component of HVWSHE training programme is the values-based approach by which learning facilitation was done to bring about attitudinal changes in the teachers as well as the approach which the teachers themselves were to use when implementing the HVWSHE approach in their classes.

The HVIIM therefore can be used with any content and has been included in the HVWSHE training programme for Lao PDR as the “values-based approach” which is required to transfer knowledge and skill relating specifically to water, sanitation and hygiene issues that would further elicit the desired behavioural change towards better water, sanitation and hygiene management.

## **2.8 Conclusion**

Poor water management has resulted in water shortages, inaccessibility, disease and preventable deaths especially in Africa and Asia. There is a desperate need to conserve

and better manage the earth's limited resources. Values education has shown much promise in being able to elicit desired behavioural change in learners.

The use of human values in the process of creating a new water-use ethic through the training of the teachers, who if sufficiently inspired would impart this attitude and belief onto their learners so as to enable a better water-use and sanitation-friendly ethic in society. The use of the human values integrated approach which is based on the framework of the SSEHV model embraces behavioural, cognitive and constructivist theories of learning. The application of this approach to water sanitation and hygiene demonstrates the flexibility of the human values approach.

The use of the HVWSHE approach on adult learners (teachers from Lao PDR) are subject to understanding the teacher as an adult learner and the experience the teacher brings along to this learning field. The role of the teachers attitudes, beliefs, self-efficacy and knowledge are key in bringing about the desired behavioural change.

*Education is a process and there is need for research methods which themselves are process-oriented, flexible and adaptable to changes in an evolving context.* (Anderson 1990:157)

## RESEARCH DESIGN AND METHODOLOGY

### 3.1 Introduction

This chapter is an account of the research design, methodology and research process that was followed in the actual study. In this chapter the empirical study is discussed, which includes an in-depth understanding of the problem and the aim of the study (refer to sections 1.4 and 1.5). The advantage of using a qualitative case study approach, the design of the study, the research techniques used, qualitative data analysis, and the interpretation are discussed and concluding remarks are made. In the section that follows, the scope of the study is described.

### 3.2 Scope of the empirical research

This research focussed on Laotian teachers who attended the Human Values Water, Sanitation and Hygiene Education (HVWSHE) intervention programme. The aim of this investigation was to investigate whether these Laotian teachers experienced any changes in their knowledge, attitudes and beliefs with regard to water-use and sanitation during and after the HVWSHE training intervention. The intention was further to investigate their willingness and determination to apply the approach in their classrooms. The teachers were expected to share their personal views during and after exposure to the programme intervention. They also had to present lessons that were observed and scored according to a pre-designed rubric.

In this study I was a participant observer of the HVWSHE programme, as presented to Laotian teachers, which took place at SPW premises, in Lopburi, Thailand. It is important to note that the training was held at the service provider's (SPW) premises. This is relevant as the Human Values Integrated Instructional Model (HVIIM) used in the HVWSHE training emphasises the significance of the effect of the learning environment on the learner (Jumsai 2009:29).

### 3.3 Research approach

According to Denscombe (2005:3) the social researcher is faced with a variety of options and alternatives and has to make strategic decisions about which options and alternatives to choose. Although there is not a “one-and-only” correct direction to take, some strategies are better suited for specific issues. Denscombe (2005:3) clearly states that “the crucial thing for good research is that choices are reasonable and that they are made explicit as part of any research report.” Each choice, however, brings with it a number of advantages and disadvantages. Leedy and Ormrod (2005:95) explain that data and methodology are “inextricably interdependent” and that the nature of the research problem and the type of data used to research the problem will therefore influence the choices with regard to the research methodology (methods, techniques and procedures) made by the researcher.

#### 3.3.1 Justification for choosing a qualitative research approach

Research scholars distinguish between qualitative and quantitative research approaches (cf. Leedy & Ormrod 2005:94-96; McMillan & Schumacher 1997:15; Shaugnessy, Zechmeister & Zechmeister 2006:44). Leedy and Ormrod (2005:96) describe a qualitative research approach as follows: “... **qualitative research** is typically used to answer questions about the complex nature of phenomena, often with the purpose of describing and understanding the phenomena from the participant’s point of view.”

**Quantitative research** in contrast attempts to answer questions about relationships among measured variables with the purpose of explaining, predicting, and controlling phenomena. According to McMillan and Schumacher (1997:15) quantitative research presents statistical results represented with numbers, whereas qualitative research presents facts in a narration with words. They explain that qualitative research is more concerned about **understanding** a particular event from the research participants’ perspective. The researcher is usually detached from the research process when a quantitative approach is followed because a research instrument is used, whereas qualitative researchers become immersed in the situation (McMillan & Schumacher 1997:16) and interact directly with the participants in the study and hence collect data first hand (Taylor 2000:90). Guba and Lincoln (1981:149) make the point that, “*qualitative evaluators do not measure..., they emphasize, describe, judge, compare, portray, evoke images and create for the reader or listener, the sense of having been there.*”

As this study aimed to establish how the Laotian teachers' experienced the Human Values-based Water, Sanitation and Hygiene Education (HVWSHE) programme and how they perceived the influence thereof on their attitudes and beliefs about water use, sanitation and hygiene, a qualitative research approach was deemed the most appropriate. The ensuing discussion of the characteristics of a qualitative research substantiates this decision.

Qualitative methods produce a wealth of information often from a much smaller number of people or cases. This enables a wider understanding of cases and situations studied, but reduce generalisability (Patton 1990:14).

According to Merriam (1988:17), in qualitative research there are multiple realities and, therefore, the world is not "an objective thing out there" but a function of personal interaction and perception. It is a highly subjective phenomenon in need of interpreting rather than measuring. Beliefs rather than facts form the basis of perception. Merriam (1988:19) perceives that qualitative researchers are interested in meaning, in how people make sense of their lives, what they experience, how they interpret these experiences and how they structure their social worlds. It is therefore assumed that meaning is embedded in peoples' experiences and mediated through the researcher's own perceptions. This study aimed to establish whether the intervention programme influenced or changed Laotian teachers' attitudes and beliefs, and thus made the qualitative approach most suitable. I was in close contact with the participants, interacted with them and perceived meaning from their experiences. This was accomplished through discussions, keeping a researcher journal and through observation and focus group interviews.

Lancy (1993:2) states that qualitative research in education utilises narrative reporting which provides a detailed thick description using the participants direct words and personal perspectives. It is thus intended that this study will be enriched by a descriptive discussion, which includes participants' perceptions of the intervention programme.

Paton (1980) quoted by Tuckman (1999:396) mentions the theme of inductive analysis in which the researcher is immersed in the details and specifics of data so as to discover important categories, dimensions and interrelationships. I assumed an inductive stance (Merriam 2001:17) because I kept a research journal and commenced with my reflections on the data from the first day of the empirical research.

According to Yin (2009:68) the researcher is the primary instrument of data collection and analysis in a qualitative study. Certain characteristics differentiate the human researcher from the other data collection instruments. According to Guba and Lincoln (1981), discussed in Merriam (1988:20), the researcher as research instrument is responsive to the context. He or she can adapt techniques to the circumstances and the total context can be considered. As there were many deviations from the initial programme, I had to deal with a situation where the time available, in which to do individual participant lesson observations as anticipated prior to arrival, was limited. However, as McMillan and Schumacher (1997:16) explain, a qualitative researcher typically uses an emergent design and makes decisions about data collection strategies during the study. I could thus more easily adapt my original plan by reducing the number of lessons observed and by observing lessons prepared in groups, rather than by individuals.

### **3.3.2 Qualitative evaluation research**

The qualitative research approach that was followed in this investigation could more clearly be described as qualitative evaluation research. According to Babbie (2007:356) evaluation research in itself is not a method, but rather one type of application of various social research methods. As such it can involve any of several research designs. Babbie (2007:350) explains that evaluation research is research undertaken for the purpose of determining the effect of some special intervention, such as a programme aimed at solving a social problem. Babbie (2007:351) further indicates that:

*Evaluation research is appropriate whenever some social intervention occurs or is planned. A social intervention is an action taken within a social context for the purpose of producing some intended result. In its simplest sense evaluation research is the process of determining whether a social intervention has produced the intended result.*

This approach was particularly relevant in the study undertaken, since it involved establishing whether the HVWSHE programme had influenced the Lao participants' attitudes towards a new water-wise and sanitation-friendly ethic.

According to Babbie (2007:352-354), when doing an evaluation research of a programme, the questions that should be asked, inter alia, are:

- *What is the intended result of the new programme?*



- *How can we measure that? It can often be expected that a programme that is aimed at producing something that cannot be measured by conventional means especially with programmes that are innovating and unconventional.*
- *What would the unconventional measure of the intended result be?*

Evaluation research is a matter of finding out whether something is there or not, whether something happened or didn't happen and it was therefore necessary to conduct an evaluation research, whereby the researcher was able to observe, and recognise the presence or absence of what was under study. In this type of evaluation research projects, programmes and investments as well as beliefs and values were at stake (Babbie 2007:352).

### **3.3.3 Case study as a type of qualitative research design**

Qualitative researchers often use a variety of data collection methods (Leedy & Ormrod 2005:145). In-depth interviews, focus groups, unobtrusive methods, narrative analysis and life history, memory-work, ethnography and participatory action research, according to Liamputtong and Ezzy (2005:54-201), are different types of qualitative research methods. Leedy and Ormrod (2005:144) distinguish between the following qualitative designs: case studies, ethnography, phenomenological study, grounded theory study and content analysis. In this research a case study design was followed.

Leedy and Ormrod (2005:108) define a case study as "a type of qualitative research in which in-depth data are gathered relative to a single individual, programme, or event, for the purpose of learning more about an unknown or poorly understood situation". According to Bromley (1986:23) researchers get as close to the subject of interest as they possibly can in a case study. This can be done partly by means of direct observation in the natural settings and partly by their access to subjective factors (thoughts, feelings, desires).

As the aim of this study was to access the thoughts, feelings, behaviour and attitudes of the participants, I thus considered the case study approach as a suitable strategy for the study. The reason for the decision to use a case study approach was that I wanted to gather in-depth data about a single programme, namely the HVWSHE programme.

Kenny and Grotelueschen (1980:3-5) suggest preconditions which could help a researcher decide on the appropriateness of using a case study design/approach.

According to them a case study “... can be an important approach when the future of a programme is contingent upon an evaluation being performed and there are no reasonable indicators of programmatic success which can be formulated in terms of behavioural objectives or individual differences” (Kenny & Grotelueschen 1980:4). This was particularly the case with the HVWSHE programme, as the UN-Habitat wanted some information about the programme which would inform their decisions about their future strategy with respect to the programme. Kenny and Grotelueschen (1980:5) also state that a case study is considered appropriate when the objectives are “to develop a better understanding of the dynamics of a programme. When it is important to be responsive, to convey a holistic and dynamically rich account of an educational programme, case study is a tailor made approach”. It was believed that by interacting with the participants during the programme, various dynamics would come into play and that participants would be able to relate more during the programme process rather than only at specific data collection points of the study. A researcher journal was kept whereby a record was made throughout the programme of the various participant reactions and behaviour to various components of the programme.

Some features associated with case study are outlined by Denscombe (2005:30) and include “spotlight on one instance”, where the defining characteristic of the case study approach has its focus on just one instance of the thing that was to be investigated. In such an instance it was relevant to use this approach to establish how Laotian teachers had experienced the HVWSHE intervention programme and what their perceptions were regarding the influence of the programme on their attitudes and beliefs towards water, hygiene and sanitation. The real value of the case study was that it offered the opportunity to explain why certain outcomes might happen, rather than just find out what those outcomes were.

One of the advantages of the case study approach was that it allowed for the use of multiple methods (Denscombe 2005:38). In this instance observation of events within a case study setting was combined with a collection of documents from lesson observations and data obtained through focus group meetings.

Case studies do, however, have certain limitations. Guba and Lincoln (1981:377) state: “Case studies can oversimplify or exaggerate a situation, leading the reader to erroneous conclusions about the actual state of affairs.”

MacDonald and Walker (1977) in Merriam (1988:34) observe that “...educational case studies are usually financed by people who have directly or indirectly power over those

studied and portrayed". In this situation the study was sponsored by UN-Habitat who aimed to establish if the study would have the desired effect on the Laotian teachers, in which case the programme will be useful. Added investment into a programme that did not yield the desired effect would not be a feasible option.

Lastly and more significantly, as Denscombe (2005:35) describes it, a case study can be selected "on the basis of no real choice": in cases where the choice was more or less dictated by circumstances beyond the researcher's control, where for instance the study was part of commissioned research where the researcher was left with little leeway in the selection of cases. The funder is often quite likely to stipulate that the research must be linked to a specific organisation or activity leaving no discussion on the matter to the researchers themselves. Denscombe (2005:35) explains that under such circumstances there was "no real choice in the selection of cases". This study was commissioned and funded by UN-Habitat. The training programme and service provider was already part of a collaborative agreement with UN-Habitat and hence the researcher had no choice but to make use of a case study.

### **3.4 Research methods**

According to Liamputtong and Ezzy (2005:293) the research population, research method(s) and data analysis are some of the aspects of the research project that should be discussed as part of the research design.

#### **3.4.1 The research participants and sampling procedure**

As this study had been commissioned by UN-Habitat, the collaborative partner, NCA, who facilitated the training programme, had in consultation with the Lao PDR Ministry of Education selected the participants from several schools in Lao PDR.

The sampling procedure used was not specific and were based on selections made by the principals of the various schools. In this study the selection of the participants could therefore be considered as the researcher having "no real choice in the selection of cases" The participants included 28 teachers selected from primary schools (Grade 1-5); lower secondary schools (Grade 6-9); upper secondary schools (Grade 10-12) and from a teacher training college. There were a total of 18 female teacher participants and 10 male teacher participants. All the participants were invited to participate in the study. Twenty participants had completed the informed consent forms.

### **3.4.2 Data collection methods**

In qualitative research there are many alternative sources of data such as interviews, observations, documents, drawings, pictures, diaries, memoirs, newspapers, autobiographies, biographies and many other sources (Corbin & Strauss 2007:27). In this study I elected to use focus group interviews, observations, document review, field notes and a researcher journal.

#### **3.4.2.1 Focus group interviews**

According to Willig (2001:29), a focus group interview is a group interview that uses the interaction amongst the participants as raw data. In such a situation the researcher would take on the role of a moderator who would introduce the members to each other and to the focus group and gently steer the discussion. The strength of a focus group as a data collection method lies in the mobilisation of participants to respond to and comment on each others' contributions. In so doing the inputs of the participants are challenged, debated, extended, refined and qualified such that the data generated would be enriched by this process. Additionally, information could be obtained on aspects such as values and beliefs which do not lend themselves to typical measuring instruments (Sonnekus 1996:139).

Focus group meetings are used when looking for a range of ideas or feelings that people have on something or when looking to uncover factors that influence opinions, behaviour or motivation (De Vos, Strydom, Fouché & Delpont 2005:301). In the evaluation of the Laotian teachers' experiences of the HVWSHE training programme it was imperative to draw on such feelings and factors, hence the consideration of focus group meetings as an important means of data collection.

Two focus group meetings were held each consisting of ten participants. Each focus group was held on different days with the same opportunity of discussion. I was present and had briefed Nana, the research assistant and translator provided by UN-Habitat on the facilitation of the focus group meeting. A semi-structured questionnaire was drawn up to guide the facilitator on the kind of questions that the participants should deliberate and respond on. The introductory details for the start up of the focus group meeting as well as the semi-structured questions had been included in Annexure D. With the permission of the interviewees the interviews were tape recorded. These recordings were transcribed word for word by the research assistant (provided by UN-Habitat) and then translated. While the interviews were conducted the translator had simultaneously

translated responses which I had noted down. It also gave me an opportunity to probe where necessary.

Wellman and Kruger's (2000:197) explanation on how a focus group should proceed was followed as far as possible. The participants were firstly advised that the purpose of the focus group meeting was an information gathering session and that they were required to freely express their feelings and opinions, that there were no right or wrong answers and that their sincere input was most valuable. Secondly it was explained to the participants that they were not to all talk at once, that only one discussion can take place at a time and that they had the right to withdraw at any time from the focus group meeting.

The questions that were used to guide the focus group interviews were as follows:

1. *In what ways did the training influence your knowledge and awareness of water, sanitation and hygiene issues in your communities and in Lao PDR as a whole?*

This question aims to elicit from the participants the influence the training had on their knowledge and awareness of the water, sanitation problems in Lao PDR. This also provides the researcher with an idea of the extent of the teachers' prior knowledge of the water, sanitation and hygiene problems in Lao PDR.

2. *What were your attitude/s towards water, sanitation and hygiene prior to the HVWSHE programme?*

This question hopes to establish what the teachers' attitudes (which influence the ultimate behaviour) were before being exposed to the HVWSHE programme.

3. *How did the training influence your personal beliefs and attitudes towards water, sanitation and hygiene behaviour?*

The objective of this question was to establish if the training influenced teachers' beliefs and attitudes and if so *how* was this affected.

4. *Were you using any form of values education in your classrooms before this training? Follow-up question if answer is yes: Discuss how your approach to values education was similar and/or different to the HVWSHE programme?*

The purpose of this question was to establish whether the teachers had prior exposure to values education, if these were implemented and the similarity of this programme to the HVWSHE.

5. *How will you implement values education in your classroom now that you have been trained?*

This question hopes to establish if the teachers would be confident and sufficiently motivated to implement what they have learnt and if so *how* they intended to do so. This question would also provide information on the self-efficacy of the teacher and would reflect the possibility that values education will become part of their teaching.

6. *What teaching strategies or approaches such as group discussions, games, role-play etc. used in the HVWSHE programme did you previously use in your classroom teaching?*

This question aims to establish if the strategies used in the HVWSHE model were previously used by the teachers, this would indicate the level of comfort the teachers have with using these strategies especially if used before.

7. *Which of these strategies or approaches are you definitely going to use once you get back to your own teaching situation? Possible follow-up question: Why have you considered these?*

This question would reflect what component strategies the teachers would use, it also indicates whether they are supportive or convinced that these strategies are adaptable to their own teaching situation.

8. *How did the training influence your perception about using HVWSHE to bring about a positive change in your learners' behaviour towards water, sanitation and hygiene?*

In this question I hope to establish if the teachers' perception has been influenced to an extent that the teacher would consider using the HVWSHE programme to bring about positive attitudinal changes in their learners. The implication would be that the teacher is himself convinced or is of the belief that this programme would accomplish behavioural change of learners toward good water-use and management.

9. *In the HVWSHE training programme the issue of the teacher as a role model was discussed. What are your feelings with respect to the role of the teacher?*

The response to this question will indicate if the teacher's belief/perception of the important principle of the teacher as role model is accepted or not. It also provides an indication to the researcher of the extent of the teacher's commitment towards the HVWSHE programme as it can be deduced that a teacher's behaviour is based on his or her beliefs/attitudes about something and hence would role model his/her beliefs.

10. *Do you believe that the human values integrated approach used in this training programme has inspired and motivated you sufficiently to adopt this approach in your classroom teaching? Follow-up question: Why do you say so?*

This question directly wishes to establish if the teachers have been motivated to adopt this programme in their schools.

11. *In what ways did the training influence your confidence to teach human values water, sanitation and hygiene education?*

It is important to establish whether the training was sufficient for them to confidently apply or adopt this programme or strategies in their classrooms.

*12. Is there anything else you would like to add or discuss?*

This question enables participants to raise issues or topics that may have not been raised or perceived by the researcher and which would contribute to having an inclusive consideration of all matters during data analysis.

The purpose of the semi-structured questions was to keep the meeting focused, providing direction, aid discussion and to act as guidance for the research assistant/translator in this instance. The questions also provided a stimulus to elicit from the participants their perceptions, feelings, beliefs and attitudes regarding the programme and the effect thereof.

### **3.4.2.2 Observations**

According to Kerfoot and Weinberg (1997:62) observation is the most popular form of data gathering when programmes, processes or behaviours are being studied.

As the training programme facilitation was based on the Human Values Integrated Instructional Model (HVIIM), aspects of this model including integration of human values in a lesson were included in the programme. Teachers were expected to plan and present lessons based on this model. Observations were used to establish the extent to which the teachers implemented what they have learned in their lessons. A lesson observation instrument (Annexure C) was used to establish if participants followed the techniques as described by the HVIIM. Although it was initially planned to observe each teacher, the organisers had changed the programme which resulted in limited time for individual lesson observations. It was then decided to group teachers teaching the same grades to prepare lessons. The lesson was prepared by each of the groups and presented by one or more of the group members and was then observed.

A lesson observation checklist based on the HVIIM was used. Components included in the checklist were the silent sitting/light meditation, classroom strategies (story telling, games, role play etc) as well as identification of values brought out or integrated in the lesson, the lesson content and the relationship of these to water, sanitation and hygiene issues. The purpose of the observation checklist was to assist the observer to take note of specific components of the model as well as act as a data record of the observation.

Apart from lesson observations, I also observed participants during the mornings at prayer time, breakfast, lunch, supper and leisure time where the participants engaged with each other on an informal level enabling an advantage of observing the natural behaviour of the participants. Field notes of these observations were kept.

### **3.4.2.3 Field notes**

According to Marshall and Rossman (1995:79), researchers doing fieldwork are able to make numerous observations. These observations involved systematic recording of events, behaviours, objects in the social setting selected for study. A written account was made of the things I heard, saw, experienced and thought during the course of data collection during the lesson observations as well as the focus group meetings. The research assistant (Nana), provided by UN-Habitat had also made records which I used and reflected upon.

According to Bryman and Burgess (1999:4), observers must preserve mental notes and this is done by writing down “jotted notes”. Phrases, key words, quotes that are put down in writing during the observation constitute jotted notes. I had drawn up a draft of the components that were present in a typical lesson based on the HVIIM as a template for the research assistant (also the translator) and I. This enabled easy capturing of information during the lesson observation sessions.

De Vos *et al* (2005:311) indicate that the assistant facilitator should take detailed notes whilst the group facilitator also makes notes during the focus groups such that both parties can discuss their notes. I performed the role of assistant facilitator while the research assistant was the focus group facilitator. I made records of various observations including participant expressions and gestures during the meeting. Both the research assistant and I went through our field notes after the meeting and discussed them to obtain clarity and meaning. This also helped to ensure reliability.

During the observation period I had made notes in the researcher journal as well as on the lesson observation tool (Annexure C). Both the research assistant provided by UN-Habitat and I completed the Annexure C tool for all lesson observations. A tape recording of the lesson presentations was also made. The field notes made by the research assistant and I was used to verify information.

Post lesson observation discussions with the research assistant, enabled verification of field notes made in the observation tool (Annexure C).



#### **3.4.2.4 Researcher journal (research memos)**

According to Liamputtong and Ezzy (2005:273), a researcher journal is separate from but additional to other forms of record keeping such as field notes and interview transcripts. Recording of ideas in a journal as it occurs can be helpful to develop them more fully at the appropriate time. The researcher journal is also used to write longer accounts and analyses of the research process and data analyses. In this study I made records in the researcher journal of many ideas, questions, frustrations, unusual encounters that facilitated thinking and writing. My journal records also served as an important and helpful tool for identifying my attitudes, perceptions and biases which assisted in reflexivity during analysis and interpretation.

### **3.5 Analysis of data**

The challenge, according to Patton (1990:371), is to make sense of the massive amount of data, reduce the volume of information, identify significant patterns and construct a framework for communicating the essence of what this data reveals.

Miles and Huberman (1994:10) indicate that their view of qualitative data analysis is directed at tracing lawful and stable relationships among social phenomena, based on regularities and sequences that relate to these phenomena. Their view is that there are four main components that interact throughout the analysis and these are:

- Data collection
- Data reduction
- Data display
- Drawing and verification of conclusions

According to Miles and Huberman (1994:11), the activity of data collection and the three activities of analysis are interactive and form a cyclical process. This enables the researcher to work interactively in all these domains and allows for new ideas which can be included in data display forming a matrix which eventually fills up.

A case study researcher often begins with analysis of the data during the data collection process; preliminary conclusions are likely to influence the kind of data that he or she would seek out and collect in later parts of the study. Ultimately the researcher would look for convergence (triangulation) of data (Kerfoot & Weinburg 1997:97), which include many separate pieces of information that would point to the same conclusion.

### **3.5.1 Analysis of data collected by focus group interviews**

The stages of analysis included transcription, data reduction and coding.

#### **3.5.1.1 Transcription**

This step of data analysis involved the transcription of the data from the audio recording.

This step was most time consuming and involved transcription by the translator.

#### **3.5.1.2 Data reduction**

The analysis of the interviews was based on the examination of the responses of the groups to the statements and questions posed by the facilitator. The data was analysed with the purpose of finding elements of commonality and differences in the responses of the Laotian teachers.

#### **3.5.1.3 Coding**

I used coding as a tool to assist with the analysis of the data from the interviews. According to Willig (2001:34) in the early stages of analysis coding is largely descriptive. Descriptive labels are attached to various instances reflecting phenomena.

During the process of analysis, I had developed codes by using the words of the participants.

An approach of reading the entire transcription of the focus group interviews several times to get an idea of the possible main themes or categories that emerged was adopted. This was followed by a line-by-line coding which gave a less generalised reflection of the information and brought about more in-depth perspective with important instances of categories which were easily missed with analysis of bigger chunks of text. This is consistent with Willig's (2001:38) sentiments that coding of large amounts of text as opposed to individual line analysis could result in less obvious but equally important instances of categories being missed.

The coding followed the following stages as indicated by Ezzy (2002:88);

- Stage 1: This stage is described as the open coding stage which involves a considerable amount of experimentation with conceptual labels or categories (Ezzy 2002:89)
- Stage 2: This stage can be labelled as the axial coding phase that involves integrating codes around the axes of the central categories (Ezzy 2002:91). This

process implies re-reading notes and memos until categories (or themes) can be specified. Codes are explored as well as relationships between these codes.

- Stage 3: This is the final stage of coding which is called selective coding. According to Ezzy (2002:93), this involves identifying the core code and then examining the relationship of the core code and other codes.

The purpose of the coding was to identify recurring themes (categories) within the data. In order to ensure inter-coding reliability the coding was done in consultation with the research assistant and members of the NCA.

### 3.5.2 Analysis of data collected by observation

This research involved two forms of observations in the data collection stages, namely participant observation by myself and lesson observation by both the research assistant and I.

Two rating scales were included to provide guidance on how well the items listed in the lesson observation checklist were addressed in the lesson presentations. The existence of the rating scales also served to assist the facilitator with data capturing. The rating scale used in the lesson observation tool for the items included in the Human Values Integrated Instructional Model is depicted in Table 3.1.

Table 3.1 Rating scale for items present in the lesson according to the Human Values Integrated Instructional Model.

<b>Outstanding</b>	<b>Meritorious</b>	<b>Motivational</b>	<b>Poor</b>
Has executed all of the desired elements and has added improvements.	Has a good understanding and appropriate implementation.	Has made a satisfactory attempt. There is room for improvement	Has poorly implemented the approach.
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

The rating scale (Table 3.2) was used to observe and rate the participants' behavioural attitudes towards water sanitation and hygiene.

Table 3.2 Rating scale of behavioural attributes in Annexure C

Attribute	Very Good	Good	Satisfactory	Poor	Comment
Attitude					
Knowledge/ Awareness					
Confidence					
Motivation					

**Very Good:** Demonstrate remarkable ability, very positive and high competency.

**Good:** Demonstrates competency and merit.

**Satisfactory:** Effort shows possibility for improvement.

**Poor:** Shows deficiency, complacency or indifference.

This component of the observation tool would therefore provide data on the likelihood of the Laotian teachers' adoption or implementation of the HVWSHE programme.

SPW had supplied a recording tool for lesson plan development to the Laotian participants during the lesson plan workshop. Although it was not initially planned to do so the completed lesson plan record sheets were also collected as part of the data collection process and used to complement the lesson observation data collected from Annexure C. This was done to get more detail and in-depth information.

The completed lesson plans, together with the data collected by means of lesson observations was analysed to determine whether the teachers would be confident in implementing the approach in their lesson presentations.

### 3.6 Interpretation

After the data was gathered and categorised, I interpreted the available information qualitatively and discussed each data collection instrument separately.

## **3.7 Synthesis of the findings**

A synthesis of all the findings was made and conclusions were drawn.

## **3.8 Measures to ensure research accuracy**

### **3.8.1 Trustworthiness of qualitative research**

According to Krefting (1991:215), alternative models appropriate to qualitative designs are needed, which would ensure rigour without sacrificing the relevance of qualitative research. One such model was proposed by Guba in 1981 and was used in this study, for purposes of ensuring research accuracy.

According to Guba (1981) in Krefting (1991:215), four aspects of trustworthiness should be considered. These are: a) Credibility (truth value); b) Transferability (applicability); c) Dependability (consistency); and d) Confirmability (neutrality).

#### **3.8.1.1 Credibility**

Sandelowski (1986) in Krefting (1991:215) suggests that truth value is usually obtained from the discovery of human experiences as they are lived and perceived by informants/researchers. Sandelowski (1986) further indicates that a qualitative study is credible when it presents accurate descriptions or interpretations of the human experience. Tobin and Begley (2004:389) assert that credibility is demonstrated through a number of strategies, such as reflexivity (field journal), triangulation, and member checking and peer examination.

To meet this criterion of demonstrating credibility the researcher used reflexivity, triangulation and peer examination as strategies. This was achieved by using a field journal that was able to identify any biases during the study, the use of multiple data collection methods such as observations, focus group meeting, document analysis, and field notes helped in recognizing counter patterns and convergence in the data as well as peer examination which enabled clarity and consistency of data interpretation (Janse van Rensburg 2001:100; Krefting 1991:218; Tobin & Begley 2004:392). With the help of the research assistant provided by UN-Habitat and members of the NCA present during the focus group meetings, observations and other occasions during the study, I have asked for the data collected to be checked against their notes and translations, and for them to assist with interpretations or perceptions of the data that was collected.

### **3.8.1.2 Transferability/Applicability**

According to Krefting (1991:216) two perspectives of applicability are appropriate for the qualitative paradigm. These are:

- that the ability to generalise is not relevant in qualitative research projects
- that the strength of the qualitative method is that it is conducted in naturalistic settings with few controlling variables. Each situation is unique and therefore less amenable to generalisation.

In this study the criterion of generalisability is not seen as relevant because its purpose is to describe experiences of the Laotian teachers towards an intervention programme which could not be generalised to adult learners or teachers in other countries. The case study is specific and situationally unique to the Laotian context.

### **3.8.1.3 Dependability**

Dependability provides an indication that the findings remain consistent, which implies that if an independent researcher analyses the raw data, he or she will come to the same conclusions as the researcher (Krefting 1991:217; Janse van Rensburg 2001:100; 105). According to Krefting (1991:218) dependability can be demonstrated through dense description of research methods, triangulation, peer examination, code and re-code procedure, and audit. Dependability of this study was enhanced through extensive description of the research method, triangulation, reflexivity, peer examination and coding and re-coding procedure.

### **3.8.1.4 Confirmability**

The use of triangulation has been used to demonstrate confirmability and completeness has been one means of ensuring acceptability across the paradigms (Tobin & Begley 2004:388; 394). Confirmability, also referred to as neutrality or freedom from bias, relates to the degree to which the findings are a function solely of the informants' conditions and not of other biases, motivations and perspectives (Guba (1981) in Krefting (1991:217). Confirmability can be demonstrated, not only through triangulation, but also through reflexivity and confirmability auditing (Krefting 1991:218). Confirmability for this study has been demonstrated through triangulation and reflexivity.

## **3.8.2 Trustworthiness of the human instrument**

Miles and Huberman (1994:84-87) indicate that the credibility of a study is enhanced through the unique authority of the researcher which is known as the "*I was there*" element.

Four characteristics were identified as necessary, by which to assess the trustworthiness of the researcher (human instrument), which are the degree of familiarity with the phenomenon and setting under study, a strong interest in the conceptual or theoretical knowledge, and an ability to conceptualise volumes of qualitative data, the ability to take a multidisciplinary approach, and looking at the subject under investigation from a number of different theoretical perspectives, and good investigative skills, developed through literature review, course work and experience in qualitative research methods (Krefting 1991:215).

Janse van Rensburg (2001:94) mentions that the trend in social sciences has become more complex, involving more inter and transdisciplinary research. I have been involved in this type of research since the inception of the HVWSHE in Africa in 2001. I am familiar with the concepts and theories around values-based education and adult learning (see chapter 1 and 2).

### **3.8.3 Personal values and biases**

While Lancy (1993:2) declares that the researcher should be aware of his/her own biases and, at the same time, strive to capture the subjective reality of the participants, Johnson and Christensen (2000:20) indicate that researchers sometimes challenge the concept of objectivity. Taylor and Bogdan (1984) quoted in Johnson and Christensen (2000:20) argued that reality is constructed differently by different groups of people, as perceived through language, common experiences, values attitudes and beliefs. Despite this argument, Taylor (2000:90) maintains that it is important that no predeterminations are made in respect of what participants' responses are. This was applicable in this study as I did not anticipate any specific responses.

According to Flick (1998:6), the subjectivities of the researcher as well as of those studied are all part of the research process. The researcher's observations, impressions, feelings, reflections and irritations all become data in their own right, forming part of the interpretation, and are documented in research journals/diaries. As the researcher, I have kept a journal of my interactions with the research participants, my impressions, feelings and frustrations (see section 3.4.2.4).

## **3.9 Ethical considerations**

The use of human subjects is quite common in research within disciplines such as social sciences, education, medicine and similar areas of study. Ethical principles should be internalised by the researcher and, in so doing, the researcher remains guided by these

principles (Leedy & Ormrod 2005:101, De Vos *et al* 2005:57 and Gravetter & Forzano 2003:60).

An important ethical principle in this study is *respect for persons*, which is honoured by obtaining the participants' voluntary consent to participate in this research. Such consent involves adequately informing the participants of the nature of the research and the nature of their participation in it. It is also necessary to inform each participant that the privacy and confidentiality of the participant is protected, and to make the participants aware that they have the right to withdraw from the research participation without penalty (Leedy & Ormrod 2005:101; De Vos *et al* 2005:59).

In accordance with the principle of *respect for persons*, I introduced myself as researcher and the intentions of the study before the training programme commenced. The Laotian teachers were informed that the study being conducted, related to their experience of the HVWSHE programme. Informed consent was obtained through informed consent forms completed by those Laotian teachers who were willing to participate (Annexure B).

The participants were assured of anonymity and confidentiality, and their agreement/consent to audiotape them during the focus group interviews and observations were obtained.

### **3.10 Limitations of this study**

This study was limited to the participating cities of Lao PDR. The study done in Lao PDR and the possibility of poorly fluent participants in English may have required translation; and although these services were available, the possibility of translation errors could have influenced results of the study.

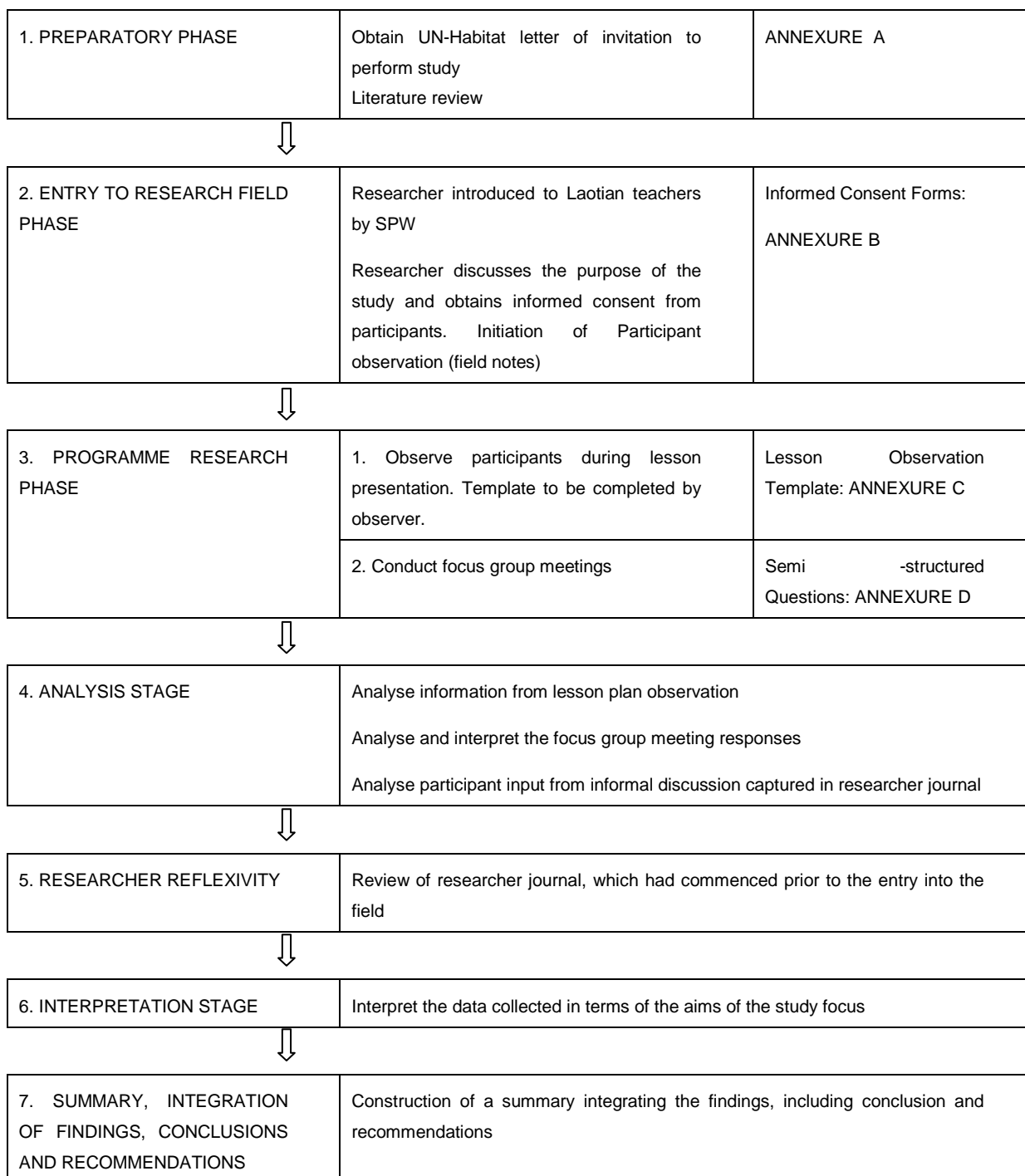
### **3.11 Conclusion**

In this chapter the qualitative nature of the research with a specific focus on the case study method, was explained. This chapter also explained the research design, the measures that were taken to ensure the validity/trustworthiness of the research, as well as the ethical considerations.

The following is a diagrammatic illustration of the research phases:



**DIAGRAM 3.1 Diagrammatic illustration of the research phases**



In the next chapter data are analysed and interpreted.

*We learn some truth from observing the events taking place in the world around  
US. (Leedy 1993:185)*

## FINDINGS AND ANALYSIS

### 4.1 Introduction

In this section a detailed description of the case study is provided. The aim is to give the reader as much detail of the case and to capture the context in which the research was done. The findings from the focus group interviews, observation, lesson plans and lesson observations as well as field notes are discussed. A few photographs are included to give the reader a visual representation of the research setting. The themes developed in this chapter have been generated through the literature review and the data collected. The data analysis and interpretation were carried out in light of the general aim and specific objectives as outlined in chapter 1 (section 1.5.2).

### 4.2 Gaining entry to the research site

The United Nations Human Settlements Programme (UN-Habitat), the agency responsible for the Habitat agenda, has commissioned this study. As discussed in chapter 1, I was invited by UN-Habitat to conduct research with respect to the Human Values-based Water, Sanitation and Hygiene Education (HVWSHE) training programme in Lao PDR (Annexure A).

I have been put in contact with the Society for the Preservation of Water, Thailand (SPW) by UN-Habitat and have communicated with SPW regarding the procedure to be followed. I received literature via email and post from SPW regarding the Human Values Integrated Instructional Model (HVIIM) and its use in the HVWSHE training which was scheduled for Lao PDR.

I have also been introduced to the research assistant (Nana) from UN-Habitat who provided additional literature and assisted with translations of various documents (such as the informed consent forms and semi-structured focus group questionnaires). The research

assistant has a post graduate degree in International Relations and was familiar with research processes and data collection. I had met her on arrival at Lao PDR and we had discussed the lesson plan observations, the observation tool (Annexure C) that was to be used and the rating scale. Similarly the interview schedule for the focus group interviews was discussed and verification of terms and the translation of the interview schedule was done with the help of a Norwegian Church Aid (NCA) official.

### **4.3 The research environment**

The study took place at the premises of the Society for the Preservation of Water (SPW), based in Lopburi, Thailand. The estate is also home to the Sathya Sai School (SSS) that is one of the schools where the Sathya Sai Education in Human Values (SSEHV) programme is implemented. The SSEHV (discussed in sections 1.1.1 and 2.2.1) originated in India. The SSS in Thailand is one of more than 160 countries that have adopted this model that promotes five universal values namely; peace, truth, love, right conduct and non violence, which has as the ultimate goal the holistic development of an individual. All the resources required for providing the knowledge and experience of water, sanitation and hygiene education was available at the school.

The Human Values Integrated Instructional Model places importance on the learning environment in the learning process. This was manifested by the natural learning environment that the learners of the SSS were surrounded by. As can be observed from Figure 4.1 the estate is one of scenic beauty, with a lake and mountain and many trees.



Figure 4.1 Scenic environment at SSS

The SSS use simple classrooms so that students are close to nature. Students don't have to be confined to classes but learn from the environment and nature. The school uses a hydroponic plant growth system and is involved in various environmental-friendly projects such as biofuel production from plant waste and the production of vegetable oil and soap from plants. The school also has an eco-house where use is made of solar cells for electricity production which is used for lighting the pavements/walkways at school during the night. Solid waste is used to generate electricity. Electricity is also generated from wind and in so doing the school contribute to the reduction of global warming. The school has a policy not to buy vegetables, but rather to use those grown at the school which encourages the concept of recycling.

#### 4.4 Profile of the research participants

On the first day of the training programme all the learners, SSS teachers, the programme participants, facilitators, the UN-Habitat research assistant and I assembled in the prayer hall for the morning prayer. The Grade 12 learners led the prayer session. This was done in the form of a 'light meditation' exercise. After the prayer session all the role players were guided to the conference hall, where I introduced the study to the research participants and requested them to complete the informed consent forms.

There were 18 female and 10 male participants from Lao PDR in total. Table 4.1 provides a breakdown of the number of participants, the kind of teaching institutions they were from, the grades they taught and the number of teachers who completed the informed consent forms.

Table 4.1 Participant representation

Institutions represented	Grades taught	Number of schools / institutions	Number of participants	Number of participants who consented
Primary Schools	Grade 1 to 5	7	14	13
Lower Secondary School	Grade 6 to 8	3	7	4
Upper secondary School	Grade 9 to 11	2	4	2
Teacher College	Grade 10 to 12	1	3	1
		<b>13</b>	<b>28</b>	<b>20</b>

Only those participants who signed the informed consent forms were involved in the focus group meetings. The participants who were observed in lesson presentations were grouped and included all 28 participants.

## 4.5 The training programme

The SPW had drawn up a programme schedule (Annexure H) which was to be used to guide the programme events. This schedule had however been amended twice during the course of the programme.

The actual training programme included the following:

Day	Activities
Day 1	<ul style="list-style-type: none"> <li>• A lecture on human values water, sanitation and hygiene.</li> <li>• A question and answer session between Laotian teachers and learners from SSS.</li> <li>• A lecture in which it was explained how a “values-based teaching approach” could be used in a mathematics lesson.</li> </ul>
Day 2	<ul style="list-style-type: none"> <li>• A walk up the mountain and a visit to the school farm.</li> <li>• Visit to the school paddy where more than 50 tons of rice were produced in 2008.</li> <li>• A lecture on water purification.</li> <li>• A lecture on the methodology of HVIIM. The five techniques to be used during lesson presentation, namely silent sitting, singing, role play, prayer and story-telling were introduced and discussed.</li> </ul>
Day 3	<ul style="list-style-type: none"> <li>• A workshop on lesson planning and preparation and the inclusion of values and sub-values in lesson presentations. The values and sub-values were introduced in this workshop.</li> <li>• A lecture on activities that should be used in lessons. These activities included various games and the elements of teamwork, cooperation and collaboration were constantly being emphasised by the facilitator.</li> </ul>
Day 4	<ul style="list-style-type: none"> <li>• A lecture on lesson planning and preparation. This was a continuation of the workshop on Day 3 and included an example of a lesson plan. Participants had to draw up a lesson plan based on any topic from the Laotian syllabus relevant to water. This was to be completed using the demonstrated lesson plan format (Annexure F).</li> <li>• A practical demonstration by SSS teachers of an integrated interdisciplinary lesson.</li> <li>• A lecture on the HVIIM used in the HVWSHE training programme (continuation of lecture on Day 2).</li> </ul>

Day 5	<ul style="list-style-type: none"> <li>• Continuation of the lecture on the HVIIM. The important role of meditation and the teacher as role model was emphasised.</li> <li>• Lesson presentations by Laotian teachers.</li> <li>• A tour to the Institute of Water Education. On this tour the participants gained access to the various applications of water, sanitation and hygiene. This was followed by exhibitions and demonstrations by the SSS teachers on various water wise applications, such as the “ecosan toilet” (a waterless toilet) which is a sanitation unit that enables collection of faeces into a dry chamber which can later be used for biofuel production.</li> </ul>
Day 6	<ul style="list-style-type: none"> <li>• Real classroom lesson demonstration.</li> <li>• Field trip to Pasaak Dam.</li> </ul>

Some of the training activities in which the research participants participated is depicted in Figure 4.2 to 4.5.



Figure 4.2 Lesson demonstration (Day 6): SSS learners involved in group activity



Figure 4.3 Demonstration of water purity testing



Figure 4.4 Several demonstrations on water distillation and filtration



Figure 4.5 Demonstration of Hydroponics



Figure 4.6 Information on hydroponics in both English and Thai

## 4.6 Research findings relating to focus group interviews

Two focus group meetings were conducted and were based on the interview schedule (Annexure D). To make it easier for the Lao teachers, the interview schedule had been translated into Lao. The focus group interviews were scheduled in collaboration with the programme coordinator from SPW and the NCA officials and took place towards the end of the training intervention.

Figure 4.7 provides an indication of the relaxed atmosphere that existed during the focus group meeting.



Figure 4.7 Atmosphere at focus group meeting

### 4.6.1 Influence of the training programme on Laotian teachers' knowledge and awareness of water, sanitation and hygiene issues

All participants indicated that they had known about water and sanitation issues before they attended the training session, but that their knowledge was basic and related to the information in their curriculum. Most of the participants indicated that the knowledge obtained during the training was mostly new to them and as can be seen from the following response by one of the respondents, the training programme had added considerably to their knowledge-base on water, sanitation and hygiene-related issues:

*"This training gave an opportunity to learn about water and sanitation and things such as information on how fertiliser can be used in water purification and things such as hydroponics which is new and useful knowledge to me."*



From the focus group interviews it became clear that a large number of the participants were not initially aware of the global water problem, while others were not aware of the fact that Lao PDR was experiencing poor water management and sanitation problems. It was indicated that some schools do have access to piped water and others not. Many of the participants confirmed that they have gained a significant amount of new information from the training programme. The participants also expressed that the programme not only made them aware of the water, sanitation and hygiene problems but also provided the knowledge of how to improve on or prevent such problems. Most of the participants have expressed their satisfaction with respect to the knowledge they gained and which they wish to share with their communities. One participant, for example, indicated that:

*“Our school has implemented something like this called the “quality of life” which is similar to this but this training increased my knowledge even further, the information I got from this training is useful.”*

Another participant responded as follows:

*“The training helped me to compare the situation in Laos and Thailand and how this can be implemented in my community for example water treatment at the school.”*

From the above responses, it can be concluded that the programme has offered new knowledge and created awareness in the Laotian participants of water, sanitation and hygiene issues. This is consistent with Gravett’s (2005) explanation that adults engage in educational activities with the intention to extend their knowledge, attitudes and skills (See chapter 2, section 2.2.5)

#### **4.6.2. Influence of the training programme on Lao teachers’ attitudes and beliefs towards water, sanitation and hygiene issues**

Almost all the participants indicated that before the training they did not consciously consider the importance of water, sanitation and hygiene issues. They were mostly very neutral in their attitude and did not consider it as important to actively propagate the importance of water-use ethics. The training had, however, helped in changing their attitudes and beliefs. They mostly indicated that after the training they were more concerned about water, hygiene and sanitation issues as they had realised the importance thereof and saw a need to do something about it. One of the participants for example responded as follows when asked about his change in attitude:

*“Actually to be honest, I never worried about water and used water as I wished, but ehh... now I feel bad about this behaviour! Anyhow this training has made me wiser now.”*

A group of participants indicated that their school had been aware of these problems as they had been experiencing water and sanitation problems at the school, but had done nothing about them. The following comments by one of the participants indicated a change in attitude and it became clear that he would try doing something about these problems in future:

*“I think this training will help us with this problem since we can now apply ways to saving and using water wisely which does not cost money, such as the ones observed in this school.”*

The attitudes of the teachers before the training varied from not caring about water, hygiene and sanitation issues to an attitude of “it doesn’t help to care, because nothing can be done”. Some of the participants for example indicated that they were experiencing water shortages at their school, but did not attempt to do anything, because of a lack of finances. According to most of the participants the training has changed their attitude. They indicated that, because of this change in attitude towards water, hygiene and sanitation issues, they intended to change their behaviour in future. One of the participants for example indicated that their school had piped water. However, before the training intervention he had not been aware of and neither did he care for any water problems. He indicated that because he had been made aware of the difference that can be achieved by water, sanitation and hygiene management, he was planning to apply what he has learned from the training and that this attitude should be fostered in his learners as well. He stated it as follows:

*“Now, I strongly believe that students should be taught to use water more economically as recently the tariffs at the school has increased, we can save this money and use it elsewhere.”*

The participants perceived that through the values-based approach that formed part of the training programme, they had become aware of the need to conserve water. One of the participants explained this as follows:

*“I used to use a lot of water in the shower and now I must rethink wasting water.”*

It was clear from the participants' responses that the training intervention had a positive influence on their attitudes and beliefs with regard to water-use and management. The following response from one of the participants clearly depicts the positive attitude towards the use of a values-based approach to bring about a change in attitude in their learners as well:

*"Yes, I am very confident in the human values water training programme, it made me change my attitude towards water problems and I am confident that it can do the same for our learners and communities."*

This finding of a positive attitudinal change enhancing confidence in the programme supports the role of teacher knowledge and beliefs in the teacher's adoption of reform programmes as described by Roehrig and Krause (2005). See chapter 2, section 2.3.4.

#### **4.6.3 Laotian teachers' attitudes towards the use of a values-based approach to education**

The participants indicated that human values are not new to them and that some of their schools were already sensitised to human values education. The participants revealed that many schools in Lao PDR have human values education provided by monks that are resident at or visiting their schools. A participant responded that:

*"Yes, values education is not new to our schools, there is the "quality programme" whereby monks come to the schools and teach the learners about life, social behaviour and meditation for example when we have question and answers session with learners at our school, the students are asked and they indicated that they are changed by the monks' education."*

A probe into whether the teachers had observed any effect in the learners' behaviour due to the monks quality programme, a response indicated that their learner's have shown positive behaviour change and was well mannered:

*"The learners in my school are good and behave well but they are not bright at schoolwork!"*

From the focus group interviews it became clear that the values-based education approach was not a unique experience to the Laotians. They indicated that in their experience there had been positive effects produced from the values education programme provided by the

monks. The values education presented by the monks was, however, not linked to water, sanitation and hygiene issues and was mostly directed at human values that should form the basis of social behaviour. The teachers are aware that the monks' teaching does not specifically focus on the issues relating to water, sanitation and hygiene and therefore recognise the need for a values-based teaching approach which would sensitise the learners towards the current water, sanitation and hygiene problems. This approach should bring about changes in their learners' attitude and behaviour that will enable better management of water, sanitation and hygiene issues in their homes and communities. In spite of this, teachers were still reluctant to tread on the monk's field of expertise. Some teachers did not realise that if a "values-based teaching approach" is followed, values should be integrated/elicited in all teaching topics/activities, rather than be taught as a separate subject as is described from the values education presented by the monks.

#### **4.6.4 Laotian teachers' willingness to implement values-based education in their classrooms**

Most of the participants' agreed that they themselves had been influenced and motivated by the training programme based on values to change their behaviour towards water-use and sanitation issues and that they would like to influence their learners in the same way. Some of the respondents were, however, uncertain about whether they would be able to bring about the same change that took place in them, in their learners. In spite of this, they expressed the intention to implement the approach in their classrooms in future. This is evident from the following two responses which echo the opinions expressed by some of the other participants as well:

*"I believe that human values-based education will have a positive impact on learners' behaviour, and wish to implement this approach in my classes."*

*"What I have learnt here at SPW I will not forget as it has changed my perception towards water conservation, it may take some time, but I believe that we can implement it and try it in our schools but I am not sure if I can change the behaviour of the learners the same way as I have changed."*

It seemed that some of the participants were uncertain about their ability to bring about a change in their learners. However, it seems that those who were uncertain about their ability to bring about a change in their learners were still uncertain about how the HVIIM should be implemented in their teaching and they needed more training:

*“Well I think we had many things to learn and maybe if there is a follow-up on this training we will be able to learn more and see if we are implementing correctly.”*

From this it is clear that the participants observe the benefits derived from the training programme but is not absolutely confident in their ability to apply the approach. The element of the self-efficacy as described by Vartuli (2005:75) in chapter 2 (section 2.3.1) seems to be prevalent here, where the teachers judgement of their own capabilities strongly influences their willingness to execute an activity.

#### **4.6.5 Lao teachers’ confidence to implement values-based education in their classrooms**

The participants agreed that the changes they have experienced through the training have brought about behavioural changes in them. Although the teachers indicated that they would like to try the proposed teaching approach in their classrooms in an effort to bring about changes in their learners as well, some of them indicated a lack of adequate confidence (compromised self-efficacy) to believe that this can be done without follow-up support.

Most of the participants indicated that they were confident that the human values programme would be capable of bringing about behavioural change in their learners as this was demonstrated by their experience of their own behavioural change. This inspired and motivated the teacher participants. Many of them, however, made it clear during the focus group interviews that they were uncertain about whether they have mastered the skills required to integrate or bring out values as well as they have been taught. From their responses it could be concluded that they required more practice of the techniques. The following response received from one of the participants summarises the opinion of most of the participants:

*“My confidence in a value-based approach to teach water, sanitation and hygiene aspects to learners were greatly increased by the awareness and knowledge acquired during this programme, I am confident that this will work for the learners and other teachers, but I believe that more practice is needed for use of the techniques for values integration.”*

The teachers indicated their willingness to pursue integration of values in their teaching. They were, however, not 100% sure of the way in which values had to be integrated and therefore doubted their ability to do so. In addition they were uncertain about the role of the

monks in teaching values and hence follow-up training was considered necessary. This kind of vision of the teacher participants clearly reflected that although they were confident about the value of the HVWSHE approach in bringing about behavioural change towards water, sanitation and hygiene issues, they lacked confidence in their own ability to integrate values into their teaching as was demonstrated by the HVIIM. The techniques of integrating values and the process of identifying relevant values from the content were problem areas experienced by all participants. The participants indicated that they still required some practice and supervision to gain the necessary confidence. They expressed interest in more intensive follow-up training to further develop their skills to implement an integrated approach to teaching human values in a lesson.

#### **4.6.6 Barriers to implementing values-based education**

Although a group of participants indicated their willingness to implement the HVWSHE using the HVIIM instructional approach in their teaching, another group was concerned about the existing education system and whether such an implementation would be permissible by the education authorities. They indicated that the educational system had recently been reformed and that they were not sure to what extent the new educational reforms would allow them to implement the HVIIM. This becomes increasingly relevant when the aim of the HVIIM involves the role of the teacher in the behavioural transformation of the learner as discussed in chapter 2, section 2.6. There was a degree of uncertainty from a group of participants, as can be clearly seen from the following:

*“I don’t think we all will consider using it since there is already existing efforts and the educational system has just recently reformed. The program has encouraged us and we will integrate continuously and will teach from the heart. We will not be able to implement all the extra-curricular activities outside school especially those requiring money, but we will follow the education program from the Lao MoE in terms of integrating activities.”*

Respondents also indicated that the schools in Laos have to use the ‘*Buchanan Plan*’. Buchanan is a Thai term that means an integration programme that has five aspects of education for all levels that must be addressed. These five components are intellectual, moral, arts, physical and labour. The Laotian teachers have indicated that aspects of knowledge building is considered intellectual, the moral components refer to the values, ethics and morals of society. The arts aspect refers to creative aspects such as making

artefacts for sale and income generation. The physical aspect refers to development in sports and exercise. The labour component addresses agricultural and related workforces.

The participants were uncertain about whether they would be allowed to implement the strategies discussed during the training programme and indicated that they would prefer for the Ministry of Education to provide guidance on this. A response obtained in this regard was for example:

*“Earlier on my colleagues indicated that the ‘quality of life’ programme is operational in our schools whereby monks come to schools and provide values and moral education lessons; however, my school is located in a remote area and is not frequented by monks. I believe that such a values-based education approach would be more necessary in schools such as mine, where teachers teach with values.”*

During the focus group interviews the participants also discussed their concern about the possibility of implementing the demonstrated approach in their schools, because Laotian schools were not boarding schools. They also mentioned that their schools lacked the necessary resources and therefore came to the conclusion that they would not be able to implement the HVWSHE approach in exactly the same way as was demonstrated during the training sessions, as they do not have boarding schools and do not have the kind of resources that the SSS had.

#### **4.6.7 Teaching strategies used by teachers before the training intervention**

The Laotian teachers were familiar with most of the teaching strategies that also form part of the HVIIM. They indicated that they made use of these strategies even before they attended the training. They created a conducive learning environment by implementing classroom activities such as role play, song, story-telling and discussion. This is reflected in the following comment by one of the participants:

*“I often get learners interested in a lesson by doing some activity such as singing, story-telling and drama. In this way the learners become comfortable with being in the classroom and these activities encourage them to participate. We unfortunately do not have privileges such as sightseeing and outdoor classrooms as SSS, but I think using these methods to create a comfortable learning environment has worked!”*

It is evident that the Lao teachers have been aware of creating a conducive learning atmosphere that encouraged learning. The Laotian teachers, as adult learners, have come to the HVWSHE training with an existing experience of using these teaching strategies in their classrooms. This situation is advantageous to the training facilitators as they are able to enhance the learning of adult learners by using and building on their existing experiences. They also realised that the learning environment of learners are not only limited to classrooms, but to the overall school environment and the society which learners are exposed to. Learners require being safe and comfortable in their learning environments. The Laotian teachers indicated that boarding schools are unheard of in Lao PDR and that learners return to their home and social environments after school.

#### **4.6.8 Teaching strategies teachers intend to use in future**

The Laotian teachers have indicated that they have been using some of the teaching activities such as story-telling, song, games and discussion. Although the HVIIM indicated various other strategies which are used to elicit or integrate values, the teacher participants have latched on to one of the strategies namely “activities” which they have confidence in. The participants were introduced to some additional activities that would enhance knowledge and awareness of the water, hygiene and sanitation problems, these include field trips, service activities and clubs. The teacher participants indicated that they were encouraged by these approaches as the excursions to the SSS farm and the IWE has been relevant and educational. The teachers expressed that if they had the relevant financial resources and facilities in Lao PDR these strategies would most definitely be used. This is evident from the following three responses:

*“I think that the information gathered on our visit to the SSS farm and IWE has been a meaningful experience where we were able to see so many practical approaches to recycling, water purification and conservation. This is not always understood by just reading about it in a magazine; I think I would like to take my students on field excursions where they can experience the practical implementation of conservation projects. I do not know of such places in Lao PDR but I think video clips can be made and used.”*

*“If a water museum such as the one here at IWE is built in Lao PDR, perhaps in a suitable location such as the teacher training college, it would be possible that both teachers and their students could visit this museum and be educated on best practices in water conservation, sanitation and hygiene. This museum should be*



*updated continuously on ongoing improvements and practices such that is relevant to the needs of Lao PDR.”*

*“I am most certainly going to introduce experiments, which do not involve expensive item in my lessons as a lesson activity. I will use examples of SODIS and sand filtration methods I learned about on this visit.”*

It is also evident from the responses that the teachers as adult learners sought relevance in the training and opted to find solutions to various resource limitations they experience in Lao PDR. This is consistent with the characteristics of adult learning whereby the adult learner is receptive to learning if it is relevant and approaches it from a problem solving perspective. In this instance the adult learners opted to find solutions to challenges they are experiencing in Lao PDR.

The participants have indicated that they were confident with the strategies used in the HVIIM, however more practice was necessary for example in bringing out inherent values in the subject; direct integration, similes and changing negativity into positive approach.

#### **4.6.9 Teachers’ opinions on the role of the environment in ensuring successful implementation of a human values-based approach**

As eluded in section 4.3 the learning environment has been emphasised throughout the programme. At this stage it maybe necessary to distinguish between the role of the learning environment and the role of environmental learning. The learning environment includes both the ethos created as well as the physical environment which is conducive to learning, whereas, environmental learning or environmental education involves knowledge and awareness of environmental problems. The HVWSHE programme uses the learning environment to promote learning as well as include knowledge of the environment as content (see HVIIM as component of HVWSHE in chapter 2, section 2.6 and 2.7).

The Laotian teachers share the sentiment that learning is most effective when the learning environment is conducive to learning. They agreed that the process of learning should be learner centred and that the role of the teacher is to facilitate the learning process thereby ensuring that learning is actively centred on the learner.

The teacher participants appreciated the role that the learning environment plays in inducing learning and that learning environments such as those found at SSS, including the large spaces for outdoor activities and resource centres such as the IWE at the school premises

are inspirational to the learning process. However, they indicated that in Lao PDR, their schools do not have the luxury of space or for that matter basic sanitation. The challenges for the Laotian teachers are to deal with what they have. A comment from a Laotian participant was,

*“Unlike the SSS school, many of our schools consist of a few classrooms within a monastery. I have 43 learners in my classroom. In many instances there is not enough playground space for the children in the school and doing activities outside the classroom would disrupt other classes.”*

Another participant added:

*“Some of our schools do not even have sanitation facilities, children have to relieve themselves outside and these outside environments are not suitable for activities. It would be appreciated if all schools, even remote ones have sanitation facilities for teachers and learners.”*

The Laotian teacher participants indicated that many of their schools were located within monasteries. The schools in the monasteries often had about forty learners in a relatively small classroom space with only one form teacher and no teaching assistants. The playground facilities are small and would not facilitate outside activities as used in the HVIIM. In some instances schools do not have adequate sanitation facilities. The Laotian teachers were therefore concerned about the influence that the environment with its limited facilities, in their own schools would have on the successful implementation of the programme.

#### **4.6.10 Role modelling**

The participants discussed the issue of the teacher as role model at length. Their general response was that they have been aware of the role of the teacher as an adult in being a good role model and that the training programme had re-enforced this understanding. It has therefore been accepted that teachers will conduct themselves in a way that is good for learners to emulate. There have been some responses that indicated that the teacher as a role model had been a generally accepted norm in society. The participants pointed out that those learners in a boarding school are more exposed to role models than in a residential school and that most schools in Lao PDR were residential schools. One of the respondents worded this issue as follows:

*“The learners in the boarding school is constantly exposed to the good role models of their teachers throughout the day and they then emulate or practice this as the environment encourages good behaviour, this is not the case with many of our learners, when they go home or return to their communities, they are exposed to other influences, sometimes the learners have abusive environments and the best way they can handle it is to react or emulate a mannerism which they believe is justified. And they bring this behaviour to the schools!”*

According to majority of the teachers they were planning to make an added effort to be a good role models to their learners in order to improve the learners’ attitude and responsibilities towards good water, sanitation and hygiene habits. They also believed that if integration of values in lessons could be a continuous process, the learners’ behaviour towards water, sanitation and hygiene issues might improve.

#### **4.6.11 The need for follow-up training**

An analysis of the focus group interviews revealed the teachers’ need for follow-up training. The participants indicated that they wished that a follow-up programme be introduced. In this way they would be able to share and exchange ideas on implementation. This is typically coherent with the social nature of adult learning.

*“We have discussed this earlier with our colleagues and we strongly recommend that UN-Habitat supports a follow-up programme so as to share and exchange ideas on implementation, we also require infrastructure development in some schools, since it is not practical to share knowledge on good sanitation practices when some schools and surroundings do not even have sanitation facilities.”*

The participants also expressed the need for other teachers to receive similar training once the Lao Ministry of Education has approved the implementation of the programme. Their belief is that if all teachers in a school follow the same implementation approach, the approach would be re-enforced by the teachers and hence the influence on learners would be more intense. Two of the responses made in this regard by focus group participants were the following:

*“I am very inspired by this programme and will propose a plan to my school principal on how to implement this but I suggest that it should commence as a pilot study and propose that the other teachers in my school also be trained.”*

*“It would be good to have all the teachers in our school trained on this human values programme as values integration is continuous and re-enforces good behaviour in all lessons.”*

The teachers' responses are characteristic of adult learning which is reflective and participatory in nature. In this situation the adult learner interprets ideas, skills and knowledge and wants to put it in practice in their real life setting. This is consistent with the literature findings on adult learning characteristics (see chapter 2, section 2.2.4)

#### **4.6.12 Administrative issues regarding the training programme**

As far as the logistics of the training programme were concerned, the focus group interviews revealed that participants were of the opinion that the time for this training was not sufficient.

They all agreed that the programme was intensive and the programme content was too much for one week. The respondents worded their concerns about the duration of the training programme as follows:

*“We believe that they should have given this training over a period of two weeks as the time we spent at the SSS farm, the IWE and the time it took for preparing lessons and so on, was not sufficient.”*

*“I think the times for lesson presentation should be more realistic or close to the lesson times in normal teaching, in fact it would be preferable if these lessons were observed in our own classrooms back in Laos.”*

Participants expressed their dissatisfaction with the order in which the activities were presented during the week's training. They felt that the programme should have included more actual lesson demonstrations and that these presentations should have been done at the beginning of the programme. Because of a change in the initial programme, the participants were only exposed to an actual lesson demonstration using the techniques described in the HVIIM after the Laotian teachers' had done their lesson presentations. The teachers have expressed that such actual demonstrations should have been included in the programme prior to their lesson presentations. This is coherent with the adult learners' identification with relevance and practical approaches rather than transmission of information through lectures.

*“I think that SPW should have provided one or two more actual lessons for us to observe ... I think this should have been done before our presentations...Ehmmm, I think we would have done better.”*

The participants felt that the actual lesson demonstration was of more value than mere lectures, as the demonstration helped them to understand the integrated approach much better.

This is concurrent with the characteristics of adult learning, in this instance the adult learner appreciates the lesson demonstrations rather than the lectures as the lesson demonstrations are relevant and immediate to their role as teachers. The teacher participants are able to relate these in their teaching experiences in the classroom. The relevance of the lesson demonstrations applies to their day-to-day lives.

As eluded by Muller (1993:242), adult learning is life centred and is considered a process of learning by doing as in the case of the lesson demonstrations, which enables the adult learner to interpret ideas, skills and knowledge through their life experience and testing them in real life settings.

The participants as adult learners valued the application more and this is consistent with their intention of extending their knowledge through reflecting on their existing practices and exploring the new knowledge.

#### **4.6.13 Summary**

The findings of the focus group meetings indicated that teachers mostly had a positive experience of the HVWSHE programme. The generalised response by the participants at the focus group meeting was that this programme had certainly broadened their knowledge and created awareness in them of the importance of conserving the natural resources and to use this knowledge to initiate conservation and water-saving projects such as recycling programmes at their schools and their societies. The participants indicated with confidence that the training programme had in fact changed their attitude and behaviour towards water, sanitation and hygiene. The participants expressed their willingness to implement a values-based approach in their teaching in an effort to create awareness of water, sanitation and hygiene issues in their learners.

Although the participants were willing to implement the programme in their own schools, they experienced three major challenges in this regard, namely:

- they were uncertain whether they would be allowed by the Lao PDR educational authorities to use this programme as they were aware of recent changes in their educational system, which included the “quality of life” programme which involved values being taught by monks;
- that they were not confident of their skill in integration of values in lessons and would prefer to have additional/ further training to enhance their capabilities; and their own school environments were inadequate and would not allow them to incorporate this aspect of the HVIIM into their teaching.

Despite identifying these limitations the participants were motivated and indicated that they would continue doing things such as the light meditation in their personal capacity, as they have experienced the benefits of being calmer and focussed.

The participants as adult learners also indicated that they were aware of the importance of being good role models and to lead by example. They realised that the example that they set with regard to water, hygiene and sanitation management could influence the learners’ behaviour in this regard in a positive way.

As it is observed from the findings that the participants indicated that they had widened their knowledge on water, sanitation and hygiene which is consistent with Knowles’ assumptions (discussed in chapter 2, section 2.2.2.1) that the adult learner brings into the learning situation their accumulated experience which can be used as a basis for further learning. The additional knowledge gained was based on widening the existing experience of the adult learner. The adult learner also demonstrates a readiness to learn in order to fulfil their role, in this situation the participants as teachers realised their role and therefore engaged in learning. A typical response to their unwillingness to adopt the programme without prior approval from the education authorities demonstrates their identification of a problem, whereby the teachers have not participated in the teaching of values in their schools.

The participants’ change in attitudes and belief may best be explained in terms of transformative learning within social constructivism. The participants focussed on understanding the water, sanitation and hygiene problem and on how to do or apply several of the conservation strategies communicated during the training. In many instances such approaches were used but their learning involved modification of their existing knowledge which occurs through reflection on their own experiences and beliefs, attitudes and feelings.

The transformation in behaviour and attitude can be attributed to reflection on their existing beliefs and attitudes towards water, sanitation and hygiene issues.

As far as the administration of the training programme is concerned, the participants expressed their appreciation of the training programme but emphasised that the time to take in all the information and to have done justice to the lesson plans was much too short. They recommended that in future the programme should be extended to a two week programme. Again it is evident that the participants as adult learners were able to prefer the more practical or hands on approach which is consistent with the characteristic of adult learning that is life-centred and is done through a process of active learning.

#### **4.7 Research findings related to the observation of participants**

Participant observation took place throughout the duration of the programme. Field notes were used to reproduce the events (refer to section 3.3.1.1 and 3.4.2). I analysed the participants' activities and their verbal and non-verbal reactions on an ongoing basis. During data analysis both verbal and non-verbal reactions such as body movements and facial expressions were interpreted. Several themes emerged from an analysis of the observation data.

##### **4.7.1 Influence of the training programme on Laotian teachers' knowledge and awareness of water, sanitation and hygiene issues**

The acquisition of new knowledge and addition to an existing knowledge base has been prevalent throughout the participant observation process. An analysis of the observation data revealed the following in this regard:

*The Laotian teachers' initial knowledge and awareness about water, sanitation and hygiene issues were very limited.* This observation was inter alia based on the teachers' experience when visiting the Institute of Water Education (IWE). The Laotian teachers were obviously astonished by the various elements of water, sanitation and hygiene education such as the practical applications of water conservation, purification and recycling. They showed great satisfaction with these displays and seemed to have gained valuable knowledge. The Lao teachers claimed that they were going to teach their learners this as they can pass this knowledge to their families and communities since diarrhoeal diseases are common due to many people using non-disinfected water. Laotian participants showed immense interest in the initiatives as they saw much relevance of these applications to their own situation. The

fact that they asked if they could get more information on these applications was a further indication of their initial limited knowledge about water, sanitation and hygiene issues.

*The HVWSHE programme has brought new knowledge to their existing knowledge base.* From my observations it became clear that the participants' experiences of the HVWSHE training programme had added to their knowledge and awareness of values education and water, sanitation and hygiene matters. The HVWSHE training programme endeavours to provide a holistic approach to the way water, sanitation and hygiene issues are managed through a values-based education approach. Based on my observations I, however, came to the conclusion that the participants had separated the values aspect from the knowledge and practical applications of the training into the two separate issues. The values aspect was considered an area in their education system that had to be done by the monks and they were, therefore not prepared to take responsibility for this aspect. The participants have, however, shown attributes of change in their behaviour, attitude and beliefs towards better management of water, sanitation and hygiene in Lao PDR.

#### **4.7.2 Influence of the training on Laotian teachers' attitudes and beliefs about water, sanitation and hygiene issues**

*Laotian teachers were eager to learn and to become more knowledgeable about water, sanitation and hygiene issues.* Their eagerness to learn and get more information on improved water and sanitation indicated that teachers had experienced a positive change in their attitudes and beliefs about water, sanitation and hygiene issues. It became particularly evident during the question and answer session between Laotian teachers and learners from the SSS. The Laotian teachers were eager to learn about the system that was followed at the school and asked learners about their stay at the school, their experiences and about recycling projects at the school. They were particularly interested in how the learners' knowledge and experience of the various methods of conservation used at SSS has influenced them. The learners indicated that when they went home during their vacations that they would practice water conservation such as not running tap water when washing their face and brushing their teeth as this was wasting water. They would use a glass of water for brushing their teeth. The Laotian teachers seemed impressed by this. This is consistent with the findings of the literature study on characteristics of the adult learner where it was found that adult learners are intrinsically motivated to learn and prefer to learn about things that are relevant and useful to their real life situation (see chapter 2, section 2.2.2.1).



### **4.7.3 Laotian teachers' knowledge about values in education**

*Laotian teachers were already aware of values and sub-values and the importance of values education.* It became clear from my observations that the values education aspect was not foreign to the Laotian research participants and that these were currently being taught at their schools, but mostly by monks. During a game (Day 3) in which participants were required to indicate which sub-values (handed to them on little stickers) belong to which central value, they performed very well. The teachers seemed to have a vast and in-depth knowledge or nuance of the values and were able to give reasons or a rationale for their choice in placing sub-values into central value categories. The manner in which the values are taught at their schools are, however, different from the HVWSHE programme as they are being taught by monks who are either resident at their schools or who periodically visit the schools with the intent of training.

During the course of the training programme the teachers became more aware of how values are instrumental in inspiring and modifying the attitude and behaviour of learners. It was, however, evident that they did not know how to integrate human values in their teaching. After the integrated lesson on mathematics (Day 1), many of the teachers commented for example that the use of the water issues in mathematics was a good idea and that they understood the ideas of the teacher, however they were not clear about the integration of human values. They were, however, reluctant in accepting responsibility for teaching values as they regarded values education as the monks' responsibility.

Based on my observations, it can be concluded that the practical and technical aspects of the HVWSHE training programme had contributed significantly towards increasing the knowledge of the participants with respect to water, sanitation and hygiene. The HVIIM as the instructional component of the HVWSHE training programme enabled integration of the technical aspects with awareness that enabled the participants to become sensitised to the effects of poor resource management. The HVWSHE training programme (combined effect of the technical/practical knowledge, socio-economic aspects as well as the HVIIM) resulted in the participants having experienced a change in their attitude towards water, sanitation and hygiene. The excursions that they undertook also increased the participants' awareness of the water and sanitation problems experienced globally.

### **4.7.4 Participants' awareness of the role of the environment**

The element of the learning environment is given a large emphasis and role in the Human Values Integrated Instructional Model (HVIIM). The encouragement of promoting a suitable

learning environment where learners feel invited to participate has been re-iterated throughout the training programme. The SSS has many of its lessons outdoors, where the learners are not confined to the four walls of a classroom. An analysis of my field notes that were made based on my observations, revealed the following:

*Laotian teachers gained new knowledge about the learning environment, but were concerned about the creation of a suitable environment in their own teaching situation.* The Laotian participants acknowledged the importance of a conducive environment, but were obviously concerned about the resources available in their own schools to encourage learning by making the environment pleasant. Their body language clearly conveyed their scepticism about their ability to create an environment conducive to the teaching of water and sanitation issues in their schools, often based in a monastery and mostly over-crowded with little improved water and sanitation facilities. This was also conveyed to me in informal discussions with the participants. They indicated, however, that things that are not dependant on finances such as the filtration experiments and water purification methods which was demonstrated at the SSS would be taken to their schools not only to encourage activity but for its applicability in the homes of learners.

#### **4.7.5 Programme-related elements**

Taking the needs of learners into consideration is one of the most important principles of adult education. The programme organisation, however, did not take into consideration the needs of the participants (see chapter 2, section 2.3.4). There were a larger number of primary school teachers as participants. The programme, however, included an integration lesson for high school learners. The participants did not receive training material that could be referred to during the programme. A book on the HVIIM (in Thai) and a CD (English) were, however, handed to the participants on the day of departure from SPW.

*The research participants experienced tours/visits to centres/places with information sessions much more favourably than lectures.* The excursions to the school farm, the rice paddy, the Pasaak Dam and the IWE introduced variety in the participants learning experience and there were also examples of what has been achieved with respect to water preservation. The visits allowed the participants to experience the outcome of the various conservation efforts and enabled them to engage with the persons responsible thereby expanding their knowledge base. They received practical guidance and were able to relate to the challenges experienced as well as gained insight on how to apply various methods of recycling of waste and water.

The participants more favourable approach to tours and visits may be attributed to their search for knowledge which is focussed on direct application, immediacy and relevance. Adult learning is social learning, in which there is an element of participation and collaboration, this criteria is satisfied whereby the visits and tours motivates learning through participation and collaboration of the participants which enables exploration and dialogue enabling learning to be facilitated. The practical approach of the visits enabled the participants to obtain first hand guidance through experiencing the uses of various water conservation and preservation strategies. This enabled adult learning to be facilitated through analysis and reflection (transformation learning). The excursions enabled new knowledge and competence of the participants through participative process.

*The participants were initially shy and inhibited, but became more enthusiastic and gained more self-confidence as their knowledge increased.* The programme events such as the activities, games, singing and excursions enabled the participants to come out of their shells, they were initially shy as they were from various schools and did not know each other nor were they familiar with the trainers and researchers. As the participants' knowledge grew over the training period they became comfortable asking questions and became increasingly interested in the applications of the programme.

The Laotian teacher participants as adult learners bring into the learning situation their own self confidence, self esteem and self perception. Initially the participants were reluctant to interact freely with each other and as the training progressed the adult learners have interacted with each other creating a social learning co-operative. This may also be attributed to the participants gaining realisation over the duration of the training that the self is not under threat and hence increasing interest and learning was evident.

#### **4.7.6 Adult learner experiences and learning**

Certain characteristics of adult learners and learning by adults were clearly observed.

*The Laotian teachers as participant learners have entered the training with prior knowledge and experience of values and teaching.* The Laotian teachers had a lot of teaching experience which served as foundation for their lesson planning and presentations. They also had knowledge of the existing approach to values followed in Laotian schools and presented by monks.

*As adult learners, the participants were more receptive to information that they perceived as useful and relevant for them.* The active participation of the teachers in certain aspects of learning such as that of the visit to the farm and the experiments and demonstrations at the IWE may be attributed to the fact that they believe this knowledge to be useful to the Laotian context. Several participants indicated that during this time at SPW, the meditation has made them relaxed and that they would continue with this practice themselves as they have experienced the benefit of relaxation.

*The teachers gained more from the practical demonstrations than from the lectures on theory.* The teachers as adult learners have shown appreciation of the applicability of the individual components taught during the real lesson demonstration that was provided after their own lesson presentations.

#### **4.7.7 Summary of the findings based on observation of participants**

The participant observation of the Laotian teachers revealed that knowledge and awareness encountered during the HVWSHE training programme was needed and appreciated by the participants. The role of the learning environment and its impact on learner participation was recognised as an important component in learning facilitation. The relevance and importance of planning and organising a training programme to meet the participants' requirements have been emphasised.

### **4.8 Research findings relating to lesson plans and lesson observations**

On day 5 the observation of the participants' lesson presentations was done. The observation of the Laotian teachers' lesson presentation was to provide information on whether they were confident, motivated and adequately trained to apply the various techniques as outlined by the Human Values Integrated Instructional Model. This section includes the findings and analysis of the lesson observations.

The original intent of the lesson observations was to observe at least ten teachers individually who would have been drawn randomly, however due to time constraints it was not practical to do this and hence they were divided into groups. This was done at the lesson plan workshop the day before.

Four groups (one primary school group, one lower secondary school group, one upper secondary school group and the group from the teachers training college) were observed

while doing their lesson presentations. The pre-designed lesson observation rubric was completed for each group-lesson presented. An example of the completed form can be seen in Annexure E.

The groups were rushed for time and had shortened or possibly excluded some of the relevant components such as the silent sitting or meditation. Activities such as for instance a story had in some cases been shortened and in the process the value thereof was lost. To get a better idea of what teachers would have done if they had enough time to present the lessons, it was decided to take the teachers' lesson plans into consideration as well. This was permissible as the research approach followed in this study is qualitative in nature and therefore allows for an emergent design, in other words "where each step depends on the results of the field data obtained in the previous step" (MacMillan & Schumacher 2010:486).

#### 4.8.1 Qualitative analysis of lesson observations and lesson plans

The findings based on lesson observation of the performance of the Laotian teacher participants in their groups revealed that all the groups had generally made satisfactory attempts in some instances and poor attempts in others to implement the Human Values Integrated Instructional Model (HVIIM) when teaching and that there was room for improvement. The following is an analysis of the lessons based on the components that form part of the Human Values Integrated Instructional Model (HVIIM) lesson presentation scheme. Figure 4.8 provide a graphic representation of the findings of the lesson observations of the four groups from the various levels of schooling and the teacher training college.

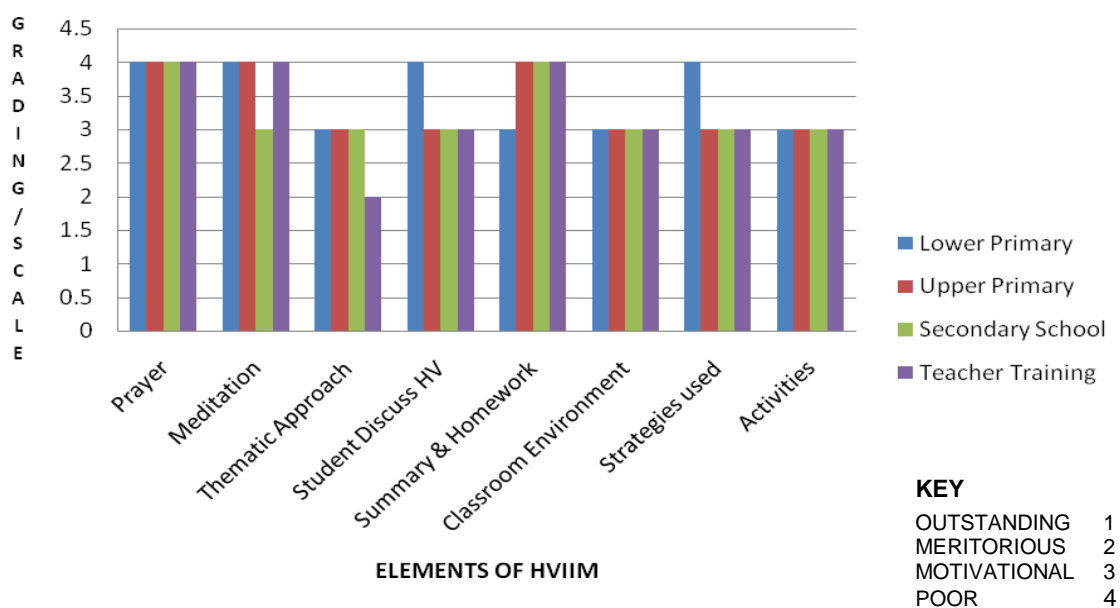


Figure 4.8: Findings of lesson observations

#### **4.8.1.1 Prayers**

None of the groups included this item as part of their presentation. Although one group had reflected prayer in their lesson plan, they did not keep to their lesson plan with the result that they did not open with prayer.

#### **4.8.1.2 Meditation**

Three groups at the time of lesson presentation attempted or pretended to have accomplished the meditation component of the lesson. All three these groups included meditation in their lesson plans. The remaining group did not include mediation in their lesson presentation at all.

#### **4.8.1.3 Thematic approach (based on interest of the students)**

According to the HVIIM the thematic approach selected should inspire and create an atmosphere of learning. This component is considered a critical element of the HVIIM as it is the strategy which is used to elicit or integrate the human values in a lesson.

All the groups made a satisfactory attempt to include a thematic approach in their lesson plans and three groups in their lesson presentations. The teacher training group provided a good lesson presentation using the thematic approach.

#### **4.8.1.4 Discussion of human values by students**

The lesson presentation by one of the groups was not student centred and hence the inability to discuss or help learners become aware of inherent values stifled the objective of the programme. Although the other three groups had addressed this aspect of the HVIIM in a satisfactory way, there were room for improvement. The lesson presentations of these three groups did not allow for enough in-depth discussion of human values by learners. The lesson plans reflected that most groups had either mentioned values that are to be discussed or had implied an application of the value concerned.

#### **4.8.1.5 Summary and delegating homework**

During the lesson presentation one group had done a summary and homework component which was satisfactory. Two of the groups did not address homework at all and the fourth group did not have a chance to finish. Only two groups included a summary in the lesson plan.

#### **4.8.1.6 Classroom environment**

Three groups created a conducive classroom environment that was regarded as satisfactory, but with room for improvement. The other group had created a positive environment but did not give the learners an opportunity to participate. In a follow-up discussion the teacher had indicated that the learner participation in the limited time period would not have given him an opportunity to finish all elements of his lesson presentation. Thus the limited time allocated had significantly affected potential better performances.

#### **4.8.1.7 Strategies used to elicit or integrate values**

All the groups attempted to integrate values, however on attempting to bring out inherent values from a lesson, one of the three groups had poorly implemented this strategy and another failed to bring out any of the values in spite of their attempt to do so. This is considered a critical component of the HVIIM and is a distinguishing component of the human values-based approach that is not present in other approaches. This is the component that supports the thematic approach of inspiration of learners.

It can be deduced at this point that two critical aspects of the human values-based education approach, namely thematic approach and the strategies used as described in the HVIIM were not satisfactorily implemented and may imply a lack in the teachers' ability to perform this approach. This performance may have been affected due to the fact that the training on the HVIIM was not completed and also contributing was the lack of adequate experience or exposure of the Laotian teachers to the approach. The teachers were not exposed to a real life encounter of a lesson with learners until after the lesson observation experience.

#### **4.8.1.8 Activities**

All the groups were comfortable with activities and had included in some cases three or more activities in a short lesson. The lesson plans also indicated several activities which were not always practical to accomplish. The teachers overemphasised activities in their lesson plans and could not get to all the activities during their lesson presentations. While activities are critical in creating a conducive environment for learner participation, it is not expected that all or as many as possible activities get included in a lesson. The teachers may have over-rated the importance of activity due to the fact that much attention and time in the programme was given to suitable activities when implementing a human values-based approach to teaching.

The Laotian teachers showed great confidence in implementing the activities during their lesson presentations. It was obvious that the teachers had used certain activities such as role plays and games before. This observation was confirmed by the teachers during the focus group interviews.

#### 4.8.1.9 Role modelling

The component of role modelling was not assessed as the lesson observation was done prior to this aspect being covered during the training. The teachers also required to be observed in their natural teaching environment. As the lesson observation has defaulted onto being reflective of a group and not as an individual it was difficult to rate since two or three teachers presented for one group.

#### 4.8.2 Teachers’ attitude, knowledge, confidence and motivation to implement a human values-based approach in their teaching

The teachers were observed during the lesson presentations in an attempt to determine their attitude, knowledge/awareness, confidence and motivation with regard to the implementation of a human values-based approach in their teaching. As the lessons were presented in groups, it was not possible to observe each individual teacher. The attitudes, knowledge, confidence and awareness displayed by each group were taken as a reflection of the individual group members’ disposition. Figure 4.9 provides a graphic representation of the findings.

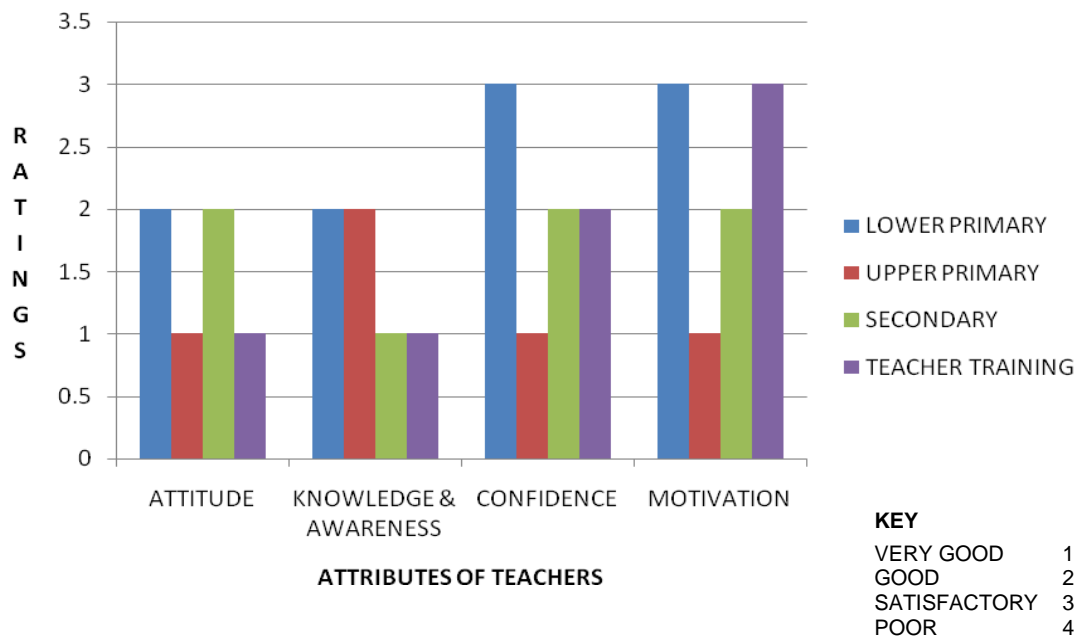


Figure 4.9: Findings on teacher attributes



#### **4.8.2.1 Attitude towards the use of a values-based approach to teaching**

Two of the groups displayed a very positive attitude towards the implementation of an integrated human values-based approach to teaching. Their positive attitude was revealed by means of their remarkable ability to implement the approach, their positive behaviour and their enthusiasm. Although the other two groups did show a positive attitude towards the use of the approach (by putting in a lot of effort into their lesson plans and presentations), their positive attitude was not as obvious as in the case of the first two groups. It could be concluded that the Laotian teachers have shown a positive response towards being receptive to the programme.

#### **8.4.2.2 Knowledge/Awareness**

The findings for knowledge and awareness is similar to that of attitude indicating that the Laotian teachers have demonstrated a high level of knowledge and awareness which culminated in their lesson presentations. The teachers indicated that their improved knowledge and awareness would ultimately promote changes in their belief and behaviour towards water, sanitation and hygiene issues.

#### **4.8.2.3 Confidence**

The confidence displayed during lesson presentations to implement an integrated human values-based approach to teaching was mostly very good. This observation contradicted the participants' responses during the focus group interviews. In these interviews, they indicated that they required more training and opportunities to become more confident with the implementation of the approach. It can be concluded that although the teachers displayed a lot of confidence in implementing the approach, they did not feel confident. As the teachers' behaviour and actions are influenced by the teachers beliefs about their own abilities namely, self-efficacy, it can be clarified that the teacher participants have experienced a change in their own attitude and behaviour towards water management and hence is confident in the HVWSHE programme, whilst they do not believe in their own ability through judgement of their capabilities to deliver the same in terms of implementation. Hence it is important to distinguish between the confidence of the participants in the programme and confidence in their own ability (self-efficacy) on implementation of the programme.

#### **4.8.2.4 Motivation**

Three of the groups were observed as being very motivated to implement the integrated human values-based approach into their teaching, whereas one of the groups did not show

very high levels of motivation. This might, however, be attributed to the fact that they were rushed for time when doing their lesson presentation.

### **4.8.3 Summary of findings relating to lesson plans and lesson plan observations**

An analysis of the lesson presentations based on the HVIIM indicated overall satisfactory performance by all the groups. In two of the lesson components that are crucial in the HVIIM, namely the thematic approach and the application of the strategies used in drawing out or integrating values, the groups did not perform well. These two areas of concern have not been adequately understood or applied by the Laotian teachers.

It is important to acknowledge the time limitation of the lesson plan observations, the fact that at the time of lesson plan observation the training of the HVIIM was not complete and hence all the component items as listed in the observation checklist were not known to the Laotian teachers.

The Laotian teachers have reflected a more than satisfactory outcome with respect to the attributes of attitude, knowledge/awareness, confidence and motivation. This is a positive indicator with respect to the likelihood of a behaviour change towards water, sanitation and hygiene issues and a greater probability of their adoption of the approach.

## **4.9 Post-training activities: Visit to a Laotian school**

At the focus group meetings the participants' responses revealed that the schools in Lao PDR are very different from the SSS where the training took place. The Laotian teacher participants indicated for instance that many of their schools were within monasteries, that the numbers of learners were large (sometimes more than forty learners and one teacher) and the classrooms small. They also explained that the playground facilities are small and would not facilitate outside activities and some schools do not have adequate sanitation facilities. In as much as the knowledge is appreciated, it would be more realistic for schools to have access to adequate sanitation and piped water. I had therefore decided that I would like to visit at least one school in Lao PDR.

The school that I visited and which is typical of the schools in Lao PDR had only four classrooms and accommodated some 160 learners. The school had 3 toilets (see Figure 4.8), one for male learners, one for female learners and the other for teachers and monks. The school is based in a monastery and the resident monks do come to class on a

scheduled basis and teach the learners about values and being good people. The playground space was limited and had three sitting areas which were not practical to do outside classroom activity. If an activity has to take place there, it would be disruptive to the other classes since they are all in a single row.



Figure 4.10: Typical sanitation facilities in a school



Figure 4.11: Playground area of learners

My visit to the school confirmed the teachers' explanations regarding the limited space and limited sanitation facilities. The teachers' concerns regarding the environment were thus valid and that it is indeed impractical to engage in outdoor activities with large numbers of learners.

#### 4.10 Reflexivity

In this section I reflect on my journal notes regarding my experiences of the participants. The Laotian teacher participants had arrived at the learning environment, each with their own perception of the HVWSHE training.

Some perceptions were:

- that values education was a subject to be taught in isolation of application and that it was specifically directed towards moral development
- it was the responsibility of the monks who they believed were the only people skilled for this and who were in fact exemplars of good moral conduct.
- that water, sanitation and hygiene was primarily the responsibility of the municipalities and the ministry of water and forestry.

The perceptions and conclusions of the participants after the HVWSHE programme:

- they used water indiscriminately as they were not aware of the problems; or
- they can contribute to conserving and preserving water by using it wisely;

- that the HVWSHE programme be brought to Lao PDR;
- that this system of integration of values with subject knowledge must first be approved by the Lao PDR ministry of education;
- pilot projects in selected schools in Lao PDR should be started.

#### **4.11 Limitations**

Certain factors in the training programme could have influenced the effectiveness of the training and the teachers' experience of the training programme. Factors such as background knowledge of programme participants, time frames, sequence of programme events, translations, and programme handouts/study material could be regarded as limitations.

*Background of participants.* The programme participants were mostly primary school and lower secondary school teachers (19 teachers) and the example of the maths lesson plan was intended for senior secondary school learners and was considered to be too complicated for the grades that most of the participants taught. It could have been an oversight from the programme planning point of view whereby the majority of the participants were in fact primary and lower secondary school educators.

*Sequence of programme events.* An initial programme sent prior to the arrival of the participants conveyed a well structured programme, which I believed was both practical and logical. On arrival at the SSS we were given a revised programme and were advised that one of the facilitators had to travel to Bangkok and hence the revision of the programme schedule resulting in a presentation of a lesson plan prior to the introduction of the various strategies used for values integration or the components of the Human Values Integrated Instructional Model.

*Time.* The time factor seems to be the most discussed, or perhaps according to my perception the factor which most participants acknowledged to be the limitation of the programme. Participants felt that more time should have been allocated to the practical approaches of water, sanitation and hygiene management which were observed in various areas of the SSS, for example, the re-cycling efforts put in place at the school farm and the efficient use of water at the boys hostel. The applications observed at the IWE were extensive and required more time to fully explore all of the applications. I believed this was the case as the Laotian participants as adult learners were able to relate to the relevance of

these approaches to the Laotian context, where many of the Lao people are subsistence farmers and the learners can take with them this added skill.

The teacher participants indicated that the time allocated for the lesson observations were not enough and that it was not practical to demonstrate the events of a forty five minute lesson in twenty minutes. The participants believed that due to the time limitation they were not able to demonstrate their acquired skill. Due to the third change in the programme the amount of time that was allocated for the HVIIM was limited again. The participants expressed their interest in these lectures and believe that the programme should have been done over a period of two weeks as there was too much to absorb in the limited time.

*Translation.* The Lao PDR participants are familiar with both Lao and Thai, however some presentations such as the maths lesson, the presentation on the lesson plan and the integrated approach were done in English. SPW had not provided translators and hence the UN-Habitat research assistant and members of the NCA had doubled as translators. I later discovered that the Lao participants were able to understand English, but were just reluctant or not confident to speak English.

*Training material.* The training material/notes were not given at the beginning or during the programme presentations. Participants indicated that it was difficult to prepare a lesson plan as they did not have references, notes etc of the strategies, activities and information on how to do light meditation etc. The participants requested this and were given CDs and a book on the HVIIM at the end of the workshop.

## **4.12 Conclusion**

In this chapter, the data from the case study of the Laotian teachers experience of the HVWSHE held at the SPW premises was analysed. The study took place in a natural learning environment for both teachers and learners; the Sathya Sai School as well as the Institute of Water Education were all on the same premises.

The study was done according to the design described in Chapter 3. I was introduced to the participants as a researcher. The participants were made aware of the purpose of the study and were advised on the data collection strategies to be used, such as participant observation, lesson observation and focus group meeting. Informed consent was obtained from participants through completion of informed consent forms. There were two focus group meetings held on different days with a different group of participants. The findings of the various strategies were analysed and discussed.

*Towards a better water-use and sanitation-friendly ethic! (UN-Habitat 2005:3)*

## SUMMARY, INTEGRATION OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Introduction

The nature of this dissertation of limited scope is multidisciplinary and specifically involves establishing how a group of adult learners (teachers from LAO PDR) experienced the effects of an intervention (training) programme. I begin this chapter by reviewing the awareness of the larger problem that has resulted in the adoption of the intervention strategy. I did this by reflecting on the underlying global water and sanitation crisis and the need for an intervention which will bring about change in attitude towards a better water, sanitation and hygiene management. I then introduce the intervention strategy adopted, which involves a values-based education approach called the Human Values-based Water, Sanitation and Hygiene Education (HVWSHE) training programme, within the context of Lao PDR. As the intervention involved training of teachers as adult learners, it was necessary to establish how these adult learners experienced the programme. I then proceed to the aims of the study. A brief summary of the contents of each chapter is provided, which is followed by the conclusions reached, based on the findings of this case study. This is followed by recommendations for improving the programme based on the Laotian teachers' experience of the programme, limitations of the study and recommendations for further research.

### 5.2 Summary of the problem and rationale for the study

For most of the poor people in the world, access to water supply and sanitation is a luxury (WHO 2006:1). Africa and Asia are the continents most affected. At the turn of the 21<sup>st</sup> century, more than half the population in these regions still lack water piped to their homes and good quality sanitation (WHO 2006:7), and these acute shortages in improved water and sanitation cause high rates of water-borne disease and death.

Water resource management is a global problem particularly where urban sustainability is seriously threatened by the growing water and sanitation problem on the one hand as well

as the fast growing population on the other hand (WHO 2000:1). Despite many perceptions of better services that come with urbanisation, it was discovered that by the end of the century more than half the population in most large cities in sub-Saharan Africa and many in Asia still lack improved water supply and sanitation services.

The United Nations Millennium Declaration adopted in September 2000 relevant to water and sanitation addresses the following targets:

- Target 10: to halve, by 2015, the proportion of people without sustainable access to safe drinking water.
- Target 11: to achieve, by 2020, a significant improvement in the lives of at least 100 million slum dwellers (UNO 2010:9; 58-59).

The United Nations Human Settlements Programme, referred to as UN-Habitat, is responsible for helping the international community meet the Millennium Development Goals. In so doing UN-Habitat supports and works in partnership with governments, local authorities, non-governmental organisations (NGOs) and the private sector. In January 2001 UN-Habitat, in collaboration with United Nations Environment Programme, recognised that improvement in water management and sanitation cannot be achieved by technical or regulatory measures alone. It was therefore accepted that education, awareness-raising, understanding and accepting ownership should play an important role.

UN-Habitat then decided to follow an inclusive approach by introducing an additional component to the education framework that would simultaneously elicit both awareness and understanding of the specific water, sanitation and hygiene issues. The strategy adopted was a human values-based approach to water and sanitation issues. This approach was named the Human Values-based Water, Sanitation and Hygiene Education (HVWSHE) programme. The approach was first introduced to African cities in 2001 and was later extended to Asian cities in 2004.

The HVWSHE training programme involves training teachers who would apply this human values-based approach in their classroom teaching. This would only be effective if teachers' attitudes, beliefs and behaviour towards water, sanitation and hygiene were changed. One of the aims of the HVWSHE programme is to effect such a change in attitude and behaviour towards better water, sanitation and hygiene management in teachers and then expect them to ensure that the same changes occur in their learners.

It is important to explain the relevance of the study in Lao PDR. The Lao Peoples Democratic Republic (Lao PDR) is one of the East Asian countries nominated to participate in the UN-Habitat's Water for Asian Cities (WAC) programme. Lao PDR is challenged with problems that range from poverty; lack of access to clean water and sanitation; and poor infrastructure, to illiteracy (Cooper 2009:28, 76-79). Infant mortality remains high, and in remote regions inadequate diet, poor sanitation and limited healthcare still give rise to debilitating and fatal diseases (World Bank 2005:23).

In Lao PDR there is a general lack of awareness and understanding of the conservation of natural resources. Education is therefore of vital importance. It is in this context that UN-Habitat was motivated to use the HVWSHE programme to build capacity in schools and communities, to result in changes in behaviour and attitude amongst people and to promote a better understanding of the critical roles that water conservation plays in human development and survival (UN-Habitat 2003:68,122,201; UN-Habitat 2004:4-7).

### **5.3 Summary of the research question and sub-questions**

The global threat to urban sustainability, due to poor management of water resources and sanitation, is growing and requires an intervention that would bring about significant changes in a new water-use ethic amongst its users. The use of technical and regulatory methods has not brought about the significant improvement required and therefore the use of values-based education as an intervention to bring about this awareness and change in behaviour towards water management was adopted as a suitable complement to existing strategies.

UN-Habitat commissioned various research projects that would provide necessary feedback for purposes of establishing feasibility and informing their decision making processes. Although the impact of the HVWSHE training was already established in Africa, more information was needed on the perceived influence of this programme on Asian teachers. In the light of this, UN-Habitat extended an invitation to me [the researcher], to conduct a study on the effect of *Human Values-based Water, Sanitation and Hygiene Education* training on teachers from Lao PDR. (This commission received from UN-Habitat was discussed in greater detail in chapter 3.)

As discussed in chapter 1, I have been involved with human values education for a period of time and was keen to learn how Laotian teachers as adult learners would respond to such an intervention. It was with this in mind that I had obtained permission of the sponsor to use



this study to establish the effect of the training on the adult learner. The statement of the problem for the study was therefore formulated by means of the following question:

*What are the Laotian teachers' experiences and perceptions of the effect of a training programme, using a human values-based approach to water, sanitation and hygiene education on their knowledge, attitudes and beliefs towards a new water-use and sanitation-friendly ethic?*

As the study involved adult learners (teachers), the first sub-question dealt with adult learning theories. It was also necessary to establish what the HVWSHE programme and the concept of human values involve. Therefore the second and third sub-questions addressed these issues. The first three sub-questions were addressed by means of a literature review in chapter 2. The remaining three sub-questions dealt with the Laotian teachers' experience, as adult learners, of the training programme and covered issues such as:

- what changes in knowledge, attitude and beliefs were brought about by the training intervention,
- the likelihood that the teachers would implement the proposed approach in their own teaching situations and
- how the findings of the study might assist in improving future training interventions.

## **5.4 Summary of the aim and objectives of the investigation**

The aim of the study is related to the problem statement. There is one general aim which is addressed using six objectives that were identified as relevant. The aim and objectives are stated below.

**The general aim** was to investigate what the Laotian teachers' perceptions of the human values-based approach was and whether they experienced any changes in their knowledge, attitudes and beliefs towards water, sanitation and hygiene issues during and after the HVWSHE training intervention.

The objectives of the study were to:

1. Investigate the prevailing theories on adult education and training.
2. Establish what the UN-Habitat's HVWSHE programme entails.
3. Establish what human values and human values-based education involve.

4. Determine what changes in knowledge, attitude and beliefs towards new water-use and sanitation ethics were experienced by Laotian teachers who received training in the HVWSHE programme
5. Investigate the likelihood of Laotian teachers adopting the HVWSHE approach in their classrooms.
6. Determine how the findings of the study could assist in improving the training of teachers in using a human values-based approach to water, sanitation and hygiene education.

## **5.5 Overview of the investigation**

The main body of the study was divided into four chapters. In chapter 1 the background to the study was discussed. This discussion entailed an explanation of the water, hygiene and sanitation problems, globally, and the influence thereof on people in Africa and Asia in particular. The role of UN-Habitat was highlighted in this chapter as well. Chapter 1 also presented the research problem, the research aims and the research design. These basically revolved around the Laotian teachers' experience, as adult learners, of the HVWSHE programme.

Before formulating the problem, it was postulated that the global threat to urban sustainability due to poor management of water resources and sanitation is growing and requires an intervention that would bring about a change that would result in a new water-use ethic amongst the users. The use of technical and regulatory methods has not brought about the significant improvement required and therefore the use of values-based education as an intervention to bring about this awareness and change in behaviour towards water and sanitation management was adopted as a suitable complement to existing strategies. As the training initiative at stake in this study involved adult learners, this chapter also introduced the adult learner and aspects that should be kept in mind when teaching adults with the intention of changing their attitudes and beliefs.

Chapter 2 consisted of a survey of relevant literature. This chapter was divided into three main sections, the first reviewing adult education, and covering learning theories, adult learning, the characteristics of adult learners and the implications thereof for adult learning facilitation. The second section covered several aspects relating to teachers' attitudes and beliefs and the possible influence of these on their teaching practices. The third section of the chapter offered a thorough discussion of human values and focused on the human values-based training programme, namely the Human Value-based Water, Sanitation and

Hygiene Education (HVWSHE) programme which the Laotian teachers were exposed to. This discussion also highlighted the instructional model used in the HVWSHE training programme experienced by the Laotian teachers, namely the Human Values Integrated Instructional Model (HVIIM).

Chapter 3 dealt with the design and methodology of the case study as conducted at the Society for the Preservation of Water (SPW) in Thailand. It was explained that the study commissioned by UN-Habitat involved determining Laotian teachers' experiences of a human values-based programme which existed within the collaborative framework established by the sponsor (UN-Habitat), service provider SPW (Thailand) and the Laotian Ministry of Education. Facilitation of the training event was handled by the Norwegian Church Aid (NCA) in Lao PDR.

The study required consideration of the following:

- The objective of the sponsor was to establish whether the HVWSHE would have an effect on the attitude and behaviour of the Laotian teachers towards water, sanitation and hygiene issues.
- As the nature of the investigation involved affective aspects such as attitudes, beliefs and feelings, a qualitative approach had to be employed.

The role players in the case study were also identified and discussed in this chapter. These consisted of:

- twenty eight Laotian teachers, forming the research participants of this study, who were selected by their school principals and represented teachers from primary schools (Grade 1-5); lower secondary schools (Grade 6-9); upper secondary schools (grade 10-12) and from a teacher training college;
- the facilitators from the service provider SPW (Thailand) of the HVWSHE training;
- the research assistant and also translator who assisted in being the focus group meeting co-facilitator and lesson plan observer from the sponsor's local office, UN-Habitat Lao PDR;
- the three members from the NCA who accompanied the participants were integral to the case study; and
- the researcher (myself) for this study.

The design of the data collecting devices and how these were administered were also introduced in this chapter. A variety of research methods such as focus group meetings,

participant observation, lesson plan observation, field notes and a researcher journal were used to collect data. Each of these methods and the way in which they were applied in the research project were discussed.

Chapter 4 dealt with the presentation of the findings of the research. These findings and the conclusions based thereon will be discussed in the next section.

## **5.6 Conclusions of the study**

This section contains the conclusions drawn from the literature study and the empirical study.

### **5.6.1 Conclusions drawn from the literature study**

- The worldwide demand for water and sanitation is increasing as the global availability and quality of water is decreasing. Asia's water coverage accounts for the vast majority of people in the world. With Asia, having the second lowest water coverage, after Africa, it is home to millions of people without access to improved water and sanitation services.
- Improvement in water management and sanitation cannot be achieved by technical or regulatory measures alone. Education, awareness-raising, understanding and accepting ownership play critical roles. This calls for a new approach in which to bring about a change in the attitude and behaviour of its users.
- A values-based approach in water, sanitation and hygiene education followed in Africa has shown a positive impact on the attitude and behaviour of water users and hence the expansion of this initiative to Asia.
- A change in behaviour and attitude towards water management and sanitation is necessary. This can be brought about by gaining knowledge and raising awareness of the problem in a manner that will motivate the desired change.
- Due to the teachers who formed part of this study being adult learners, the unique characteristics of adult learners must be taken into consideration when designing and facilitating adult learning programmes and in particular when the purpose of a training intervention is to bring about changes in adults' attitudes, beliefs and behaviour.
- Adult learners are self directing, they bring into any learning situation their existing knowledge and experience, they show a readiness to learn things they need to know, they have a problem-centred orientation and are intrinsically motivated to learn.
- Adult learning takes place if the process is learner centred, relevant to the adult learner, participatory and collaborative in nature.

- It would not have been feasible to adequately capture the dynamics of attitudinal and behavioural change observed in adult learning, without consulting various learning theories and models. These included learning theories such as the behaviourist perspectives, the cognitive psychology perspective, constructivist learning approaches, moral reasoning and the andragogical model.
- Behavioural practices of teachers in their classrooms are motivated by their personal attitudes, beliefs and perceptions.
- Teachers' self-efficacy influences their attitude and motivation towards implementation of something new.
- Human values are considered to be beliefs and attitudes that a human chooses to live by and are considered to be important to him/her. Values involve the general belief of what is preferred or desirable and imply that an individual's value system influences the individuals' beliefs of what is desirable in terms of one's behaviour.
- The human values-based approach to education includes the use of human values in content during teaching which elicits changes in attitude and behaviour of the learners.
- The Human Values-based Water, Sanitation and Hygiene Education (HVWSHE) approach adopted by UN-Habitat includes knowledge and awareness of the water, sanitation and hygiene issues as well as a values-based instructional approach.
- The objective of HVWSHE training programme is to bring about the desired changes in beliefs, attitude and behaviour of water users such as teachers (adults) who would ultimately use it in their classrooms thereby effecting change in behaviour of their learners. The learners would then share this with their families and this sharing could result in attitudinal and behaviour changes in the community.
- The HVWSHE is not only limited to educating of teachers who will in turn educate their learners but have included other outreach programmes which were, however, not relevant for this case study.
- The values-based instructional approach used in training the Laotian teachers is known as the Human Values Integrated Instructional Model (HVIIM). The HVIIM includes the premises of various learning theories and was used as an instructional approach for training the Laotian teachers. This model was also part of the content of HVWSHE training programme which would enable the teachers to use the same approach when teaching their learners.

### **5.6.2 Conclusions drawn from the findings in the empirical investigation**

In this section the conclusions drawn from the findings of the empirical study are presented under the relevant themes that were identified.

### **5.6.2.1 Experiences with regard to knowledge and awareness**

- The Laotian teachers' initial knowledge and awareness about problems associated with water, sanitation and hygiene issues were very limited
- The HVWSHE programme has brought new knowledge and understanding to their existing knowledge base.
- Laotian teachers were eager to learn and to become more knowledgeable on the HVWSHE programme.
- Laotian teachers were already aware of values and sub-values and the importance of values education. During the course of the training programme the teachers, however, became more aware of how values are instrumental in inspiring and modifying the attitude and behaviour of learners. Laotian teachers were not familiar with light meditation which forms a very important starting point of the Human Values Integrated Instructional Model.

#### **Conclusion**

From the Laotian teachers experiences it is evident that they have experienced the training provided in a positive way in the sense that they gained and appreciated the new knowledge and awareness about water, sanitation and hygiene and were enthusiastic to learn more. It could further be concluded that the Laotian teachers had arrived at the research site with an existing knowledge of values and were able to build on this knowledge in learning how values are instrumental in behavioural change. Thus the Laotian teachers gained new knowledge and awareness on water, sanitation and hygiene as well as knowledge on the application of human values in education.

### **5.6.2.2 Influence of the training intervention on teachers' attitudes and beliefs**

- The attitudes of the participants prior to the training varied from not caring to neutrality. Many indicated that they had not consciously considered the importance of water, sanitation and hygiene prior to this training.
- Many participants indicated that because of the training they had become more aware and concerned about water, sanitation and hygiene issues.
- Most participants indicated that the training had changed their attitudes and that they intended to change their behaviour towards the way they managed water and sanitation.

#### **Conclusion**

Although it is unlikely that a trainee would claim to not have benefited from a specific programme as it is likely that no participant remains unchanged after any training

programme. However as the researcher, I relied on the sincerity of the responses obtained from the participants during the focus group interviews and am therefore able to conclude from the findings that the HVWSHE training intervention had increased the participants' knowledge and awareness of water, sanitation and hygiene issues. It is clear that the training intervention was an encouraging experience in this regard as it had a positive influence on their attitudes and beliefs, and motivated them to change their behaviour with regard to water, sanitation and hygiene management in future.

#### **5.6.2.3 Participants' experience of the use of a values-based approach to education**

- The human values education approach was not new to the Laotian teachers, as a human values education programme called the "quality programme" (which is provided by monks) has been implemented in their schools.
- The Laotian teachers indicated that the human values education provided by the monks was shown to have positive effects on the learners' general behaviour. However, the values-based education provided by the monks is not linked to or directed at water, sanitation and hygiene issues.
- As the quality programme implemented in Laotian schools are taught by monks, teachers were reluctant to tread on the monks' field of expertise.
- In some cases there are schools that are not frequently visited by monks and hence it would be more suitable and easier for teachers to adopt the values-based education approach at these schools.

#### **Conclusion**

The general attitude towards the use of a values-based approach was initially one of uncertainty. This was mostly as a result of an already existing values education programme which is conducted by monks who are either resident or visiting Laotian schools. The participants have recognised that the monks' training was not specific to water, sanitation and hygiene and consideration was given to adopting a values-based education approach in this regard. The participants indicated that they would adopt and implement the values-based approach if permission to implement this approach is granted by the Lao PDR Ministry of Education.

#### **5.6.2.4 Laotian teachers' willingness to implement the values-based approach in their classrooms**

- Although most participants' experiences during the training programme had a positive effect on their willingness to implement the values-based approach in their classroom,

some of them still felt a bit uncomfortable about certain issues. Those who have been influenced and motivated by the training programme to change their behaviour towards water-use and sanitation issues were also keen to influence their learners in the same way.

- Some participants were, however, uncertain about whether they would be able to bring about the same changes that they have experienced in their learners. In spite of this they expressed their intention to implement the values-based approach.
- Some participants were still uncertain about how the values-based approach should be implemented and indicated that more training was required.
- Participants indicated that they have already been using some of the activities such as role play, games and discussions; and they intended to use other activities. However, they have stated that due to limited resources some activities would not be pursued.
- The participants indicated that they were willing to implement the values-based approach provided that their Ministry of Education has approved of the use of the approach.
- Some teachers proposed that this programme be implemented in pilot schools in Lao PDR and that all the teachers in the school receive training on HVWSHE such that the learners benefit from this approach in all their lessons.

### **Conclusion**

It can be concluded that the participants were willing to implement the values-based approach provided that the Ministry of Education in Lao PDR approved. Some reluctant participants indicated a willingness to implement the values-based approach in their classrooms if additional training was provided. This implies that they are not absolutely confident in their own ability to apply the values-based approach.

#### **5.6.2.5 Laotian teachers' confidence to implement values-based education in their classrooms**

- Participants agreed that their experience of the HVWSHE training programme has brought about behavioural changes in their approach to water, sanitation and hygiene issues.
- The teacher participants acknowledged the importance of good role modelling, but indicated that this may work better in boarding schools where learners are mostly exposed to good role models.



- The teachers were aware of creating a conducive learning atmosphere that encouraged learning and realised that the learning environment is not only limited to the classroom but to the overall school environment and society which the learners are exposed to.
- Some participants indicated a lack of confidence or rather doubted their ability (compromised self-efficacy) to implement the values-based approach in their classrooms and believe that implementation of the programme can be achieved with follow-up training and support.
- Most of the participants indicated that they are confident that the HVWSHE programme is capable of bringing about a similar behavioural change in their learners as it did for them.
- Participants indicated that they may not have mastered the skills required and that more practice of the techniques was required.

### **Conclusion**

The Laotian participants are confident that their experience of the HVWSHE programme was instrumental in transforming their attitude and behaviour towards water, sanitation and hygiene. Most of the participants were confident enough to implement values-based education in their classrooms, provided that the Lao PDR Ministry of Education permitted it. Some participants were not sufficiently confident in their own ability to integrate values in a lesson and believed that they required additional supportive training to master the skills related to the values-based education approach.

#### **5.6.2.6 The Laotian teachers' as adult learners, experiences of the training programme**

- The Laotian teacher participants as adult learners have come to the learning situation with their existing knowledge and experiences of water, sanitation and hygiene as well as with human values-based education.
- The participants were more receptive to the excursions and visits as opposed to the lectures which reflected the participatory and active process of learning in adults.
- The participants found relevance in the knowledge and applications observed on the visits and wanted more time as there were lots of relevant and valuable information applicable to their real-life situations.
- The participants' motivation to learn increased with participative and interactive collaboration with the facilitators at the Institute of Water Education.
- The adult learner participants' encountered a dilemma of experiencing a change of attitudes and beliefs and at the same time being aware of the existing educational system and its recent reform that already implemented a values education programme.

Some participants indicated their intent to bridge this gap by submitting a motivation to the principals of their schools for the approval and/or acceptance of the use of this approach in their schools.

- Poor efforts are made to improve water, sanitation and hygiene problems in Laotian schools and communities as there are inadequate financial resources. Based on the training experience teacher participants adopted a problem solving approach. Their intention is to apply some of the ideas gained from the training in their schools, especially the ideas which did not require financial resources.
- The Laotian participants identified with some of the teaching strategies of the human values-based instructional approach which they used in their classrooms and are motivated to build on these as well as try other strategies which did not require financial resources and would contribute to making the learning environment more comfortable and learner oriented.
- The participants indicated that their experience of the HVWSHE training programme was that it was comprehensive in information, but that the time allotted was not sufficient for assimilating such an intensive programme.
- The participants indicated that there was a need for follow up training and that this will help them share ideas on their experiences of implementation of the programme. The adult learners have expressed concerns regarding administrative arrangements of the programme which clearly indicated the importance of consultation with the adult learners to address the needs of the learner in terms of relevance and participation. (Detailed concerns are mentioned in the section to follow).

## **Conclusion**

The experiences of the participants were characteristic of adult learners and of adult learning, whereby the participants' existing knowledge and experience acted as a scaffold for new learning. The adult learners identified with elements that were practical and relevant to their everyday lives such as the exhibitions and demonstrations encountered on the excursions and visits. The participants indicated that their attitudes, beliefs and perceptions to water, sanitation and hygiene had changed during the training and that their interest in learning more about these issues had grown with their increased awareness. This is consistent with adult learning characteristics whereby the adult learner identifies the learning as relevant and useful and becomes interested and then participates in the learning. Adult learners also learn better if they experience the knowledge as relevant to solving problems in their real life situations and are eager to learn more if they perceive the new information as useful and relevant. The teachers

showed typical adult learner behaviour in that they exhibited their problem-oriented nature and sought solutions thereto, such as recommending follow-up training and increasing the duration of the programme. The participants' suggestion of having follow-up training in order to share knowledge and experiences of implementation emphasises the problem-oriented and social nature of adult learning. It can therefore be concluded that this study once again confirmed the importance of taking adult learner characteristics into consideration when training or developing training programmes for adult learners.

#### **5.6.2.7 Improving the training of teachers in using a human values-based approach to water, sanitation and hygiene education.**

As is characteristic of the adult learner, the Laotian teachers related their experiences which provided several indicators on how the training programme can be improved. These are as follows:

- The participants indicated that the time for the training was not sufficient. Participants agreed that the training was intensive and the programme content was too much for one week. The participants were aware that light meditation was done in a lesson but were not familiar with the words used and indicated that they did not have supportive material such as notes or handouts which they could have referred to for guidance when doing their lesson presentation.
- The participants indicated a need for follow-up training so that they would be able to share experiences of implementation, exchange ideas and receive further guidance on implementation of the values-based approach.
- The participants indicated that the programme sequence was not suitable as they would have appreciated the actual lesson demonstration to have been done prior to their lesson presentations. The participants valued the actual lesson demonstration more than the lectures. The participants indicated that they got a better understanding of the integrated approach after having experienced the actual lesson demonstrations. This finding provides further guidance on the programme design for adult learners where the adult learner learns by doing, therefore it is necessary to include more such actual lesson plan activities in the programme.

#### **Conclusion**

The experiences of the participants provided useful information on improving the programme design in order to enhance the learning experience of learners in future

programmes and follow-up programmes. The training programme is very comprehensive and thus more time for the training was needed. The supply of notes or study material should therefore be done at the beginning or during the presentations, as participants need more guidance and references in written format. The sequence of events the programme played an important role in the way in which participants experienced the usefulness and value of these activities.

In essence, consideration should be given to:

- the allocation of sufficient time;
- supporting learning materials being handed out timeously;
- consideration of event sequence in the programme design and schedule, so that basic information is presented before the advanced applications of the topic; and
- the inclusion of more relevant participatory activities.

## **5.7 Integration and summary of the findings and conclusions**

In this section I present a summary of the conclusions based on the findings of the literature study and the findings of the empirical study.

### **5.7.1 Summary of findings and conclusions of the literature study**

- The global water demand is increasing as the availability and quality of water decreases resulting in a vast majority of the people without access to safe drinking water and sanitation. Improvement in water and sanitation management cannot be achieved by technical and regulatory measures alone.
- Attitudinal and behavioural changes towards water management are required. The desired change can be brought about through education which promotes awareness and understanding amongst water users.
- A values-based water, sanitation and hygiene education approach used in Africa has shown a positive impact on attitude and behaviour of users and hence the education approach was expanded to Asia.
- The HVWSHE programme provides teachers with the necessary technical knowledge and skills as well as bringing about awareness and understanding of the water, sanitation and hygiene issues which would ultimately effect a change in the attitude and behaviour of their learners towards better water, sanitation and hygiene management.
- Characteristics of adult learners are that they are self directing, they bring into any learning situation their existing knowledge and experience, they show a readiness to learn things they need to know, they have a problem-centred orientation and are intrinsically motivated to learn.

- Characteristics of adult learning is that learning takes place if the process is learner centred, relevant to the adult learner, participatory and collaborative in nature.
- The implications of the unique characteristics of the adult learner, adult learning theories and the characteristics of adult learning and facilitation should be taken into consideration in designing an adult training programme.
- Teachers' practices are influenced by their attitudes and beliefs. Teachers are motivated to implement new strategies if they believe in it and if they are confident about their ability to implement it (self-efficacy).

### **5.7.2 Summary of findings and conclusions of the empirical study**

The Laotian teachers as adult learners had experienced the HVWSHE programme as follows:

- The participants had gained new knowledge and developed increased awareness on water, sanitation and hygiene issues.
- The knowledge on values education was not new to Laotian teachers, the participants were therefore able to use their existing knowledge to recognise, experience and understand the effect of values-based education on attitude and behaviour change.
- The participants have experienced the knowledge and information gained as being relevant and applicable to their real-life situation and was eager to learn more.
- The participants have experienced a positive change in their personal attitude and behaviour towards water, sanitation and hygiene issues and were motivated to change their current bad water and sanitation practices to considerate and conservative practices.
- The general attitude towards the use of the values-based approach was one of uncertainty as the teachers indicated that the Laotian schools are already implementing values-based education which is facilitated by monks. The teachers were reluctant to encroach on the monks' territory in their education system. The participants, however, recognised that the monks' training was not specific to water, sanitation and hygiene issues.
- The teachers expressed a willingness to implement the values-based approach as they had been transformed by the training. The participants indicated their motivation to implement the values-based approach provided that the Ministry of Education of Lao PDR approved the implementation of this approach in their schools.
- Some participants indicated that they would submit motivations to their school principals regarding the implementation of this approach in their schools.

- Some participants indicated their confidence in the HVWSHE programme as they have experienced the effect of the programme on their personal attitude and behaviour; however they indicated that they were not confident in their own ability to facilitate and would require further or follow-up training.
- The participants as adult learners have indicated that the programme was very comprehensive and relevant, but that they required more time in understanding some of the technical and practical applications demonstrated during the programme.
- The participants as adult learners also recommended follow-up training in which they are able to share their experiences of implementation which is characteristic of the social nature of adult learning.
- The participants identified some administrative deficiencies of the programme and suggested that the programme design extend the duration of the training, provide supportive training material timeously for instance during the training programme and to add more practical and participatory activities.

From this summary it is evident that the Laotian teachers as adult learners have experienced the HVWSHE training programme as informative and transformative. They have experienced changes in their knowledge, awareness, attitudes and beliefs which motivated a positive behavioural change towards water, sanitation and hygiene issues and a willingness to try to bring about the same changes in their learners. The teachers as adult learners have exhibited characteristics consistent with the literature on adult learners and adult learning facilitation.

## **5.8 Recommendations**

In this section I present the recommendations. All of these are based on the empirical research and the literature study.

Based on the findings and conclusions in this study the following is recommended:

- The implications of the unique characteristics of the adult learner and the characteristics of adult learning and facilitation should be taken into consideration when the HVWSHE training programme is presented.
- The following changes in the programme design should be considered to enhance adult learning:
  - ✓ Practical sessions should be increased, since adult learners learn better through doing, by application and experience, rather than theoretical lectures. More skills

development exercises such as those of water purification, recycling approaches and similar practical approaches to conserving water should be included.

- ✓ More participative and collaborative activities such as group work should be included. Since adult learning is of a social nature, this would enable adult learners to share their wealth of experience and existing knowledge with other learners as well as enable them to explore new issues and concerns. Therefore, more activities such as group lesson planning and presentation should be included, as was done in the lesson observations.
  - ✓ More problem-solving exercises should be included, which would enable the adult learner to apply their problem-oriented approach to learning. Thus real life examples of Lao PDR water, sanitation and hygiene issues should be used in the discussions to elicit participation of the adult learners in solving these problems.
  - ✓ More examples of real life applications should be included, as adult learning is learner-centred and the application of the learning should be relevant and immediate to their life needs such as their obligations in their job and profession (teaching in this case). Therefore more real life classroom observations where values integration is demonstrated should be included in the programme.
- 
- It should be established whether or not the Laotian teachers are permitted by the Ministry of Education of Lao PDR to implement the HVWSHE programme in the Laotian schools, thereby enabling the Laotian teachers to consider implementation of the values-based education approach without inhibition.
  - The programme design should be such that it takes into consideration the needs of the Lao PDR teachers and to be cognisant of the effects of limited time and resources on the programme outcome.
  - Programme organisers should take into account the need for translators (in this study some presentations were in English and although Laotian teachers understand English, they are not fluent in it) and adequately compensate for time required to translate during the programme presentation and where learners respond to questions posed.
  - Notes and study materials should be made available to participants before or during presentation, so that the learners are able to access the materials when performing exercises/activities during the training programme.
  - The Lao PDR teachers should be given follow-up training to support implementation of their training and further expand their knowledge and application of water, sanitation and hygiene issues.
  - The sponsor should consider the possibility of engaging monks in both participation in and training of the HVWSHE programme, as they currently provide values-based

education to learners at most schools in Lao PDR.. The monks are also able to reach members of their communities and share this knowledge and awareness with them, which would bring about the much needed behavioural changes in learners and other members of society.

## **5.9 Limitations of the study**

This study was limited to a single country, namely Lao PDR and to the twenty eight participants nominated to attend the HVWSHE programme. The qualitative research approach entailed a case study and therefore implies that the conclusions drawn from this case should not be generalised. The empirical study was also limited in terms of time. While I was satisfied that all available data were saturated, it would have been preferable to observe the participants in their own classrooms in Lao PDR, after the training programme.

The training programme was delivered predominantly in the Thai language and the lesson observations and focus group meetings were conducted in Lao. It is possible that, with the use of translators, information may have been lost in translation, even though great efforts were made to verify information throughout the research process.

## **5.10 Recommendations for further research**

- While there has been research done on adult learning with regard to the specific role of learner attitudes, beliefs and perceptions and their influence on adult learning, there is still a need to further research this with respect to adult learning facilitation.
- More research is also to be done on the use of values-based education as an instructional approach in formal and non-formal education.
- The application of a values-based approach in bringing about behavioural changes in individuals towards water, sanitation and hygiene issues enables exploring the use of values-based education in other issues of global concern such as those affecting global warming, natural resources, health and education.
- More research should be done regarding the design of suitable research models in respect of multidisciplinary-interdisciplinary-transdisciplinary studies.

## **5.11 Closing remarks**

Although the study focussed on the Laotian teachers' experiences and perceptions of the effect of a training programme using a human values-based approach to water, sanitation and hygiene education on their knowledge, attitudes and beliefs towards a new water-use and sanitation-friendly ethic, the study involved integration and partnerships with various



other disciplines making this study multidisciplinary in nature. From the perspective of a researcher this had made the task much more daunting as it extended into various disciplines and required elaboration on facets of the various disciplines that were relevant in obtaining a more in depth and meaningful account of the experiences encountered by the participants during the study. There is therefore a wide array of literature and background which was necessary to be elaborated on in this case study.

This study is a small component of many approaches to solving the larger global water, sanitation and hygiene problem. The problem is the ineffective global management of our limited water resources. The study involved learning about the effect that the HVWSHE training programme had on Laotian teachers and encompassed various disciplines such as:

- Adult Education in that the training programme was experienced by adult learners and involved establishing how they had experienced the programme and the effect of this programme on their attitude, beliefs, knowledge, awareness and perceptions.
- Environmental education in addressing concerns on preservation and conservation.
- Socio-economic and political sciences in addressing each country's individual problems that contributes to the global problem.
- Education in empowering users with knowledge to create awareness of the problem and sharing solutions.
- Engineering and utilities in developing technical methods and the utilities in devising regulatory programmes.
- Psychology in understanding the need for and effecting attitudinal and behavioural changes towards a better water-use and sanitation-friendly ethic.

The interesting aspect of the study is the fact that it widened my understanding of the complexity of the problem and has given insight to the problem from each of the various disciplines. My understanding of Adult Education has moved from theory and models of adult learning to a deeper reality of the practical, social and interactive nature of adult learning.

Finally, the millennium development goal to half the number of people that do not have access to safe water and sanitation by 2015, is indeed a challenge especially when those most affected are not always adequately informed. The UN-Habitat agency is most certainly commended for the various approaches towards achieving these goals. This study of the Laotian case has shown promising outcomes in achieving desired changes in attitude and behaviour of adult learners towards a better water-use and sanitation-friendly ethic!

# Bibliography

Alderman, C. 1996. *Sathya Sai education in human values, book 1, ages 6–9*. Pinner: Sathya Sai Education in Human Values Trust.

Alemu, B. M. 2010. Active learning approaches in mathematics education at universities in Oromia, Ethiopia. Unpublished DEd thesis. Pretoria: University of South Africa.

Allen, W. 2011. Trans- & Inter-disciplinary science approaches <http://learningforsustainability.net/research/interdisciplinary.php> [Accessed: 31/10/2011].

Allen, W., Kilvington, M. & Horn, C. 2002. Using participatory and learning based approaches for environmental management to help achieve constructive behaviour change. Wellington: New Zealand Ministry of Environment. [http://www.landcareresearch.co.nz/research/sustainablesoc/social/documents/mfe\\_0102-057.pdf](http://www.landcareresearch.co.nz/research/sustainablesoc/social/documents/mfe_0102-057.pdf) [Accessed: 10/09/2008].

Anderson, D. 1990. *Fundamentals of education research*. London: Falmer Press.

Arweck, E., Nesbitt, E. & Jackson, R. 2005. Common values for the common school? Using two values education programmes to promote 'spiritual and moral development'. *Journal of Moral Education*, 34(3):325–342.

Asmal, K. 2001. Address by professor Asmal, Minister of Education, at the opening of the water-related environmental education in African cities expert group meeting. 30 April 2001. Pretoria: Ministry of Education.

Babbie, E. 2007. *The practice of social research*. 11<sup>th</sup> edition. Belmont, CA.: Thomson/Wadsworth.

- Bakhtin, M. M. 1984. *Problem of Dostojevsky's poetics*. Minneapolis, MN.: University of Minnesota Press.
- Bourdet, Y. 1998. Dynamics of regional disparities in Laos: The poor and the rich. *Asian Survey*, 38(7):629-652.
- Bromley, D. B. 1986. *The case study method for Psychology and related disciplines*. New York: Wiley.
- Bryman, A. & Burgess, R. G. 1999. *Qualitative research* (Volume III). London: Sage.
- Burkitt, I., Husband, C., McKenzie, J., Torn, A. & Crow, S. 2001. *Nurse education and communities of practice*. London: ENB.
- Cann, V. & Jones, T. 2006. *Down the drain. How aid for water sector reform could be better spent*. London: World Development Movement.
- Caffarella, R. S. 2010. Planning programs for adults: what's it all about. In *Designing and assessing learning experiences*. San Francisco: Jossey-Bass, 1-19.
- Castelletti, A. & Soncini-Sessa, R. 2007. A participatory and integrated planning procedure for decision making in water resource systems. In: Castelletti, A. & Soncini-Sessa, R. (eds). *Topics on system analysis and integrated water resource management*. Amsterdam: Elsevier.
- Chappell, C., Hawke, G., Rhodes, C. & Soloman, N. 2003. *Major research program for older workers. Stage I - The conceptual framework*. Sydney: Oval Research University of Technology.
- Concise Oxford Dictionary. 2004. Oxford: Oxford University Press.
- Collins Cobuild English Learner's Dictionary. 1994. London: HarperCollins.
- Connolly, B. 2008. *Adult learning in groups*. London: Open University Press.

- Cooper, R. 2009. *Laos: An indicative fact book*. Vientianne: Lao Insight Books.
- Corbin, J. & Strauss, A. 2007. *Basics of qualitative research: Techniques and procedures for developing grounded theory*. 3<sup>rd</sup> edition. California: Sage.
- Cresswell, J. W. 2005. *Research design: Qualitative and quantitative and mixed methods approach*. London: Sage.
- Dasgupta, S., Deichmann, U., Meisner, C. & Wheeler, D. 2005. Where is the poverty-environment nexus? Evidence from Cambodia, Lao PDR and Vietnam. *World Development*, 33(4):617-638.
- Delahaye, B. L. & Ehrich, L. C. 2008. Complex learning preferences and strategies for older adults. *Educational Gerontology*, 34(1):649-662.
- Denscombe, M. 2005. *The good research guide for small-scale social research projects*. 3<sup>rd</sup> edition. Philadelphia: Open University Press.
- De Vos, A. S., Strydom, H., Fouche, C. B. & Delport, C. S. L. 2005. *Research at grass roots for the social sciences and human service professions*. 3<sup>rd</sup> edition. Pretoria: Van Schaik.
- Doolittle, P. & Hicks, D. 2003. Constructivism as a theoretical foundation for the use of technology in Social Studies. *Theory and Research in Social Education*, 31(1):72-104.
- Elias, J. 1989. *Moral education: Secular and religious*. Florida: Robert Krieg.
- Esrey, S. A., Potash, J. B., Roberts, L. & Shiff, C. 1991. Effects of improved water supply on ascariasis, diarrhoea, dracunculiasis, hookworm infection, schistosomiasis and trachoma. *Bulletin of the WHO*, 69(5):609-621.
- Ezzy, D. 2002. *Qualitative analysis: Practice and innovation*. London: Routledge.

Feather, N. T. 1999. *Values, achievement and justice. Studies in the psychology of deservingness*. New York: Kluwer Academic.

Flick, U. 1998. *An introduction to qualitative research*. London: Butler & Tanner.

Foley, G. 2004. Introduction: The state of adult education and learning. In: Folye, G. (ed.). *Dimensions of adult learning: Adult education and training in a global era*. Maidenhead: Open University Press, 3-19.

Galbraith, D. D. & Fouch, S. E. 2007. Principles of adult learning: Application to safety training. *Professional Safety*, 35-40.

Gravett, S. 2005. *Adult learning: Designing and implementing learning events. A dialogic approach*. Pretoria: Van Schaik.

Gravetter, F. J. & Forzano, L. B. 2003. *Research methods for the behavioural sciences*. Belmont: Thomson/Wadsworth.

Guba, E. G. & Lincoln, Y. S. 1981. *Effective evaluation*. San Francisco: Jossey-Bass.

Guskey, T. R. 1985. Staff development and teacher change. *Educational Leadership*, 42(1):57-60.

Hanchett, S., Akhter, S., Khan, M. H., Mezulianik, S. & Blagbrough, V. 2003. Water, sanitation and hygiene in Bangladeshi slums: An evaluation of the Water Aid – Bangladesh urban programme. *Environment and Urbanisation* (15): Online version: <http://eau.sagepub.com/cgi/content/abstract/15/2/43> [Accessed: 09/10/2008].

Hawskey, H., Jacoby, J., Louw, H., Coetzee, E. & Findlay, H. 2000. *Life orientation today – senior phase*. Cape Town: Maskew Miller Longman.

Higgs, P. 1996. *Metatheories in philosophy of education*. Johannesburg: Heinemann.

Hill, B. V. 2008. How learners respond to the teaching of beliefs and values. *Journal of Christian Education*, 12(2):101-113.

Isenberg, J. P. 1990. Teacher's thinking and beliefs and classroom practice. *Childhood Education*, 66(5):322-327.

Jarvis, P. 2006. *Towards a comprehensive theory of human learning*. London: Routledge.

Jarvis, P. 2010. *Adult education and lifelong learning*. Oxon: Routledge.

James, W. 2000. *Values, education and democracy*. Pretoria: UNISA.

Janse van Rensburg, E. 2001. "They say size doesn't matter..." Judging knowledge claims in different research frameworks. Department of Education. Grahamstown: Rhodes University.

Johnson, B. & Christensen, L. 2000. *Educational research: Quantitative and qualitative approaches*. Boston: Allyn and Bacon.

Jumsai, A. 2003. A development of the Human Values Integrated Instructional Model based on intuitive learning concept. Unpublished PhD thesis. Bangkok: Chulalongkorn University.

Jumsai, A. 2009. *Human Values in Water Education Instructional Model*. Institute of Water Education. Thailand: Society for the Preservation of Water.

Kakkar, V. & Taplin, M. 2001. Values education at university: Necessary or not? Paper presented at the Second Hong Kong Conference on Quality in Teaching and Learning in Higher Education, University of Hong Kong, April 2001.

Kanu, V. S. 2001. Water education: A human values approach. Paper presented at the Expert Group Meeting on *Introducing Water Education for African Cities*, Johannesburg: South Africa. April 2001.

Kanu, V. S. 2000. Psychology, science, spirituality and human values. Concept paper presented at the International Conference on Human Values, Prashanti Nilayam. India. July 2000.

Kapani, M. 2000. *Education in human values*. New Dehli: Sterling Publishers.

Kegan, R. 2000. What “form” transforms? A constructive developmental approach to transformative learning. In: Mezirow, J. & Associates (eds). *Learning as transformation: Critical perspectives on a theory in progress*. San Francisco: Jossey-Bass, 35-70.

Kenny, W. R. & Grotelueschen, A. D. 1980. *Making the case for case study*. Urbana – Champaign, Illinois: College of Education, University of Illinois.

Kerfoot, C. & Weinberg, C. 1997. *Learning about action research*. Cape Town: Juta.

King, K. P. 2000. The adult ESL experience: Facilitating perspective transformation in the classroom. *Adult Basic Education*, 10(2):69-89.

Kirschenbaum, H. 1992. A comprehensive model for values education and moral education. *Phi Delta Kappa*, 73(10):71-76.

Knowles, M. S. 1984. *The adult learner: A neglected species*. 3<sup>rd</sup> edition. Houston, TX.: Gulf Publishing.

Knowles, M. S., Holton (III), E. F., Elwood, F. & Swanson, R. A. 1998. *The adult learner: The definitive classic in adult educational and human resource development*. 5<sup>th</sup> edition. Texas: Gulf Publishing.

Krefting, L. 1991. Rigour in qualitative research. The assessment of trustworthiness. *The American Journal of Occupational Therapy*, 45(3):214-222.

Lahiri, S. & Chanthaphone, S. 2003. Water, sanitation and hygiene: A situation analysis paper for Lao PDR. *Environmental Health Research*, 13 (June): S107-S114.

Lancy, D. F. 1993. *Qualitative research in education: An introduction to the major traditions*. New York: Longman.

Lawler, P. A. 2003. Teachers as adult learners: A new perspective. *New Directions for Adult and Continuing Education*, 98:15-22.

LeBar, F. M. & Suddard, A. 1960. *Laos: Its people, its society, its culture*. New Haven: Hraf Press.

Leedy, P. D. 1993. *Practical research. Planning and design*. New York: MacMillan.

Leedy, P. D. & Ormrod, J. E. 2005. *Practical research: Planning and design*. 8<sup>th</sup> edition. Ohio: Merrill Prentice Hall.

Liamputtong, P. & Ezzy, D. 2005. *Qualitative research methods*. 2<sup>nd</sup> edition. New York: Oxford University Press.

Lickona, T. 1993. The return of character education. *Educational Leadership*, 51(3):6-11.

Marshall, C. & Rossman, G. B. 1995. *Designing qualitative research*. 2<sup>nd</sup> edition. Thousand Oaks: Sage.

Manshishi, P. C. 1998. Report of evaluation of Sathya Sai Schools in Zambia. School of Education. Lusaka: University of Zambia.

McCown, R., Driscoll, M. & Roop, P. G. 1996. *Educational Psychology*. 2<sup>nd</sup> edition. Boston: Allyn and Bacon.

McMillan, J. H., & Schumacher, S. S. 1997. *Research in education: A conceptual introduction*. New York: Longman.

McMillan, J. H., & Schumacher, S. S. 2010. *Research in education: Evidence-based enquiry*. 7th edition. Boston: Pearson.



Merriam, S. B. 1988. *Case study research in education: A qualitative approach*. San Francisco: Jossey-Bass.

Merriam, S. B. 2001. *The new update on adult learning theory*. San Francisco: Jossey-Bass.

Mezirow, J. 1990. *Fostering critical reflection in adulthood*. San Francisco: Jossey-Bass.

Mezirow, J. 1991. *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.

Miles, M. B & Huberman, A. M. 1994. *An expanded sourcebook: Qualitative data analysis*. 2<sup>nd</sup> edition. London: Sage.

MOE Lao PDR (Ministry of Education Lao PDR) and UNICEF. 2006. Lao PDR Teacher Upgrading Project Report. November 2006. Ministry of Education Lao PDR.

MOE Lao PDR (Ministry of Education Lao PDR). 2005. National Plan of Action: Education for All. Ministry of Education Lao PDR.

Molnar, A. 1997. *The construction of children's character*. Ninety Sixth Yearbook of the National Society of Education. Chicago: Chicago Press.

Muller, J. 1993. The action training model and its educational foundations. *Adult Education and Development*. Re-published on CYC-ONLINE (60)  
<http://www.cyc-net.org/cyc-online/cycol-0104-muller.html> [Accessed: 04/10/2011].

Mwamwenda. T. S. 2004. *Educational Psychology. An African perspective*. 3<sup>rd</sup> edition. Sandton: Heinemann.

Nanan, D., White, F., Azam, I., Afsar, S. & Hozhabri, S. 2003. Evaluation of water, sanitation and hygiene education intervention on diarrhoea in Northern Pakistan. Bulletin of the World Health Organisation. 81(3). Geneva: WHO.

NCA (Norwegian Church Aid). 2009. About Norwegian Church Aid. <http://www.kirkensnodhjelp.no/en/About-NCA/Our-consituency/> [Accessed: 06/11/2009].

Newby, T. J., Stepich, D. A., Lehman, J. D. & Russel, J. D. 2006. *Educational technology for teaching and learning*. New Jersey: Pearson.

Ölander, F., Thøgersen, J. 1995. Understanding consumer behaviour as a prerequisite for environmental protection. *Journal of Consumer Policy*, 18(1):345-385.

Padayachee, S. 2002. Values elicitation - An implementation tool in recapturing the full mission of education. Dissertation for Advanced Diploma in Values Education. Ndola: The African Institute of Sathya Sai Education.

Patton, M. Q. 1990. *Qualitative evaluation and research methods*. 2<sup>nd</sup> edition. California: Sage.

Prilleltensky, I. 1994. Rhetoric of change, philosophy of adjustment: On social legacy of B. F. Skinner. *Theory and Psychology*, 4(1):125-137.

Richardson, V. 1996. The role of attitudes and beliefs in learning to teach. In: Sikula, J. (ed.). *The handbook of research in teacher education*. 2<sup>nd</sup> edition. New York: Macmillan. 102-119.

Roehrig, G. H. & Kruse, R. A. 2005. The role of teachers' beliefs and knowledge in the adoption of a reform-based curriculum. *School Science and Mathematics*, 105(8):412-422.

Rogers, A. 1992. *Adults learning for development*. London: Cassell.

Rogers, A. & Horrocks, N. 2010. *Teaching adults*. 4<sup>th</sup> edition. Berkshire: Open University Press.

- Rogers, J. 2007. *Adults learning*. 5<sup>th</sup> edition. New York: McGraw Hill.
- Rosnow, R. L. & Rosenthal, R. 1996. *Beginning behavioural research*. 2<sup>nd</sup> edition. New Jersey: Prentice Hall.
- Ross, L. & Nisbett, R. E. 1991. *The person and the situation: Perspectives of Social Psychology*. New York: McGraw-Hill.
- Shacham, M. & Od-Cohen, Y. 2009. Rethinking PhD learning incorporating communities of practice. *Innovations in Education and Teaching International*, 46(3):279-292.
- Shaugnessy, J., Zechmeister, E. & Zechmeister, J. 2006. *Research methods In Psychology*. 7<sup>th</sup> edition. New York: McGraw Hill.
- Shulman, L. S. 2000. Teacher development: Roles of domain expertise and pedagogical knowledge. *Journal of Applied Development Psychology*, 21(1):129-135.
- Schulze, S. 2003. Courage to change: Challenges for teacher educators. *South African Journal of Education*, 23(1):6–12.
- Smith, M. K. 2002. Malcolm Knowles, informal adult education, self direction and andragogy, the encyclopaedia of informal education. Online at: <http://www.infed.org/thinkers/et-know.htm>. Last updated: 28/12/2007. [Accessed: 16/04/2008].
- Sonnekus, I. P. 1996. Enhancing realistic academic self-actualisation: A psycho andragogical perspective. Unpublished D.Ed.thesis. Pretoria: University of South Africa.
- Spigner-Littles, D. & Anderson, C. E. 1999. Constructivism: A paradigm for older learners. *Educational Gerontology*, 25(1):203-209.
- Spodek, B. 1988. Implicit theories of early childhood teachers: Foundations for professional behaviour. In: Spodek, B., Saracho, O. N. & Peters, D. L. (eds.).

*Professionalism and the early childhood educator*. New York: Teachers College Press, 161-171.

SSSIHL (Sri Sathya Sai Institute of Higher Learning). 2000. Sri Sathya Sai System of Integral Education. Prasanthi Nilayam.

SSSWF (Sri Sathya Sai World Foundation). 2007. Global Overview of Sri Sathya Sai Education. New Delhi: Roots Advertising Services.

Stake, R. E. 1981. Case study methodology: An epistemological advocacy. In: Welsh, W. W. (ed.). Case study methodology in educational evaluation. Proceedings of the 1981 Minnesota Evaluation conference. Minneapolis: Minnesota Research and Evaluation Center.

Stein, R. J. 2008. *The Reference Shelf: Water Supply*. New York: Wilson.

Sterling, E. J. 2007. Blue Planet Blues. In: Stein, R. J. (ed.). *The Reference Shelf: Water Supply*. New York: Wilson.

Taplin, M. 1998. Promoting education in human values in the regular mathematics classroom. <http://www.fed.cuhk.edu.hk?filee/mathsfors/edumath/9812/10taplinm.html>. [Accessed: 01/04/2008].

Taplin, M., Ng, D. & Huang, F. 2006. The impact of a collaborative model for curriculum restructuring on teachers professional growth. In: Townsend, T. & Bates, R. (eds.). *Handbook of teacher education: Globalisation standards and professionalism in times of change*. Dordrecht: Springer, 523-539.

Taylor, G. R. 2000. *Integrating quantitative and qualitative methods in research*. Lanham, NY.: University Press of America.

Taylor, K., Marienau, C. & Fiddler, M. 2000. *Developing adult learners: Strategies for teachers and trainers*. San Francisco: Jossey-Bass.

The Hague. 2000: Ministerial Declaration of the 2<sup>nd</sup> World Water Forum: Online at: [http://www.worldwatercouncil.org/fileadmin/wwc/Library/Official\\_Declarations/The\\_Hague\\_Declaration.pdf](http://www.worldwatercouncil.org/fileadmin/wwc/Library/Official_Declarations/The_Hague_Declaration.pdf) [Accessed: 04/11/2010].

Tibaijuka, A. K. 2001. Foreword. In: UN-Habitat. *Water and sanitation in the world's cities*. Nairobi: UN-Habitat.

Tillman, D. & Hsu, D. 2000. *Living values activities for children ages 3–7*. Deerfield Beach, FL.: Health Communications.

Tobin, G. A. & Begley, C. M. 2004. Methodological rigour within a qualitative framework. *Journal of Advanced Nursing*, 48(4):388-396.

Tobin, K. & McRobbie, C. J. 1996. Cultural myths as constraints to the enacted science curriculum. *Science Education*, 80(1):223-241.

Toh, L., Ng, K. T., Yeap, C. H. & Haji Ismail, I. F. 2008. Cross-curricular teaching incorporating human values: A collaborative research by reflective practitioners. Unpublished article. UN-Habitat.

Truluck, J. E. & Courtenay, B. C. 1999. Learning style preferences among older adults. *Educational Gerontology*, 25(1):221-236.

Tuckman, B. W. 1999. *Conducting educational research*. 5<sup>th</sup> edition. Orlando: Harcourt Brace College Publishers.

UNICEF (United Nations Children's Fund). 2008. *The state of the world's children. Child survival*. New York: UNICEF.

UNDPI (United Nations Department of Public Information). 2008. *The United Nations Today*. New York: United Nations.

UN-Habitat (United Nations Human Settlements Programme). 2001. *Water education in African cities*. Nairobi: UN-Habitat.

UNESCO (United Nations Educational, Scientific and Cultural Organization). 2005. Education for All (EFA) National Plan of Action 2003-2015. Lao PDR. Ministry of Education. Bangkok: UNESCO.

UN-Habitat (United Nations Human Settlements Programme). 2003. *Water and sanitation in the world's cities. Local action for global goals*. London: Earthscan Publications.

UN-Habitat (United Nations Human Settlements Programme). 2004. *Report of the regional consultations on Values-based Water Education for Asia and the Pacific*. Nairobi: UN-Habitat.

UN-Habitat (United Nations Human Settlements Programme). 2005. *Towards a new water-use and sanitation-friendly ethic in society. Human Values in Water, Sanitation and Hygiene Education Initiative. Water for African and Asian Cities Programme*. Nairobi: UN-Habitat.

UN-Habitat (United Nations Human Settlements Programme). 2006a. *Human values water, sanitation and hygiene education. Teacher training guide for Africa*. Nairobi: UN-Habitat.

UN-Habitat (United Nations Human Settlements Programme). 2006b. Agreement of cooperation between United Nations Human Settlements Programme and Society for the Preservation of Water. Thailand: UN-Habitat.

UN-Habitat (United Nations Human Settlements Programme). 2009. Agreement of cooperation between United Nations Human Settlements programme and Norwegian Church Aid. Lao PDR: UN-Habitat.

UNO (United Nations Organisation). 2010. Millennium Development Goals. <http://www.un.org/millenniumgoals/pdf/MDG%20Report%202010%20En%20r15%20-low%res2020100615%20-pdf>. [Accessed: 19/10/2010.]

Van Rooy, T., Claasen, C. & Schulze, S. 2000. Teaching, learning and development in adult education. Study guide for TELDAD-J. Pretoria: UNISA.

- Vartuli, S. 2005. Beliefs: The heart of teaching. *Young Children*, 60(5):76-86.
- Wellman, J. C. & Kruger, S. J. 2000. *Research methodology for the Business and Administrative Sciences*. Oxford: Oxford University Press.
- Willig, C. 2001. *Qualitative research in Psychology*. Buckingham, Philadelphia: Open University Press.
- Woolfolk, A. 2001. *Educational Psychology*. 8<sup>th</sup> edition. Boston: Allyn and Bacon.
- World Bank. 2005. Lao PDR Environment Monitor 40065. The World Bank. Washington, DC20433,USA.  
[http://www.wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2007/06/18/000020439\\_20070618152653/Rendered/PDF/400650LA0Envir1or0May0200701PUBLI C1.pdf](http://www.wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2007/06/18/000020439_20070618152653/Rendered/PDF/400650LA0Envir1or0May0200701PUBLI C1.pdf) [Accessed: 05/09/2008].
- WHO (World Health Organization). 2000. Global water supply and sanitation assessment 2000 report.  
[http://www.who.int/water\\_sanitation\\_health/monitoring/globalassess/en/print.html](http://www.who.int/water_sanitation_health/monitoring/globalassess/en/print.html)  
[Accessed: 12/10/2010].
- WHO (World Health Organization). 2006. *Meeting the MDG drinking water and sanitation target. The urban and rural challenge of the decade*. Geneva, Switzerland: WHO, Unicef.
- Yin, R. K. 2009. *Case study research: Design and methods*. 4<sup>th</sup> edition. London: Sage.
- Yonemura, M. 1986. *A teacher at work*. New York: Teachers College Press.
- Zmeyyov, S. I. 1998. Andragogy: Origins, developments and trends. *International Review of Education*, 44(1):103-108.
- Zohar, D. & Marshall, I. 2000. *Spiritual intelligence: The ultimate intelligence*. New York: Bloomburg.

**ANNEXURE A: LETTER OF INVITATION BY UN-HABITAT**



**UN-HABITAT**



**United Nations Human Settlements Programme**

Programme des Nations Unies pour les établissements humains - Programa de las Naciones Unidas para los Asentamientos Humanos

**Water for Asian Cities Programme Lao PDR**

Lane Xang Avenue

PO Box 345 Vientiane, Lao PDR

Tel: +856-21-267707 • Fax: +856-21 264939 • Email: avi.sarkar@unhabitat.org

10 October 2008

To whom it may concern:

**Subject: Impact study on HVWSHE/ SPW training programme in Laos (2008-2009)**

The United Nations Human Settlements Programme (UN-HABITAT) in cooperation with the Society for Preservation of Water (SPW) has developed a training programme for educators, known as the training of the trainers programme on Human Values Water, Sanitation and Hygiene Education (HVWSHE). This cooperation exists within the collaborative framework of the Water for Asian Cities (WAC) Programme and includes amongst others human values education as an intervention strategy to the existent approach to water, sanitation and hygiene management. Thus training educators and trainers in HVWSHE is a constituent of the capacity building intervention of the WAC programme.

UN-HABITAT in assessing the impact of the HVWSHE training of the trainers programme is pleased to invite Ms. Silverani Padayachee to conduct an impact assessment of this programme in Laos (one of ten selected Asian countries of the WAC Programme).

UN-HABITAT in recognition of further education and training has permitted Ms. Silverani Padayachee to use this study as part of her Master of Education studies at the University of South Africa (UNISA).

Ms. Silverani Padayachee as the researcher should conduct the study adhering to ethical principles of good research practice.

UN-HABITAT will cover the researcher's air travel and per diem during the trip/s, and facilitate local project research through local project resources according to UN rules and regulations.

If you require further information, please contact us at the numbers above.

Yours sincerely,

Avi Sarkar  
Regional Chief Technical Advisor  
Mekong Region/S-E Asia  
WSS II,  
Water Sanitation Infrastructure Branch,  
UN-HABITAT



**ANNEXURE B: INFORMED CONSENT ENGLISH TRANSLATION**

**The Impact of Human Values Water Sanitation and Hygiene Education training on  
Laotian Teachers**

Researcher: Silverani Padayachee

PERMISSION TO TAKE PART IN THE ABOVE MENTIONED RESEARCH PROJECT

1. CONDITIONS FOR TAKING PART

I.....(the undersigned) herewith declare the following:

- That my participation in this research project is voluntary and based on informed consent.
- That the aim and nature of the project have been explained to me.
- That I am aware of the fact that I am allowed to withdraw from the project during any stage of the interview/focus group meeting /observation
- That I give permission for the interview/focus group meeting to be recorded.
- That I was informed that I am entitled to view a transcription of the interview and to comment on it before the researcher may use the information in her research report.
- That I was ensured that all information provided will only be used for research purposes.

2. CONFIDENTIALITY

The researcher ensured me that all information provided will be kept confidential and anonymous.

Signature:\_\_\_\_\_

Date:\_\_\_\_\_

Telephone:\_\_\_\_\_

Witness:\_\_\_\_\_

# Annexures

## ANNEXURE C: LESSON OBSERVATION CHECKLIST

Lesson Observation Checklist for Lao PDR teacher participants to the HVWSHE training programme

Name of Participant: \_\_\_\_\_ Qualifications: \_\_\_\_\_ Age \_\_\_\_\_ Gender: \_\_\_\_\_

Name of School: \_\_\_\_\_ Province \_\_\_\_\_

Grades that teacher normally teach: \_\_\_\_\_ Grade being observed: \_\_\_\_\_ Learning Area/Subject being taught: \_\_\_\_\_

Rating scale:

<b>Outstanding</b>	<b>Meritorious</b>	<b>Motivational</b>	<b>Poor</b>
Has executed all of the desired elements and has added improvements.	Has a good understanding and appropriate implementation.	Has made a satisfactory attempt. There is room for improvement	Has poorly implemented the approach.
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

# Annexures

Method of instruction	Time in minutes	Process of instruction	Yes	No	Rating	Comment
1. Prayers	±2					
2. Meditation a). Awareness of breath b). Light meditation	±2 ±6	Students calm down. Students focused and relaxed.	.....	.....	.....	..... .....
3. Thematic approach (based on interest of the students)	±30	Inspire learners. Create atmosphere for learning. *Eliciting and integration of values.	.....	.....	.....	..... ..... Use the same rating scale and complete table below (page 3) on strategies used.
4. Students discuss human values	±10	Facilitate collaboration and observe learners.				
5. Summary and delegating homework	±5	Relevance and re-enforcement of values discussed.				
6. Classroom environment	N/A	Positive & learner centred				

# Annexures

*Strategies used to elicit or integrate values	YES	NO	Rating	Comment +(Indicate values integrated or elicited in lesson)
Bring out the inherent values in the subject.				
Direct integration where human values are an integral part of the subject.				
Use simile and make a comparison with similar events in the life of the students.				
Change negativity into a positive lesson.				
Bring out values through activities such as:				
a). discussions and brainstorming.	.....	.....	.....	.....
b). story telling to bring out values.	.....	.....	.....	.....
c). games on human values.	.....	.....	.....	.....
d). stories of great personage.	.....	.....	.....	.....
e). song & music to integrate values.	.....	.....	.....	.....
f). drama depicting events with human values.	.....	.....	.....	.....
g). field trips, service activities and clubs to draw out human values.	.....	.....	.....	.....

# Annexures

Comments on the behaviour modelled by the teacher:(punctual, calm etc) \_\_\_\_\_

\_\_\_\_\_

Overall teacher rating: Indicate with an X in the appropriate column and provide supportive comment

Attribute	Very Good	Good	Satisfactory	Poor	Comment
Attitude					
Knowledge/Awareness					
Confidence					
Motivation					

**Very Good:** Demonstrate remarkable ability, very positive and high competency.

**Good:** Demonstrates competency and merit.

**Satisfactory:** Effort shows possibility for improvement.

**Poor:** Shows deficiency, complacency or indifference.

Observer general comments and follow up remarks:

\_\_\_\_\_

## **ANNEXURE D: SEMI STRUCTURED QUESTIONS USED FOR FOCUS GROUP MEETING**

### **Semi-structured Questions for Focus group Meeting with the Lao teacher (participants)**

Note to co-researcher/translator: Please advise the participants that this is an information gathering session and that they are required to freely express their feelings/opinions. There are no right or wrong answers to any of the questions and their sincere input would be most valuable. Emphasise that we want the teachers to discuss the questions so as to enable us to get as much information from them on the various questions. Please probe where necessary to elicit further understanding of the responses.

The participants are to not all talk at the same time, but allow each other to share their discussions and experiences with the entire group.

Please inform participants that confidentiality would be ensured and that the participants are free to withdraw from participation at any time.

#### **Questions:**

1. In what ways did the training influence your knowledge and awareness of water, sanitation and hygiene issues in your communities and in Lao PDR as a whole?
2. What were your attitude/s towards water, sanitation and hygiene prior to the HVWSHE programme?
3. How did the training influence your personal beliefs and attitudes towards water, sanitation and hygiene behaviour?
4. Were you using any form of values education in your classrooms before this training?  
[Follow up if answer yes] Discuss how your approach to values education was similar and/or different to the HVWSHE programme?
5. How will you implement values education in your classroom now that you have been trained?

## Annexures

6. What teaching strategies or approaches such as group discussions, games, role-play etc. used in the HVWSHE programme did you previously use in your classroom teaching?
7. Which of these strategies or approaches are you definitely going to use once you get back to your own teaching situation? [Possible follow up, if yes]. Why have you considered these?
8. How did the training influence your perception about using HVWSHE to bring about a positive change in your learners behaviour towards water, sanitation and hygiene?
9. In the HVWSHE training programme the issue of the teacher as a role model was discussed. What are your feelings with respect to the role of the teacher?
10. Do you believe that the human values integrated approach used in this training programme has inspired and motivated you sufficiently to adopt this approach in your classroom teaching? [Follow up question] Why do you say so?
11. In what ways did the training influence your confidence on human values and water sanitation and hygiene education?
12. Is there anything else you would like to add or discuss?

## ANNEXURE E: EXAMPLE OF COMPLETED LESSON OBSERVATION

Teacher Observation Checklist: HVWSHE impact study Laos

Page 1 of 1

### Lesson Observation Checklist for Lao PDR teacher participants to the HVWSHE training programme

Name of Participant: Group 5 Qualifications: \_\_\_\_\_ Age \_\_\_\_\_ Gender: \_\_\_\_\_

Name of School: \_\_\_\_\_ Province \_\_\_\_\_

Grades that teacher normally teach: Grade 3 Grade being observed: \_\_\_\_\_ Learning Area/Subject being taught: \_\_\_\_\_

Rating scale:

Outstanding	Meritorious	Motivational	Poor
Has executed all of the desired elements and has added improvements.	Has a good understanding and appropriate implementation.	Has made a satisfactory attempt. There is room for improvement	Has poorly implemented the approach.
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

Teacher Observation Checklist: HVWSHE impact study Laos

Page 2 of 2

Method of instruction	Time in minutes	Process of instruction	Yes	No	Rating	Comment
1. Prayers	±2			X		
2. Meditation				X		
a). Awareness of breath	±2	Students calm down.		X		
b). Light meditation	±6	Students focused and relaxed.		X		
3. Thematic approach (based on interest of the students)	±30	Inspire learners. Create atmosphere for learning. *Eliciting and integration of values.	X		3	slow confidence and attempt to motivate students Starts class with motivational song, continues with songs but not able to point out values.
4. Students discuss human values	±10	Facilitate collaboration and observe learners.	X		3	Asks questions to students about water and praises them after they're answered. Makes jokes.
5. Summary and delegating homework	±5	Relevance and re-enforcement of values discussed.		X		Not enough time to summarize
6. Classroom environment	N/A	Positive & learner centred	X		3	



# Annexures

*Strategies used to elicit or integrate values	YES	NO	Rating	Comment +(Indicate values integrated or elicited in lesson)
Bring out the inherent values in the subject.		X		
Direct integration where human values are an integral part of the subject.	X		3	Fails to bring out values from students
Use simile and make a comparison with similar events in the life of the students.		X		
Change negativity into a positive lesson.		X		Did not raise any example
Bring out values through activities such as:		X		Asks students what we can do with water then explains importance of water. Invites another teacher to explain about chemical reaction in water, shows formula for H <sub>2</sub> O
a). discussions and brainstorming.		X		
b). story telling to bring out values.		X		
c). games on human values.		X		
d). stories of great personage.		X		
e). song & music to integrate values.	X		3	Explains what the song is about, asks student what do they do with water through song
f). drama depicting events with human values.		X		
g). field trips, service activities and clubs to draw out human values.		X		Not discussed in the plan

Comments on the behaviour modelled by the teacher:(punctual, calm etc) \_\_\_\_\_

Overall teacher rating: Indicate with an X in the appropriate column and provide supportive comment

Attribute	Very Good	Good	Satisfactory	Poor	Comment
Attitude	X				
Knowledge/Awareness		X			
Confidence	X				
Motivation	X				

**Very Good:** Demonstrate remarkable ability, very positive and high competency.

**Good:** Demonstrates competency and merit.

**Satisfactory:** Effort shows possibility for improvement.

**Poor:** Shows deficiency, complacency or indifference.

Observer general comments and follow up remarks:

---



---

## ANNEXURE F: SPW BLANK LESSON PLAN AND LIST OF VALUES

EHV centered Lesson / Activity Plan (indirect)

Topic	Grade Levels	Lesson Duration	Location
Lesson / Activity Objectives		References	
Approach & Emphasis → → Correlate to <u>Core</u> and <u>Sub-values</u>			
Sequence of Lesson / Activity Presentation & Tools			
Assessment / Evaluation of Student Learning / Follow-up / Closure			

<i>Peace</i> <b>ความสงบ</b>			
ความสนใจ Attention	ความสงบนิ่ง Calm	ความมีสมาธิ Concentration	ความพอใจในสิ่งที่มี Contentment
ความสง่างาม Dignity	ความมีระเบียบวินัย Discipline	ความมุ่งมั่นจดจ่อ Focus	ความสุข Happiness
ความอ่อนน้อมถ่อมตน Humility	ความเป็นตัวของตัวเอง Individualism	ความสงบจากภายใน Inner Silence	การมองโลกในแง่ดี Optimism
ความพอใจ Satisfaction	การยอมรับตนเอง Self-Acceptance	ความเชื่อมั่นในตนเอง Self-Confidence	การควบคุมตนเอง Self-Control
ความมีวินัยในตนเอง Self-Discipline	การเคารพตนเอง Self-Respect		
<i>Love</i> <b>ความรัก</b>			
ความเอาใจใส่ Caring	ความเมตตากรุณา Compassion	การอุทิศตน Dedication	การรักใคร่อุทิศตน Devotion
ความมีมิตรภาพ Friendship	การให้อภัย Forgiveness	มีใจใจกว้าง Generosity	การช่วยเหลือ Helping
การรู้จักกตัญญูพิจารณา Consideration	ความกรุณา Kindness	ความอดทนอดกลั้น Patience	การแบ่งปัน Sharing
ความจริงใจ Sincerity	ความเห็นใจสงสาร Sympathy	ความอดทน Tolerance	
<i>Non-Violence</i> <b>ไม่ใช้ความรุนแรง</b>			
ความซาบซึ้งใจ Appreciation	สำนึกบุญคุณในผู้อื่น Appreciation of other	วัฒนธรรมและศาสนา Culture and Religion	ความเป็นพี่น้องกัน Brotherhood
การเป็นพลเมืองที่ดี Citizenship	การคำนึงถึงทุกชีวิต Concern for All Life	ความร่วมมือกัน Co-operation	ความเสมอภาคกัน Equality
การทำตามความรู้สึกที่ดี Follow Feeling	ความจงรักภักดี Loyalty	เป็นผู้มีความมักน้อย Minimum Natural	ความตระหนักรู้ Awareness
ความเคารพ ในทรัพย์สินสมบัติ Respect for Property	การรับใช้ช่วยเหลือ Service	ความยุติธรรมในสังคม Social Justice	ความเป็นอันหนึ่ง อันเดียวกัน Unity
ความรักความเมตตา อันเป็นสากล Universal Love	ความไม่เต็มใจ ที่จะทำให้อีกใครเจ็บปวด Unwillingness to Hurt		

## Truth (ความจริง)

ความอยากรู้อยากเห็น Curiosity	วิจารณ์แยกแยะ Discrimination	ความเท่าเทียมกัน Equality	ความซื่อสัตย์ Honesty
ความซื่อตรง Integrity	ความหยั่งรู้ Intuition	ความจำ Memory	การแสวงหาความรู้ Quest for Knowledge
ความมีเหตุผล Reason	การวิเคราะห์ตนเอง Self-Analysis	การรู้ตัวของตนเอง Self-Awareness	การมีความรู้โดยตนเอง Self-Knowledge
การแสวงหา ทางจิตวิญญาณ Self-inquiry	การสังเคราะห์ Synthesis	ความจริง Truthfulness	ความเข้าใจ Understanding

## Right Conduct (เรื่องเล่าของท้าวโศภิต)

ความสะอาด Cleanliness	ความกล้าหาญ Courage	ความไว้วางใจ Dependability	หน้าที่ Duty
ความอดทนหนักแน่น Endurance	ความมีศีลธรรมจรรยา Ethics	ความกตัญญู Gratitude	การวางเป้าหมาย Goal Setting
การประพฤติดี Good Behavior	มีทิวามารยาทดี Good Manners	การอยู่อย่างมีสุขภาพดี Healthy Living	ความช่วยเหลือกัน Helpfulness
ความคิดริเริ่ม Initiative	ภาวะผู้นำ Leadership	ความเชื่อฟัง Obedience	ความอดทนออกฉันท Patience
ความเพียรพยายาม Perseverance	การใช้เวลาอย่างเหมาะสม Proper Use of Time	การปกป้อง Protection	เป็นผู้รู้จักมีความคิด Resourcefulness
ความเคารพ Respect	ความรับผิดชอบ Responsibility	ความเสียสละ Sacrifice	ความเชื่อมั่นใจตนเอง Self-confidence
ความรู้จักพอ รู้จักประมาณตน Self-Sufficient	การรับใช้ช่วยเหลือ Serving	มีจิตอย่างเรียบง่าย Simplicity	การทำงานร่วมกัน Team Work
มีความตั้งใจมั่น Will			

## ANNEXURE G: EXAMPLE OF COMPLETED SPW LESSON PLAN

Group 5

EHV centered Lesson / Activity Plan (indirect)

<b>Topic</b> ປະຕິກິລິຍາແຄມ	<b>Grade Levels</b> ວ 3	<b>Lesson Duration</b> 60'	<b>Location</b> ທາງສູນ
<b>Lesson / Activity Objectives</b> - ອະທິບາຍໃຫ້ ມັກ ຮຽນ ຮູ້ ກ່ຽວກັບ ປະຕິກິລິຍາແຄມ - ການ ປະກອບ ເປັນ ມາ ແລ້ວ ຂຽນ ສິດ. - ປິ່ນ ມັກ ຮຽນ ຮູ້ ອັດຕາ ສົມ ປະກອບ ເປັນ ມາ		<b>References</b> - ປຶ້ມ ແອບ ບຽນ - ຮູບ ພາ ປະກອບ ເປັນ ມາ ທີ່ ເປັນ ຮູບ ແມ່ ມາ	
<b>Approach &amp; Emphasis</b> → → <b>Correlate to Core and Sub-values</b> - ປິ່ນ ມັກ ຮຽນ ມາ ທີ່ - ປິ່ນ ມັກ ຮຽນ ຮູ້ ອັດຕາ ສົມ ປະກອບ ເປັນ ມາ ແລ້ວ ຂຽນ ສິດ. - ອະທິບາຍ ໃຫ້ ຮູ້ ອັດຕາ ສົມ ປະກອບ ເປັນ ມາ ປິ່ນ ມັກ ຮຽນ ຮູ້ ອັດຕາ ສົມ ປະກອບ ເປັນ ມາ - ສິ່ງ ທີ່ ສຳຄັນ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ສິ່ງ ທີ່ ສຳຄັນ ມາ ທີ່ ອະທິບາຍ ມາ - ດຸນ ດາ ທີ່ ສຳຄັນ ມາ ທີ່ ອະທິບາຍ ມາ			
<b>Sequence of Lesson / Activity Presentation &amp; Tools</b> - ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ * ສິ່ງ ທີ່ ສຳຄັນ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ - ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ແລ້ວ ປິ່ນ ມັກ ຮຽນ ມາ ທີ່ ອະທິບາຍ ມາ - ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ ທີ່ ອະທິບາຍ ມາ			
<b>Assessment / Evaluation of Student Learning / Follow-up / Closure</b> - ສິ່ງ ທີ່ ສຳຄັນ ມາ ທີ່ ອະທິບາຍ ມາ - ສິ່ງ ທີ່ ສຳຄັນ ມາ ທີ່ ອະທິບາຍ ມາ			

## TRANSLATION OF EXAMPLE LESSON PLAN

### EHV centered Lesson/Activity Plan (Indirect) Group 5

<b>Topic</b> Chemistry	<b>Grade Levels</b> Lower Sec Year 3	<b>Lesson Duration</b> 60 mins	<b>Location</b> Class room
------------------------	---	--------------------------------	----------------------------

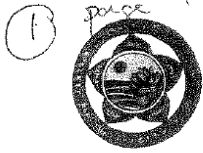
<b>Lesson / Activity Objectives</b> <ul style="list-style-type: none"> <li>- Explain to students about chemical reactions</li> <li>- Composition of water and formula</li> <li>- Ratio of hydrogen to oxygen to produce water</li> </ul>	<b>References</b> <ul style="list-style-type: none"> <li>Textbook</li> <li>Pictures of rivers</li> </ul>
--	--

<b>Approach &amp; Emphasis</b> → → <b>Correlate to <u>Core and Sub-values</u></b> <ul style="list-style-type: none"> <li>- Meditation</li> <li>- Talk about the meaning and benefits of water</li> <li>- Explain the benefits of the chemical formula for water?</li> <li>- Talk about harmony between water and organisms in this world</li> <li>- What are the values of water?</li> </ul>
--

<b>Sequence of Lesson / Activity Presentation &amp; Tools</b> <ul style="list-style-type: none"> <li>- Organize student activity related to protection of water. Ask students to pair up, one person blind folds the other person and guide the blind folded person to fill a bottle with water.</li> <li>- Bring up questions about water and divide students into groups</li> <li>- Show pictures of rivers to students and ask them to discuss</li> <li>- Sing a song with students and summarize lessons.</li> </ul>
--

<b>Assessment / Evaluation of Student Learning / Follow-up / Closure</b> <ul style="list-style-type: none"> <li>Observe group exercise</li> <li>Observe group presentations</li> </ul>
--

## ANNEXURE J: THE THREE TRAINING PROGRAMME SCHEDULES FIRST TRAINING PROGRAMME SCHEDULE



### Training in Human Values in Water, Sanitation and Hygiene Education June 7<sup>th</sup> ~ 12<sup>th</sup> 2009



#### Saturday June 6<sup>th</sup>

Arrival of participants

#### Sunday June 7<sup>th</sup>

05.45 Morning Prayers and meditation in the school prayer room  
06.45 Breakfast  
08.00 Tour of the school premises  
09.30 Orientation  
10.00 Morning Break  
10.15 Integrated Model for HVWSHE by Dr. Art-ong Jumsai Na Ayudhya  
12.00 Lunch  
14.00 Integrated Model for HVWSHE (continued)  
15.00 Afternoon Break  
15.20 Integrated Model for HVWSHE (continued)  
17.45 Dinner

#### Monday June 8<sup>th</sup>

05.45 Morning Prayers and meditation in the school prayer room  
06.45 Breakfast  
10.00 Integrated Model for HVWSHE by Dr. Art-ong Jumsai Na Ayudhya  
12.00 Lunch  
14.00 Methodology for HVWSHE by Loraine Burrows ~ Conference Room  
15.30 Afternoon Break  
15.20 Methodology for HVWSE (continued)  
17.45 Dinner  
18.30 Questions and Answers Session (Prayer Room)

#### Tuesday June 9<sup>th</sup>

05.45 Morning Prayers and meditation in the school prayer room  
06.45 Breakfast  
08.00 Workshop 1 on making Lesson Plans by Teacher Babak  
10.00 Morning Break  
10.20 Integrated Class on Water  
12.00 Lunch  
14.00 Workshop of activities for HVWSHE in the ISSE Building  
17.45 Dinner



# Annexures

## Wednesday June 10<sup>th</sup>

- 05.45 Morning Prayers and meditation in the school prayer room
- 06.45 Breakfast
- 08.00 Integration of HVWSHE into the curriculum by Teacher Kokoro  
~ Conference Room
- 10.00 Morning Break
- 10.20 Integration of HVWSHE into the curriculum by Loraine Burrows  
~ Conference Room
- 12.00 Lunch
- 14.00 Workshops in the Institute for Water Education
- 15.30 Afternoon Break in the canteen
- 15.20 Workshop in the Institute for Water Education
- 17.45 Dinner

## Thursday June 11<sup>th</sup>

- 05.45 Morning Prayers and meditation in the school prayer room
- 06.45 Breakfast
- 08.00 School Ceremony "Honouring the teachers" ~ Prayer Room
- 10.00 Morning Break
- 10.30 Workshop 2 on making Lesson Plans by Teacher Babak
- 12.00 Lunch
- 14.00 Presentation by Participants
- 15.30 Afternoon Break
- 15.20 Presentation by Participants (continued)
- 17.45 Dinner

## Friday June 12<sup>th</sup>

- 05.45 Morning Prayers and meditation in the school prayer room
- 06.45 Breakfast
- 08.00 Field Trip to Pasaak Dam
- 05.45 Dinner
- 18.30 Cultural Presentation by the SSS students

## Saturday June 13<sup>th</sup>

- Breakfast
- Departure of participants

### SECOND TRAINING PROGRAMME SCHEDULE



**Training in Human Values in Water  
Sanitation and Hygiene Education**  
June 7<sup>th</sup> ~ 12<sup>th</sup> 2009



## Saturday June 6<sup>th</sup>

Arrival of participants in the evening

## Sunday June 7<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 08.00 Welcome the participants - Conference Room (School Building)
- 08.15 Integrated Model for HVWSHE by Dr. Art-ong Jumsai Na Ayudhya Conference Room
- 10.30 Morning Break - Conference Room
- 10.45 Free Time
- 12.00 Lunch - Canteen
- 13.30 Methodology for HVWSHE- by Teacher Loraine Conference Room
- 15.00 Afternoon Break - Conference Room
- 15.30 Methodology for HVWSHE by Teacher Loraine - Conference Room
- 17.45 Dinner - Canteen
- 18.30 Rest

## Monday June 8<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.30 Walk up the "Grandmother and Grandfather Mountain" with some teachers
- 08.00 Breakfast - Canteen
- 08.30 Baths and rest
- 10.00 Tour of the School Premises with Teacher Kluay
- 12.00 Lunch - Canteen
- 14.00 Workshop of activities for HVWSHE by Teacher Loraine - ISSE Building
- 15.30 Afternoon Break - ISSE Building
- 15.45 Workshop of activities for HVWSHE by Teacher Loraine - ISSE Building
- 17.45 Dinner - Canteen

## Tuesday June 9<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 08.00 Workshop 1 on making Lesson Plans by Teacher Babak - The Water Institute
- 10.15 Morning Break - Conference Room
- 10.30 Integrated Model for HVWSHE by Dr. Art-ong Jumsai Na Ayudhya - Conference Room
- 12.00 Lunch - Canteen
- 13.00 Integration of HVWSHE into the curriculum by Teacher Loraine - Conference Room
- 15.00 Afternoon Break - Conference Room
- 15.15 Integration of HVWSHE into the curriculum by Teacher Kokoro - Conference Room
- 19.00 Arrival of special guests from Bhutan
- 19.15 Dinner and Cultural Programme - Canteen

## Wednesday June 10<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast- Canteen
- 08.00 Q and A Session with Grade 12 students and talk by Dr. Jumsai - School Prayer Room
- 10.00 Morning Break - Canteen
- 10.20 Integrated Class on "Water" - by the Lakeside (weather permitting)
- 12.00 Lunch - Canteen
- 14.00 Integrated Model for HVWSHE by Dr. Art-ong Jumsai Na Ayudhya - Conference Room
- 15.30 Afternoon Break - Conference Room
- 15.45 Integrated Model for HVWSHE by Dr. Art-ong Jumsai Na Ayudhya - Conference Room
- 17.45 Dinner - Canteen

## Thursday June 11<sup>th</sup>

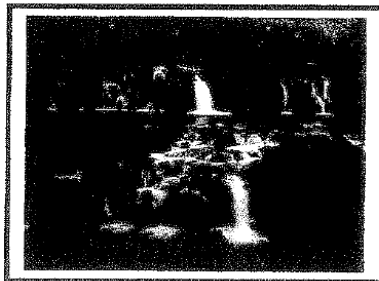
- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 08.30 School Ceremony "Honouring the teachers" Ceremony - Canteen
- 10.00 Morning Break - Canteen
- 10.30 Workshop 2 on making Lesson Plans by Teacher Babak
- 12.00 Lunch - Canteen
- 14.00 Workshop by various teachers - Water Institute
- 15.30 Afternoon Break - Canteen
- 15.20 Workshop by various teachers - Water Institute
- 17.45 Dinner - Canteen

## Friday June 12<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 08.00 Field Trip to Pasaak Dam with Teacher Nui and Teacher Kluay
- 12.00 Picnic Lunch with Teacher Nui and Teacher Kluay - The Waterfall
- 15.15 Afternoon Break - Conference Room
- 15.30 Presentation by participants - Conference Room
- 17.45 Dinner - Canteen

## Saturday June 13<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 07.30 Departure of participants



## THIRD TRAINING PROGRAMME SCHEDULE



**Training in Human Values in Water  
Sanitation and Hygiene Education**  
June 7<sup>th</sup> ~ 12<sup>th</sup> 2009



## Saturday June 6<sup>th</sup>

Arrival of participants in the evening

## Sunday June 7<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 08.00 Welcome the participants - Conference Room (School Building)
- 08.15 Integrated Model for HVWSHE by Dr. Art-ong Jumsai Na Ayudhya Conference Room
- 10.30 Morning Break - Conference Room
- 10.45 Free Time
- 12.00 Lunch - Canteen
- 13.30 Talk about the Sathya Sai School by Dr. Art-ong - School Prayer Room
- 15.00 Afternoon Break - Conference Room
- 15.30 Integration of HVWSHE into the curriculum by Teacher Kokoro - Conference Room
- 17.45 Dinner - Canteen
- 18.30 Rest

## Monday June 8<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.30 Walk up the "Grandmother and Grandfather Mountain" with some teachers
- 08.00 Breakfast - Canteen
- 08.30 Baths and rest
- 10.00 Tour of the School Premises with Teacher Kluay
- 12.00 Lunch - Canteen
- 14.00 Methodology and Integration for HVWSHE- by Teacher Loraine Conference Room
- 15.30 Afternoon Break - ISSE Building
- 15.45 Methodology and Integration for HVWSHE- by Teacher Loraine Conference Room
- 17.45 Dinner - Canteen

## Tuesday June 9<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 08.00 Workshop 1 on making Lesson Plans by Teacher Babak - The Water Institute
- 10.15 Morning Break - Conference Room
- 10.30 Integrated Model for HVWSHE by Dr. Art-ong Jumsai Na Ayudhya - Conference Room
- 12.00 Lunch - Canteen
- 13.00 Workshop of activities for HVWSHE by Teacher Loraine - ISSE Building
- 15.00 Afternoon Break - ISSE
- 15.15 Workshop of activities for HVWSHE by Teacher Loraine - ISSE Building
- 19.00 Arrival of special guests from Bhutan
- 19.15 Dinner and Cultural Programme - Canteen

# Annexures

## Wednesday June 10<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 08.00 Q and A Session with Grade 12 students and talk by Dr. Jumsai - School Prayer Room
- 10.00 Morning Break - Canteen
- 10.20 Integrated Class on "Water" - by the Lakeside (weather permitting)
- 12.00 Lunch - Canteen
- 14.00 Integrated Model for HWWSHE by Dr. Art-ong Jumsai Na Ayudhya - Conference Room
- 15.30 Afternoon Break - Conference Room
- 15.45 Integrated Model for HWWSHE by Dr. Art-ong Jumsai Na Ayudhya - Conference Room
- 17.45 Dinner - Canteen

## Thursday June 11<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 08.30 School Ceremony "Honouring the teachers" Ceremony - Canteen
- 10.00 Morning Break - Canteen
- 10.30 Workshop 2 on making Lesson Plans by Teacher Babak
- 12.00 Lunch - Canteen
- 14.00 Workshop by various teachers - Water Institute
- 15.30 Afternoon Break - Canteen
- 15.20 Workshop by various teachers - Water Institute
- 17.45 Dinner - Canteen \* focus group

## Friday June 12<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 08.00 Field Trip to Pasaak Dam with Teacher Nui and Teacher Kluay
- 12.00 Picnic Lunch with Teacher Nui and Teacher Kluay - The Waterfall
- 15.15 Afternoon Break - Conference Room
- 15.30 Presentation by participants - Conference Room
- 17.45 Dinner - Canteen \* focus group

## Saturday June 13<sup>th</sup>

- 05.45 Morning Prayers and meditation - School Prayer Room
- 06.45 Breakfast - Canteen
- 07.30 Departure of participants



# Annexures

## **ANNEXURE I: TRANSCRIPTION OF FOCUS GROUP MEETING (2<sup>ND</sup> GROUP)**

Note: This focus group meeting was the second of two focus group meetings. The venue of the meeting was the Institute of Water Education on 12 June at 19:00.

For purposes of the transcription research assistant (Nana) will be abbreviated as **R** and the responses would be reflected as **P**. Please note that a numeric is added to P where the response is from a different participant. The numeric is only reflective of the sequence of response and does not imply that it is the same participant in each question.

**R:** Thank you all and welcome to the meeting tonight. Please make yourselves comfortable. As mentioned at the beginning of the training programme, we indicated that Silverani was doing a study on the impact of the HVWSHE programme. This session is an information gathering session and you are to freely express your feelings and opinions. We have some questions to guide us and hope you will share your experience in answering them. Please note there are no right or wrong answers to any of the questions and your sincere input would be most valuable. You may want to discuss the questions so as to enable us to get as much information on the various questions. A few minutes will be used for discussion before the responses are taken. There are some general points I wish to bring your attention to; firstly that we are tape recording the meeting so that we can capture the discussions and responses; secondly we should not all talk at the same but allow each other to share in discussions and experiences with the entire group. Also note as mentioned before that confidentiality would be ensured and that you are free to withdraw from participation at any time. Is there any questions?

**P:** If we want to say something do we just raise our hands?

**R:** Yes and you will given an opportunity to speak. Ok, we will commence with the discussion now, we would like to know; in what ways did the training influence your knowledge and awareness of water, sanitation and hygiene issues in your communities and in Lao PDR as a whole?

**P1:** I think it might be different for my colleagues here, but we do subjects like Geography and Natural Science where we are expected to teach learners about things like rivers, forests and so on, but we do not for instance know or teach about what is currently happening with the water supply of the Mekong for instance, so I think we know about water, where we get it from and the

# Annexures

uses but we are not aware or teaching about the health of the Mekong river and whether it is able to still supply our needs in Lao PDR

**R:** Yes, I see maybe we can say how this training changed your knowledge and awareness of the water problems in Lao PDR

**P2:** We were just discussing and feel that there was more awareness brought about by this training of what is happening regarding water problems in Laos

**P3:** this training gave an opportunity to learn about water and sanitation and things such as information on how fertiliser can be used in water purification and things such as hydroponics which is new and useful knowledge to me.

**P4:** I agree, we all have been aware of the things in our curriculum for these subjects but the added knowledge such as P3 mentioned in not in the curriculum and is new and useful information.

**P5:** Actually, our school has implemented something like this called the “quality of life” which is similar to this but this training increased my knowledge even further, the information I got from this training is usefull. Ehhh....I think it is the same for other schools, I may be mistaken.

**P6:** Yep, it is the same for our school and I agree that there is more information in HVWSHE especially about what the water situation is around the world and in our country, Phhuff... I was surprised that this is the case about water shortage and so on...

**P7:** Actually, to think about it, this training was an eye opener for me and my colleagues from our school and we could see how different things are and how it can be used in our school.

**R:** Maybe you can tell us more about what you mean by how different things are

**P7:** Ehhmm.... maybe I should put it like this; the training helped me to compare the situation in Laos and Thailand and how this can be implemented in my community for example water treatment at the school.

**R:** Does anyone else want to add to this? [No Response]

**R:** Ok, tell us what were your attitude/s towards water, sanitation and hygiene prior to the HVWSHE programme?

# Annexures

**P1:** Ohhhh...you really want to know, I was surprised that as a teacher I did not know about this problem Laos, I guess we were not aware of these things before the training and especially that many cities of Laos are experiencing problems.

**P2:** I cannot believe that before this training I was so unconscious about our water and sanitation problems. Sometimes we heard of children getting ill because of playing in contaminated water, but we did not think we could control or were responsible for any of these things, just imagine....

**P3:** Actually to be honest, I never worried about water and used water as I wished, but ehh... now I feel bad about this behaviour! Anyhow this training has made me wiser now.

**P4:** It is difficult to admit our attitudes as it is not a good reflection of teachers but I am sure this knowledge from the HVWSHE has changed all of that now...

**R:** Yes, that is what we would like to hear from you, what were these attitudes you had before the training.

**P4:** For instance, I used to use a lot of water in the shower and now I must rethink wasting water.

**P5:** I think P4 is right as we all may have had similar attitudes where we were wasteful with water, but we can now use this information to make changes in our schools and our lives.

**P6:** Yes water wastage and lack of knowledge made the problem worse

**P5:** I think this training will help us with this problem since we can now apply ways to saving and using water wisely which does not cost money, such as the ones observed in this school

**R:** So your attitude before the training was different to what it is now?

**P1:** It was indifferent that is what it was! Ha..ha..ha!!! [All laughing]

**R:** Anything more to add? [no response]; Well then let us talk about how did the training influence your personal beliefs and attitudes towards water, sanitation and hygiene behaviour?

**P1:** Again, after discussing this we think that there is a increase in awareness about the water problem and we would now look at conserving water and being more aware of what can be done to improve this, but I think we all have something to say about how we have been influenced.



## Annexures

**P2:** It made me more aware of the problems that we face regarding water use and poor sanitation practices and it might not be so prevalent in our school as we have piped water. I think I have personally realised that I must not waste water and share this knowledge with others.

**P3:** As mentioned before I used to not think about water when using it and now I feel that I should change my attitude and be considerate when using water.

**P4:** I think what is important here is that the training has given us more information about a problem that we may not have been aware of, but I believe that this knowledge has been useful in changing our attitude towards water and sanitation

**R:** Could you expand a bit on how it affected your personal beliefs or attitude towards water

**P4:** Well lets see...ehmm...What I have learn't here at SPW I will not forget as it has changed my perception towards water conservation, it may take some time, but I believe that we can implement it and try it in our schools but I am not sure if I can change the behaviour of the learners the same way as I have changed

**P5:** Really speaking, I will be looking at water and sanitation differently as I believe I have not been saving water and will change the way I do things

**P6:** I think my attitude before was not good but after the training I realise that things can be done and my attitude has therefore improved in the way I see the water, sanitation problem.

**R:** Were you using any form of values education in your classrooms before this training?

**P1:** Yes, values education is not new to our schools, there is the "quality programme" whereby monks come to the schools and teach the learners about life, social behaviour and meditation for example when we have question and answers session with learners at our school, the students are asked and they indicated that they are changed by the monks' education

**P2:** Yes, I think this is so for all our schools where the monks come in from time to time and teach the learners which is part of the Buchanan (integrated) system which includes moral education.

**R:** Discuss how your approach to values education was similar and/or different to the HVWSHE programme?

**P1:** As mentioned this is done by the monks and it is part of the moral education component.

## Annexures

**P2:** The monks' education is focussed on teaching the learners good social values.

**R:** Have you observed any changes in the learners with the "quality programme"?

**P3:** Yes, I think the learner's behaviour is acceptable

**P4:** The learners in my school are good and behave well but they are not bright at schoolwork!

**R:** Is there a relationship with the learners behaviour and their performance?

**P4:** Dr Jumsai mentioned to us in the training that he observed that the learners' concentration improved with the meditation and that they could remember better and performed well, I am not sure if the monks training is the same as the HVWSHE training...that's all

**P5:** I think maybe my friend P4 may have a point there, ehh..I think that the monks education include meditation but it is not the same as the light meditation used here at SSS. So they may be doing similar things but it is not the same.

**P6:** I also agree as the HVWSHE training has provided us with knowledge on how we can use values to teach our lessons but also made us aware of water, sanitation and hygiene issues. I think that the monks values education is not specifically on these issues and focus more on the learners' conduct and behaviour in society and guide learners to make right choices. Therefore the learners are well behaved.

**R:** Now that you have been trained, how will you implement values education in your classroom?

**P1:** We have been talking about this during the course of the training and even the discussion now, ehh...yeh...the thing is I don't think we all will consider using it since there is already existing efforts and the educational system has just recently reformed. The program has encouraged us and we will integrate continuously and will teach from the heart. We will not be able to implement all the extra-curricular activities outside school especially those requiring money, but we will follow the education program from the Lao MoE in terms of integrating activities.

**P2:** Earlier on my colleagues indicated that the 'quality of life' programme is operational in our schools whereby monks come to schools and provide values and moral education lessons; however, my school is located in a remote area and is not frequented by monks. I believe that such a values-based education approach would be more necessary in schools such a mine, where teachers teach with values.

## Annexures

**P3:** Well, it seems to me that the programme has benefitted me and I think that I will continue in my personal capacity to use this to improve my personal life

**R:** How do you plan to do this?

**P3:** I noticed that since I have been doing the light meditation as a result of it being done before each presentation, I became calm and is able to focus or be more attentive. So I will continue to do this on a personal level.

**P4:** Yes, I have noticed that about me too, but then we should consider the use of these techniques in our classes if it is permitted.

**P5:** I think we must first obtain permission to use the values-based approach; we will then be implementing this technique in our lessons. Perhaps we can motivate that the values based approach be used

**P6:** I believe that human values-based education will have a positive impact on learners' behaviour, and wish to implement this approach in my classes.

**P5:** Yes...but as I said before...I think we need to get permission from the Laos Ministry of Education first!

**R:** Well let us talk about what teaching strategies or approaches such as group discussions, games, role-play etc. used in the HVWSHE programme did you previously use in your classroom teaching?

**P1:** As a primary school teacher I use some of these strategies everyday, for instance story telling, song and games are ways I use to captivate my learners attention.

**P2:** Many of these strategies are taught to be used by teachers in their teacher training so I believe that all the teachers here would be using one or other strategy in their lessons.

**P3:** Yes, this is the way we can get learners involved in the lesson. I often arrange for quiz games and get the learners into groups, they focus on learning as they wish to do better than the other groups in the quiz, so I feel this technique is fun and the learners are motivated to learn.

**P4:** I often get learners interested in a lesson by doing some activity such as singing, story-telling and drama. In this way the learners become comfortable with being in the classroom and these activities encourage them to participate. We unfortunately do not have privileges such as sightseeing and outdoor classrooms as SSS, but I think using these methods to create a comfortable learning environment has worked

## Annexures

**R:** Which of these strategies or approaches are you definitely going to use once you get back to your own teaching situation?

**P1:** Yes, I will continue to use the ones I am using, but I think that I got some new ideas on the training such as the game on water that we seen the learners do with the integrated interdisciplinary lesson.

**P2:** As a secondary school teacher, I would consider using more of the experimental activities, excursions and instead of story telling use videoclips if possible.

**R:** Why have you considered these?

**P2:** I think that the information gathered on our visit to the SSS farm and IWE has been a meaningful experience where we were able to see so many practical approaches to recycling, water purification and conservation. This is not always understood by just reading about it in a magazine; I think I would like to take my students on field excursions where they can experience the practical implementation of conservation projects. I do not know of such places in Lao PDR but I think video clips can be made and used.

**P3:** The financial resources to do excursions and field visits are virtually not possible at all

**P4:** It is also difficult as I think that such water museums such as IWE is unheard of in Laos

**P5:** If a water museum such as the one here at IWE is built in Lao PDR, perhaps in a suitable location such as the teacher training college, it would be possible that both teachers and their students could visit this museum and be educated on best practices in water conservation, sanitation and hygiene. This museum should be updated continuously on ongoing improvements and practices such that is relevant to the needs of Lao PDR.

**P4:** Perhaps UN-Habitat can build a similar museum as IWE in Laos and this will be a way of receiving the latest information on water, sanitation and hygiene education.

**P6:** People, perhaps we need to think of what we can do now and that is realistic!

**P5:** Like what my friend?

**P6:** I am most certainly going to introduce experiments, which do not involve expensive items, in my lessons as a lesson activity. I will use examples of SODIS and sand filtration methods I learned about on this visit.

**R:** So how did the training influence your perception about using HVWSHE to bring about a positive change in your learners behaviour towards water, sanitation and hygiene?

**P1:** What I have learn't here at SPW I will not forget as it has changed my perception towards water conservation, it may take some time, but I believe that we can implement it and try it in

## Annexures

our schools but I am not sure if I can change the behaviour of the learners the same way as I have changed

**P2:** My perception about water and sanitation has changed with this training and I think the same can happen for the learners

**P3:** I think that it can bring about the same change in the learner as it did for me, but my concern is that I may not be able to implement it properly and this may not have the same effect on the learners

**P4:** I agree with P3 as I am not sure how to choose the values from a lesson, like in a topic on the lesson presentation

**P5:** Well I think we had many things to learn and maybe if there is a follow-up on this training we will be able to learn more and see if we are implementing correctly.

**P6:** I think that follow-up training or even a support programmes where we can meet and discuss how the implementation is going.

**P7:** If such follow-ups are done in Laos, then other teachers in our schools can also get exposure to this programme.

**P8:** I think that all teachers in the school get HVWSHE training as the learners will be continuously exposed to this approach rather than in some classes they are taught using values-based approach and in others not. I think that schools should consider adopting the programme.

**R:** In the HVWSHE training programme the issue of the teacher as a role model was discussed. What are your feelings with respect to the role of the teacher?

**P1:** In Laos it is generally accepted that the teacher be a good role model for their learners and to the community.

**P2:** It is difficult to maintain the image of a good role model as it is not always easy to maintain discipline in the classrooms. Some learners are just disruptive and as the teacher I cannot remain calm at all times.

**P3:** I think that it is easier to be a role model teacher in a controlled environment such as SSS school as it is a boarding school

**R:** Why do you think that it is easier to be a good role model in a boarding school?

**P3:** Because the learners in the boarding school is constantly exposed to the good role models of their teacher throughout the day and they then emulate or practice this as the environment encourages good behaviour, this is not the case with many of our learners, when they go home

## Annexures

or return to their communities, they are exposed to other influences, sometimes the learners have abusive environments and the best way they can handle it is to react or emulate a mannerism which they believe is justified. And they bring this behaviour to the schools!

**R:** Does this mean that being a good role model in a non boarding school would not help?

**P4:** No, it will help, but the effect may not be as pronounced as in the case of continuous exposure to good role models.

**P5:** I think what we are saying is that we are expected to be good role models anyhow since we are teachers, but sometimes it is so difficult to be perfect. We have heard from the learners at SSS that the teachers are good role models and I guess I will put in more effort to be a good role model

**P6:** I think the same goes for many of us, we will put more effort into being good role models to learners.

**R:** Do you believe that the human values integrated approach used in this training programme has inspired and motivated you sufficiently to adopt this approach in your classroom teaching?

**P1:** Yes from our discussion we agree that we are motivated by HVWSHE programme and we would like to use it in our lessons

**R:** Why do you say so?

**P1:** Well, we agree that it has changed the way we think about water, sanitation and hygiene issues. This programme would also change the way learners think about water issues and therefore we think that this programme can be used provided that permission to use the approach is given by the Ministry of Education

**P2:** I am very inspired by this programme and will propose a plan to my school principal on how to implement this but I suggest that it should commence as a pilot study and propose that the other teachers in my school also be trained

**P3:** Yes, I agree with this suggestion, but I am not certain if this can be done at the same time as the 'quality of life' programme. We can only know this if the Ministry of education approves that we use this programme as well.

**P4:** As I mentioned before schools such as mine is in a remote area and monks don't get to come there often enough, so I think it is necessary that the teachers be taught this programme as it will benefit our learners and the community.

**P5:** Nonetheless we still need approval from the education authority to use the programme in our schools.

# Annexures

**R:** Well then, in what ways did the training influence your confidence on human values and water sanitation and hygiene education?

**P1:** We discussed this and we feel that confidence in the programme is there but we are not sure if the way we implement the programme will bring the same changes as we had experienced

**R:** So you are confident in the programme and what about how your confidence was influenced?

**P2:** Yes, I am very confident in the human values water training programme, it made me change my attitude towards water problems and I am confident that it can do the same for our learners and communities

**P3:** Ehrrr, I think you mean as individuals how we were influenced,...well I think we answered this before by us being motivated and the change in our attitude is what gives confidence about the programme

**P4:** Lets see how can I say this ....hmmm,.... my confidence in water, sanitation and hygiene was greatly increased by the awareness and knowledge acquired during this programme, I am confident that this will work for the learners and other teachers, but I believe that more practice is needed for use of the techniques for values integration

**P5:** I think we are confident in the programme but not so much confident we have the skills so eh you know...its , I am confident that the new information can be used in Laos ..but I think I need to have more practice on using the programme...yes that's it!

**R:** Today we observed a real classroom lesson, what are your feelings about today's lesson demonstration on integration?

**P1:** Actually this was so useful as I now understand how we suppose to do the lesson presentation, we could have done better but also the time was not enough

**P2:** I think that SPW should have provided one or two more actual lessons for us to observe ... I think this should have been done before our presentations...Ehmmm, I think we would have done better

**P3:** Yes I agree and this lesson was for lower primary school, perhaps also some real classroom observations for upper primary and secondary school would be useful as we would then be able to see how this works and when the values are integrated.

# Annexures

**P4:** I suggest that SPW consider increasing the programme time and include more real classroom observations before we get to do our presentations, It would have been more helpful to us in planning our own lessons.

**R:** So you believe that you would have performed better if you had more real classroom lessons before the lesson observation session?

**P1:** Yes, it is so and also the time given for us to present was not realistic, this real classroom lesson observed today was about 45 minutes and we had to do ours in less than 20 minutes, it's obvious we could not do justice to the lesson.

**P2:** I think the times for lesson presentation should be more realistic or close to the lesson times in normal teaching, in fact it would be preferable if these lessons were observed in our own classrooms back in Laos

**P3:** Yes we also need to be realistic about the class sizes; in Laos we have many learners in one classroom, over forty with one teacher so the time to get each learner involved in like the water activity of passing the bowl of water around would take up more than 20 minutes

**P4:** I think I gained some valuable information on how the lesson is to be done and perhaps a follow-up must be done or additional training where we have more such real classroom lessons included. That would be really great, I think!

**R:** Ok, is there anything else you would like to add or discuss?

**P1:** Yes, ehrr...We have discussed this earlier with our colleagues and we strongly recommend that UN-Habitat supports a follow up programme so as to share and exchange ideas on implementation, we also require infrastructure development in some schools, since it is not practical to share knowledge on good sanitation practices when some schools and surroundings do not even have sanitation facilities

**P2:** Yes, Dr Jumsai also mentioned the importance of the learning environment when discussing the model and the SSS is a boarding school that has enough space, very beautiful environment with a lake and mountains and also adequate sanitation facilities. I think that the schools in Laos do not have these benefits in fact some don't have piped water.

**P3:** Some of our schools do not even have sanitation facilities, children have to relieve themselves outside and these outside environments are not suitable for activities. It would be appreciated if all schools, even remote ones have sanitation facilities for teachers and learners



## Annexures

**P4:** Yes, it only makes sense to talk about managing sanitation issues if we get sanitation facilities. I think part of the programme should include how to build toilets so that schools that don't have proper sanitation can get the learners and community involved in such projects

**P5:** I think that would require financial resources which we don't have, but perhaps there are more cost effective ways.

**P6:** Perhaps in the follow-up or additional training these things that affect our individual schools can be discussed.

**P7:** Hang on friends...I was a bit concerned, since some of the trainings I went on, gave some hand-outs or study reference or something, but we didn't get anything here...now if for instance we had notes on how to do light meditation...we would have been able to do this correctly in our observation lessons...so perhaps it's not policy share some light on this

**R:** I do not know, but we can ask the programme co-ordinator tomorrow

**P8:** Yes, the power-point presentation was in English so I assumed that they were preparing the Thai translations and that's why there were no hand outs

**P9:** people I think what we want to say is that we would have appreciated hand-outs or training notes during the training so we could have referred to them when doing our exercise on lesson observations

**P10:** Hang on people....we also need some kind of reference or support when implementing this. So it is important for me to have received something I can refer to.

**R:** Ok, is there anything more?

**P1:** We believe that they should have given this training over a period of two weeks as the time we spent at the SSS farm, the IWE and the time it took for preparing lessons and so on, was not sufficient.

**P2:** Yes, the training was good and had lots of information but the time was not enough for us

**P3:** I think that on behalf of all the participants want to thank SPW, NCA and UN-Habitat for this programme. I think we are all pleased with the knowledge we gained and is of the opinion that we will implement the programme in our schools if Lao PDR Ministry of education has approved.

**P4:** I just want to add that SPW has been a wonderful host, the food and accommodation was excellent, the people here are very kind and helpful....I think it is because of the values-based programme here...[all laughing]

**P5:** Yes, I think we all got to know each other very well and we will miss the fun we had here on the training. I think we all did well in the basketball and football games we had against the SSS.

## Annexures

The facilities here are excellent and I think if we had such facilities we would have beat them...in those matches [all laughing]

**P6:** You were just not as fit as they were that's all..[all laughing]

**R:** On that note, the researcher, Silverani and the sponsor UN-Habitat would like to express our appreciation to you all for participating and sharing your experiences of the HVWSHE programme. I think we will miss you too...especially the jokes we shared at meals and so on. We will officially say farewell to you tomorrow before our departure to Lao PDR. Silverani has after listening to your input requested that she visit some of the schools in Lao PDR in the coming days, so after confirming with the UN-Habitat office we will still see some of you at your schools. Thank you once again and see you all tomorrow.