TEACHING ECONOMICS AT SECONDARY SCHOOL LEVEL IN THE MALDIVES: A COOPERATIVE LEARNING MODEL

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قال رسول الله صلى الله عليه وسلم : "يد الله مع الجماعة..."

- رواه الترمذي-

God's hand is with the group

DEDICATION

This thesis is dedicated to my late father Nizar and my mother Zubaida

In deep gratitude for their parenting

ABSTRACT

The dominant approach to the study of economics at secondary school level in the Maldives is teacher-centred methods based on behaviourist views of teaching and learning. Despite considerable research on the benefits of cooperative learning in economic education at the post-secondary level, very limited research has been conducted in secondary school classrooms in order to find ways of improving teaching and learning of economics. The purpose of this study was to enhance the teaching and learning of economics at secondary schools in the Maldives by trialing a cooperative learning model to enhance economics teachers' awareness of the impact that cooperative learning might have on student learning. This study explored a cooperative learning approach to teaching and learning economics in secondary schools and investigated teachers' and students' perceptions of cooperative learning.

Some elements of both ethnographic and grounded theory methodologies were employed and specific data collection methods included workshops, classroom observations, interviews, video tapes and student questionnaires. Nine teachers and 232 students were involved in this study. The research was conducted in three stages (pre-intervention, workshops to train the participants, and post-intervention) over a period of three months in three selected schools in Male', the Maldives. Four research themes were derived from the analysis of both pre and post intervention data. These themes were teaching issues, learning issues, cooperative learning implementing issues, and students' and teachers' reactions to cooperative learning.

In the pre-intervention phase, the teachers taught in a traditional manner, but after the intervention they incorporated elements of cooperative learning method to teach economics in their selected classes. The overall findings showed a considerable change in teachers' and students' attitudes and perceptions about traditional teacher-centred methods towards more student-centred methods of

cooperative learning. It was evident that both teachers and students perceived cooperative learning to be an effective method of teaching. For example, the findings revealed that both teachers and students understood and could see the benefits that cooperative learning offered to the teaching and learning of economics. The students indicated that they liked working in groups and appreciated getting help from other students. In addition, the results revealed that students' interactions and involvement in classroom activities, as well as interest and motivation to learn economics, increased during the implementation of the cooperative learning model.

Furthermore, this study found a mismatch between home and the traditional teacher-centred school culture in the Maldives. In contrast, the findings suggest that the principles of cooperative learning match well with the cultural values of Maldivian society. Consequently, a revised model of cooperative learning is presented that includes the aspects of culture. Jordan (1985) argued that "educational practices must match with the children's culture" (p. 110) and thus culturally responsive teaching can help to minimise confusion and promote an academic community of learners that enables students to be more successful learners (Gay, 2000).

This study suggests that training teachers and students for cooperative learning is salient for effective implementation of cooperative learning for a positive influence on students' learning and teachers' pedagogy. However, further research should be conducted to examine other aspects of teaching and learning which may also enhance this relationship.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

THE THESIS AND ITS CONTEXT

1.1 INTRODUCTION

Economics is taught in some form in the secondary schools of nations throughout the world. It has been taught as a stand-alone examination subject to prepare students for various school certificate programmes. It has also been integrated with and taught through personal, social and career education programmes, as well as through other subjects via a process of subject permeation (Jephcote, 2004). Economics teaching at this level of schooling appears to be important for the development of the economics understanding of students. Although economics courses are offered in universities, it is argued that the best opportunity for expanding the economic education of the youth of a nation occurs in secondary school (Caropreso & Haggerty, 2000; Walstad, 2001).

However, a review of the literature on economic education suggests that economics as a school subject together with how it is taught and learnt, appear very much under-researched in many parts of the world (Jephcote, 2004, Walstad, 2001). Apparently, little attention has been given to the improvement of teaching and learning of economics in recent decades (Becker, 1997; Walstad, 2001). The available evidence from the last few years shows that passive learning based on traditional methods of "chalk and talk" seems to be the most widely used teaching method, characterising the 20th century style of economics teaching (Becker & Watts, 2001; Benzing & Christ, 1997; Siegfried, Saunders, Sonar, & Zhang, 1996).

Consequently, growing concerns have been raised over a number of years about the impact of teaching methods on student achievement, and there are criticisms of a lack of knowledge and skills among the secondary school graduates and their inability either to apply school knowledge to real life situations, or to communicate effectively in workplaces (Anderson, 1992; Becker, 1997, 2000).

This study, therefore, intended to explore issues related to the teaching and learning of economics at secondary school level in the Maldives, and investigates how a cooperative learning model could help students learn economics.

My classroom observations as a teacher educator in the Maldives suggest that the dominant method of teaching employed by the teachers in secondary schools is essentially traditional. In contrast to the traditional methods of teaching, cooperative learning provides opportunities for students to interact with others and work together in small groups to help each other to achieve the learning goals (Johnson & Johnson, 1989; S. Kagan, 1992; Slavin, 1990). Such interaction amongst students is believed to help them to construct their own understanding through discussion both inside and outside the classroom (Bartlett, 1993, 2006; Becker & Watts, 2001, 1998; Benzing & Christ, 1997; Siegfried et al., 1996).

This chapter therefore, outlines and discusses the rationale for conducting the present study. It also outlines and describes the research context before concluding with an overview of the thesis.

1.2 RATIONALE FOR THE STUDY

The aim of teaching economics for each of the three largest groups of students who study economics—secondary school students, undergraduate students, and post-graduate students—differs. For example, economic education provides an intellectual training, a preparation for citizenship, and a vocational training for a business career. Despite the differences in educational level, one reason for introducing economics into the school curriculum is to foster the learning of economics, set in the social and political environment in which students live. Schug (1985) stated the main aim of economics teaching in schools is "to foster in students the thinking skills, substantial economic knowledge and attitudes necessary to become effective and participating citizens" (p. 2).

The argument for economic education for citizenship applies equally to all students since each of them is a future citizen. According to the Maldivian secondary school curriculum one of the aims of teaching economics is to participate more fully in decision-making processes, as consumers and producers

and as citizens of the local, national and international community. Hence, economic literacy is emphasised as a key to effective citizenship in a free society—a society based on democratic and market economic principles. With respect to this Banaszak (1987) argued that "economically literate citizens, because they possess an understanding of economic generalisations and concepts, will enjoy a more complete understanding of their world, be able to make reasoned decisions, and be more fully in control of their economic future" (p. 2).

However, the world's leading economic education researchers (for example, Anderson, 1992; Becker, 1997, 2000; Walstad & Soper, 1988) have questioned the aims and effectiveness of economics teaching in recent years. It appears that lack of content knowledge and skills among the graduates and their inability to perform effectively in workplaces raised deep concerns among parents, teachers, business communities, teacher educators, researchers, and so on. For example, a survey in the US carried out by Walstad and Soper (1988) found "most students who have completed a secondary course in economics still exhibit significant deficiencies in their knowledge of economics, especially macroeconomics" (p. 10). My own experience as a teacher educator also indicates similar deficiencies in knowledge and skills amongst secondary school economics students in the Maldives (Nazeer, 2002). It is quite a serious and growing concern among teachers, parents, teacher educators and the business community at large in the Maldives (Ministry of Communication Science and Technology, 2001).

Many of my former students at the Faculty of Education (FE) of the Maldives College of Higher Education identify that their lack of knowledge and skills is largely attributable to being taught by rote memorisation and sitting passively in classrooms. Consequently, they quickly forgot what they studied or memorised for their examinations. Some parents of secondary school students also brought to my attention their dissatisfaction with poor teaching practices in economics at secondary school level in the Maldives. This supports my own classroom observations during a period of two years as a school experience coordinator at the FE and as a classroom supervisor. There was a general pattern of "chalk and talk" or one-way transmissive teaching as a teaching strategy employed by the economics teachers in secondary schools. I estimated around 90 per cent of a 35-

minute classroom period was made up of teachers talking and dictating notes from their notebooks. Some experienced teachers still used the same teaching notes that they prepared around 10 to 15 years previously.

Much of the mainstream economic education research has been primarily concerned with the benefits, costs, production, and financing of the dissemination of knowledge about economics (Siegfried & Fels, 1979) and has been focused on the post-secondary level. Although the quantity of research on these aspects of economic education at that level has declined during the past decade, a considerable amount of research was done on the process of teaching economics in the same period (Becker, Highsmith, Kennedy, & Walstad, 1991).

A search of the literature located few studies at secondary level. It appears that research on economic education at secondary schools has been neglected (Walstad, 2001). However, some limited research has been done on economic education at this level. Much of the research (for example, Banaszak, 1987; Becker, Greene, & Rosen, 1990) focused on general issues regarding the nature of economic literacy, such as basic knowledge and skills needed for citizenship, rather than exploring ways of improving teaching and learning of economics in secondary schools.

It is widely accepted that what can be termed traditional methods of teaching have dominated many of the classroom practices at both secondary and tertiary levels for many years (Becker & Watts, 2001). Consequently, similar patterns of economics teaching practices were seen in many parts of the world. For example, a five-year survey of teaching methods in US undergraduate economics courses found little variation between the results of 1995 and 2000 (Becker & Watts, 2001). A similar survey found that academic economists consistently lectured for approximately 80 per cent of their class time (Benzing & Christ, 1997; Siegfried et al., 1996).

However, because it is widely accepted that students respond differently to different teaching approaches, and learn in various ways some research in economic education suggests the importance of employing a variety of teaching

methods in order to provide effective learning for all students (Becker & Watts, 1995; Siegfried & Fels, 1979). For example, a student could benefit from direct explanation in sometimes, and from inquiry based approaches at other times (Becker, 2000). With respect to the use of alternative methods Goodlad (1984) argued the importance of using alternative teaching strategies, and urged the setting up of training programmes for existing teachers to enhance learning, reasoning and positive attitudes. In addition, Becker (2000) argued that students would prefer a variety of instructions just as we prefer variety in our daily routines.

Furthermore, various models of teaching and theories of learning provide insights about how human beings learn. For example, contemporary learning theories such as constructivism suggest that knowledge is a product of ways in which the student's mind is engaged by classroom activities to construct knowledge and develop understanding through interactions (Fosnot, 1996; Joyce, Weil, & Calhoun, 2004; Nuthall, 1997; Richardson, 1997; Schunk, 2004). There is research evidence that students generally prefer to be actively involved in small group learning rather than always sitting at a desk as passive learners (Becker & Watts, 2001, 1998; Benzing & Christ, 1997; Ellis, Fouts, & Glenn, 1991). Consequently, through active participation in cooperative learning students can perhaps develop more positive attitudes toward teaching and learning (Caropreso & Haggerty, 2000; Johnson & Johnson, 1989; S. Kagan, 1992; Slavin, 1990).

Therefore, the aim of this study is to explore issues associated with current teaching methods at secondary school level in the Maldives. In particular, this research investigated the incorporation of a cooperative learning model that could be used by teachers to help students learn economic concepts and content in more meaningful ways. The study will:

- Establish baseline information about the current teaching approaches;
- Provide opportunities for teachers to learn the basic principles of cooperative learning methods and how to implement them to teach economics in secondary schools;

- Provide opportunities for students to interact with others in small groups to construct their own understanding of economic concepts both inside and outside the classroom;
- Provide opportunities for students to learn social and small group skills needed for effective engagement in cooperative learning; and
- Encourage teachers and students to engage in cooperative teaching and learning in the classroom environment.

Although the discussion in this section suggests the effectiveness of a particular teaching method for classroom practices, it may not be enough to accept fully and without question what research claims to be effective teaching methods. Therefore, claims that cooperative teaching can lead to improvements in students' learning need to be tested in classroom settings. As Good and Brophy (2001) stated we must look in classrooms and really see what is happening there in order to judge what methods of teaching work and which do not work and under what circumstances. Hence, to achieve the aims outlined earlier, this study intends to implement a cooperative learning model to see how effective it would be to teach economics at the secondary school level in the Maldives.

The next section of this chapter, therefore, explores the setting of the present study in order to provide background information about the nature of the context where the study was conducted.

1.3 THE SETTING OF THE STUDY

This study involved collecting data from selected secondary schools in the researcher's homeland—the Maldives—where the research was conducted. Hence, this section aims to briefly outline and describe the geographical, historical, cultural, and educational context of the Maldives in the following subsections.

1.3.1 Geographical context

The Maldives has geographical features which impact upon the provision of education. The Maldives comprises over 1190 coral islands of which only about 196 are inhabited including the capital, Male'. The population of the archipelago

according to the population and housing census 2006 of the Maldives is 298,968 people (Statistics Division, 2006).

The archipelago is situated in the Indian Ocean close to Sri Lanka and India, which are located 670 kilometres and 600 kilometres to the east and north respectively.

There are 20 atolls in the Maldives. Each atoll consists of a number of inhabited, and a great number of uninhabited islands. Each of these islands is surrounded with reef and there are shallow lagoons within the atoll's water. The islands in the Maldives are very small, low lying, and scattered over a sea area of approximately 90,000 square kilometres. The total land area of the Maldives is only 290 square kilometres with the sea forming over 99 per cent of its territory (Ellis, 1997).

The Maldives location in the Indian Ocean has placed it in the strategic and major marine routes between Africa and Asia, and the Middle East and Asia. This has contributed to its influence on world affairs for a long time (Ellis, 1997). In addition, the neighbouring countries, including Sri Lanka and India, have had cultural, social, and economic ties with the Maldives for centuries. Moreover, the interaction between the people of the Maldives and the foreign traders has contributed to the development of the social, political and economic system of the country.

1.3.2 Historical context

The early history of the Maldives is not clearly determined. It is believed that the first settlers of the Maldives may have migrated from neighbouring countries such as Sri Lanka and Southern India. There are indications of the Maldives being populated as early as the 4th century B.C. (Ellis, 1997).

As has been indicated above, the Maldives being located on major sea routes in the Indian Ocean led to it being visited by sailors and traders from countries on the Arabian Sea and the Indian Ocean littorals. The social, political and economic development of the Maldives was influenced by these traders. For example,

because of the increasing trade contacts with the Arab seafarers, Islam became the faith of many settlers and later the official religion of the country in 1153 (Nazeer, 1997).

The Maldives was ruled by a series of dynasties that continued for over 900 years. Although the Maldives was governed as an independent sultanate for most of its history from 1153 to 1968, the only limitation upon its independence occurred in 1887 when the Sultan of the Maldives agreed to become a protectorate of the British Government (Ellis, 1997). This was an unusual arrangement where the British ensured the defence of the Maldives yet were not involved in any way with the internal affairs of the country.

Independence was achieved again in 1965 and the Sultan of the nation was replaced by a republic in 1968. The Maldives became a member of both the United Nations and the Commonwealth of Nations in 1965 and 1985 respectively.

Since 1965, the people of the Maldives have taken steps to build their country's social, political and economic systems. The development of a new constitution was a major development in the country after independence. The development of the Dhivehi language (the official language of the Maldives), and the improvement of the traditional systems of education based on learning Dhivehi, Arabic script and religion were the fundamental steps towards the modern development of the Maldives.

1.3.3 Cultural context

The origin of Maldivian culture is cloaked in mystery, but many believe that the culture of the Maldives traces its roots to a number of sources including the neighbouring countries and some more distant, as in East Africa, the Malayan Archipelago, and Arabia through its conversion to Islam in the 12th century (Mayerhofer, 2003).

Islamic tradition has been central to the life of Maldivians since it embraced Islam in 1153. The main cultural events and major festivals in the Maldives are followed according to the *Hijuri* (Islamic lunar) calendar. Islam is an inseparable part of the

Maldivian culture and mutual aid to survive difficult circumstances is a dominant practice.

The Maldives population makes up a very close-knit island community. The cooperative nature of Maldivian culture and the extended family value system based on the Islamic teaching provide a safety net for the wellbeing of members of the family. Through these cultural values, people are urged to help one another in the island communities and encouraged to contribute to the care of children and the elderly. Despite the wide dispersion of the population across the many small islands, the system of extended families remain one of the strengths of this close-knit culture even today, especially in smaller island communities. The Maldivian culture has maintained its distinct identity of being a small close-knit island nation with one religion and one language—compared to other countries in the region—for centuries.

1.3.4 Educational context

The Maldivian educational system has evolved for centuries. Hence, this subsection briefly describes the educational context of the Maldives under the following subheadings.

Historical pattern

The traditional education system based on *Edhuruge*, *Makthab*, and *Madhars,* that focused on basic reading and writing of Dhivehi and Arabic as well as simple arithmetic, was the main type of education in the Maldives for a long time. The first challenge to this system occurred in 1927 with the establishment of the first boys' school in Male'. A section of this school was later opened for girls. Similar to the traditional system, teaching in these schools was largely based on rote memorisation and covered Arabic script, religion, Dhivehi language and arithmetic (Nazeer, 1997).

Attention to education throughout the 1960s was focused mainly on the two government schools in Male'. In 1960, the introduction of English medium education was the beginning of a modern educational era in the Maldives. Consequently, the medium of school instruction changed from Dhivehi to English,

and a curriculum based on the London General Certificate of Education was introduced. However, until the early 1990s secondary education was available only at English medium schools in Male'.

After a series of more recent social, economic, and political changes in the Maldives the most recent major development in education in the Maldives occurred with the establishment of a unified national system of education (Ministry of Education, 1995). This system provided a structure for a strong and reliable primary and middle school education base for the educational ladder in a national unified system of education (Ministry of Education, 1995). However, the main challenge for the implementation of such a system in the Maldives was the lack of qualified teachers and appropriate infrastructure. In addition, the establishment of primary and secondary schools in the atolls was another significant development in the Maldivian education system (Ministry of Education, 1995).

Present structure

As has been indicated the establishment of the educational reform programmes in the Maldives significantly affected the traditional system of education based upon *Edhuruge*, *Makthab*, and *Madharsaa*. Such reforms included the newly developed national curriculum for primary and middle schools, the construction of new schools in every corner of the Maldives, together with the expansion of education into the health and sanitation fields as well as into most areas of social development, including tourism and fisheries.

Formal education for children in the Maldives begins at the age of three. This is the pre-school level and lasts for three years followed by primary education at the age of six. Primary schooling lasts for seven years including primary Grades 1 to 5, and middle school Grades 6 and 7. Secondary schooling comprises both lower and higher secondary levels lasting for five years. Lower secondary begins at Grade 8 and continues through Grades 9 and 10. Grades 11 and 12 constitute higher secondary education.

The education system allows both private and local communities to establish and run their schools along with the public schools. The government provides assistance to the private and community schools in terms of teachers on the basis of supplying one teacher for every 35 students (Ministry of Education, 1995). To meet their demand for teachers some schools hire additional teachers from their own resources. According to the Ministry of Education (1995) the "future policy toward the atoll schools is still evolving but it appears that extending Government responsibility and influence will continue as the Government attempts to promote greater equity between atoll and Male' opportunities." (p. 7).

Secondary education

Secondary education in the Maldives consists of lower and higher secondary levels. Lower secondary consists of Grades 8, 9 and 10 and higher secondary consists of Grades 11 and 12. The expansion of lower secondary education throughout the country in the late 1990s is a significant achievement in the Maldivian education system. Previously, lower secondary education was limited to Male' schools but is now being extended to the atolls. This provides greater opportunities for students in the atolls to complete their lower secondary education and sit London-based school certificate examinations (Ministry of Education, 1995).

The establishment of the Centre for Higher Secondary Education (CHSE) in 1979, formally known as the Science Education Centre, enabled the development of higher secondary education, another important educational development in the Maldives. As a result of increasing demand for higher secondary education and the limited places available at CHSE (in some secondary schools and some private institutions, both in Male' and the atolls), many schools have started offering London GCE Advanced Level qualifications.

Secondary curriculum

The present secondary school curriculum in the Maldives is not indigenous in orientation, but was obtained from the University of Cambridge. The International General Certificate of Secondary Education (IGCSE) has been designed to

prepare students for further academic success, including progression to Advanced and Advanced Supplementary Level study.

However, Dhivehi and Islamic Studies curricula for secondary schools are locally developed for the preparation of Secondary School Certificate and Higher Secondary School Certificate examinations.

As has been indicated, secondary education begins in Grade 8 after completion of primary and middle school. Three streams are offered in secondary schools: science, arts and commerce. They provide students with an opportunity to decide the type of education they need for their career as early as the beginning of the first Grade in secondary schools. Normally, schools and parents provide counselling and guidance to the students in deciding their streams.

The next section provides an overview of the thesis.

1.4 OVERVIEW OF THE THESIS

The research findings presented in this thesis should be useful to classroom teachers of secondary schools who want to improve their teaching practices. It should also be useful to secondary school principals who are concerned with professional development of their facilities in terms of increasing student motivation and achievement. In addition, it should be useful to teacher educators of secondary level who train and certify new teachers.

The thesis comprises seven major chapters. The following outline gives the reader an overview of each chapter.

Chapter one provides a rationale for the present study with an outline of its objectives. It also provides an introduction to the thesis and its context that focuses on background information about history and the educational context of the Maldives.

Chapter two is a review of literature. This chapter begins by reviewing the literature on teaching and learning in general. This section specifically looks at the

teaching models and learning theories and how these models and theories influence teaching and learning. This chapter also provides background information on international trends in economic education. In addition, it specifically reviews the research literature on teaching and learning in relation to economic education, and critically examines current classroom practices in teaching economics.

Chapter three outlines the development of a cooperative learning model. It critically examines the cooperative learning literature, and outlines and discusses the reasons for cooperative learning as an alternative to competitive and individualistic methods of teaching. In addition, this chapter outlines and describes some widely used cooperative learning methods or models in order to develop a cooperative learning model for teaching economics at secondary school level in the Maldives.

Chapter four is the research methodology and design. This chapter outlines the qualitative research approaches of ethnography and grounded theory methods that included workshops, classroom observations, interviews, questionnaires, video tapes in particular. It also describes the research design in detail with reference to the data collection strategies used in this study. An outline of the research limitations and ethical considerations is provided before concluding with a description of how the research data were analysed.

Chapter five presents the thesis findings from the participants' points of view. It is organised into four main themes that emerged through the process of data analysis. These themes are: teaching issues, learning issues, cooperative learning implementation issues, and students' and teachers' reactions to cooperative learning.

Chapter six discusses the implications of the research findings presented in chapter five with reference to the research questions and existing literature. This is done to inform the research and further develop the cooperative learning model described in Chapter three.

Finally, Chapter seven summarises the main findings of the research. It also examines the research implications and contributions, and provides suggestions for further research before concluding the chapter with final thoughts about the present study.

1.5 CONCLUSION

As has been indicated earlier, this research focuses on exploring issues of teaching and learning of economics, and investigating the incorporation of a cooperative learning model to help students learn economics in more meaningful ways. In this regard, this chapter has provided a rationale for the present research, and outlined some geographical, historical, and cultural background information about the context. A brief overview of educational systems in the Maldives is outlined and presented together with an overview of the thesis.

In the next chapter relevant research literature on teaching and learning, various models of teaching and theories of learning will be reviewed.

CHAPTER TWO

A REVIEW OF THE LITERATURE

2.1 INTRODUCTION

Economic education in secondary schools has taken a variety of forms over the last three decades (Jephcote, 2004) and it has several attractive characteristics (Baumol & Blinder, 1991). Economics is a lively subject dealing with current and future problems; it touches our lives intimately; it is concerned with people; it studies many aspects of people's behaviour (Baumol & Blinder, 1991) and is therefore a very appropriate subject to study at all levels (Walstad, 1994). Given this significance, teaching economics can be defined as a process through which young people acquire knowledge and skills that contribute to the creation of wealth and to the satisfaction of human needs and wants (Baumol & Blinder, 1991).

However, Becker (1997) noted that the field of economics has placed too little value on the importance of teaching in recent decades and economics teachers are not keeping up with progressive education nor moving away from the traditional teaching methods of "chalk and talk". From my own experience as a teacher educator, the situation in the Maldives resembles what Becker has noted.

It appears that research in economic education at post-secondary level has declined during the past decade (Becker et al., 1991). Likewise, much research in economic education at secondary schools has not been undertaken during the same period (Walstad, 1990). However, there has been considerable research on teaching and learning processes over the past century. This research shows that there is no single universal method of teaching that is effective with all learners in all situations (e.g., Haigh & Katterns, 1984; McGee & Penlington, 2001; Westwood, 2006). Thus, the aim of this review is to examine research on teaching

and learning and to see if there are teaching approaches or methods that have relevance for economics teaching at the secondary school level.

The reviewed literature in this chapter was identified through a thorough search for relevant published and unpublished studies that are pertinent to the current research topic. These studies were drawn from psychology, sociology, cultural studies, and other disciplines as well as economics and education. Methods included conducting computer searches through the electronic online databases (e.g. ABI/INFORM, EBSCO, ERIC, JSTOR, ProQuest) and university catalogues, and examining bibliography and reference sections of the studies to identify further relevant studies.

This literature review provides an overview of the theoretical environment in which this study can be placed. The review will also contribute to the understanding and interpretation of the research questions addressed in this study. In addition, it can be used later during discussion of research findings presented in Chapter Five. Therefore, this chapter briefly reviews and presents the research, theories, and methods concerning teaching and learning in generic education, as well as teaching and learning in economic education and current classroom practices in teaching and learning of economics. Specifically, the chapter is organised into three sections, each providing theoretical insight into the development of the research context. The introduction is the first section. Succeeding sections review topical literature about the models of teaching and related theories of learning, research on teaching and learning, theoretical framework, theory in practice using cooperative learning, international trends in economic education, research on teaching and learning of economics and finally teacher change. A summary concludes the chapter.

2.2 TEACHING AND LEARNING

Teaching and learning is a complex process (Kane, Sandretto, & Heath, 2002). While this complexity of teaching and learning at various levels of education has been studied by various researchers (e.g., Ethell & McMeniman, 2000; D. M. Kagan, 1992) in the past, attempts to understand the nature of teaching and learning processes at different educational levels have led to the conclusion that

we still do not know everything about this complex matter. However, one aspect that academics agree on is that the vast majority of the problems associated with student learning can be "directly related back to the nature of the curriculum or the method of teaching" (Farkota, 2005, p. 10). Therefore, it is argued that teaching methods and curriculum materials need to be diverse (Reid, 2005) because one single method of teaching cannot suit all types of learning (McGee & Penlington, 2001; Westwood, 2006) due to the fact that students learn in different ways and at different rates. Common sense indicates that diverse techniques are required to achieve different learning objectives. In addition, one could argue that education has many types of contexts, techniques and approaches and it would be insufficient for a classroom teacher to know only one or two teaching methods. It is believed that a thorough knowledge of a number of teaching methods could lead to greater teacher flexibility and efficiency. Therefore, their ability to adapt those methods and combine them with others might offer valuable approaches that can enrich a teacher's repertoire (Ji-Ping & Collis, 1995). In support for using different teaching methods Joyce, Weil and Calhoun (2004) argued that teachers should not only be knowledgeable about the subjects they teach, but also need to be familiar with different methods of teaching and learning and be committed to use them for the diverse learning needs of students.

It appears that different methods of teaching and learning have been researched and developed, and many attempts have been made to categorise these methods in the past (e.g., Joyce & Weil, 1992; Joyce et al., 2004; Kauchak & Eggen, 2003). Often particular methods are placed somewhere along a continuum from 'teacher-centred teaching' at one end to 'student-centred learning' at the other (Westwood, 2006).

However, in the field of education, there is no clear consensus on what particular teaching method is best used in classrooms. The selection of an appropriate teaching and learning method to teach a particular subject depends on many factors including a student's age, ability, and level of development, the nature of the content, lesson objectives, resources, class time, and the physical setting in which the lesson will take place. In general one could say that teaching and learning experiences comprise subject content, methodological process and social

climate (Joyce, Calhoun, & Hopkins, 2002). Hence, it may take several years for teachers to acquire these teaching and learning experiences and progress from beginner to expert (Berliner, 1994; Darling-Hammond, 1998).

Finally, theories of learning provide a mechanism for understanding the implications of events related to learning in both formal and informal settings (Gredler, 2001). There are many theoretical perspectives on how human beings learn but no one theoretical explanation that exists accounts for the various types of human learning (Reid, 2005) because each theory of learning describes the key features of learning as the theorist defines them and focuses on identifying the factors that will lead to those outcomes (Gredler, 2001). However, learning theories such as behaviourism, information processing, and constructivism have their own clusters of characteristics (Armento, 1987), which together, provide some points of general importance and consensus from which teaching approaches can be developed.

Reviewing the characteristics of a selection of teaching models and theories of learning may be useful for exploring educational issues related to teaching and learning such as pedagogical approaches, teaching and learning materials, and the learning environments. It would also help to understand the theoretical perspectives that can inform the nature of these complex processes of teaching and learning. This section, therefore, reviews selected models of teaching, along with aspects of relevant theories of learning. The aim is to review some of the relevant learning theories that pertain to this particular study. The models are arranged into groups or "families", and these are outlined and discussed. Specifically, a justification has been arguing for a socio-cultural constructivist approach to teaching and learning economics at the secondary school level.

2.2.1 Models of Teaching and Related Theories of Learning

It has been argued that effective classroom teaching requires professional commitment in which teachers are required to use various teaching models or approaches appropriate to the diverse learning needs of students. A model of teaching can be viewed as a description of a learning environment including the teachers' behaviours when the model is being used (Joyce et al., 2004). Similarly,

Brady (1985) described the nature of models as "guides to the preparation and implementation of teaching" (p. 11). Models of teaching are helpful when planning lessons, developing curricula or designing classroom activities and teaching materials because they represent particular teaching approaches that underpin a meticulous set of characteristics to meet certain purposes. In addition, many teaching methods and learning theories are believed to have been designed specifically to help students acquire and operate on information (Ji-Ping & Collis, 1995). Furthermore, some argue that it is important to draw upon teaching models in day-to-day classroom practices because it is believed that how teaching is conducted has a large impact on students' abilities to educate themselves (Mafune, 2006).

Over the years a large number of teaching models have been formulated. Many of these models vary in precision, theoretical orientation, and critical components. Joyce and Weil (1992) and Joyce et al., (2004) reviewed a large number of such teaching models and chose a selection of them based on their utility and practicability in instructional settings. They merged those selected models under four 'families' of teaching that share orientations toward human beings and how they learn. These four families of teaching models are described as the information processing family, the behavioural systems family, the personal family and the social family.

It is not my aim here to review all those families of teaching models selected by the above authors extensively, since that is beyond the scope of this chapter. Rather, the following subsections briefly outline and describe the main features of each of those families of models with reference to some relevant learning theories in order to show how teaching principles associated with those families of teaching models link to learning.

The Information Processing Family

The models presented in the information processing family represent distinct philosophies about how people think and about how teachers can influence the way students deal with the information they are receiving (Mafune, 2006). In general terms information processing can be referred to as the way learners handle

information. The models of teaching that contribute to this family appear to be cognitive in nature and focus on the understanding of information and concepts. Cognition is a series of mental processes (Schunk, 2004) that include thinking, remembering, learning and the use of language. Cognitive theory usually relates to the role of information processing including the process of memory, organisation and neurological connections that are seen as central to this theoretical position (Reid, 2005). Generally, cognitive scientists model the human memory as a complex network that squares with what we know about how neurons in the brain are cross-connected in incredibly complex ways (Phillips & Soltis, 1991).

The information processing models have become dominant over the past 50 years, partly because of the insights the models advocated in describing and explaining cognitive processes such as thinking and problem solving. This led many to believe that if we are able to understand the connections between concepts, break down information and rebuild it with logical connections, then our retention of material and understanding are believed to be increased (Mafune, 2006).

As Joyce et al., (2004) noted the information processing family emphasises ways of enhancing students' innate desire to make sense of the world by acquiring and organising information, solving problems, and developing concepts and language for conveying them. Table 2.1 depicts the seven models of the information processing family that have been adapted from the *Models of Teaching* by Joyce, Weil, and Calhoun (2004, p. 26).

Information processing is a generic name applied to theoretical perspectives dealing with the sequence and execution of cognitive events (Schunk, 2004). As has been indicated these models focus directly on students' intellectual capacity and emphasise strategies that tap students' own natural curiosity and desire to make sense of the world around them (Joyce et al., 2004). These tools allow students to acquire and organise data, identify problems and generate solutions (Mafune, 2006). However, it appears the emphasis of these models varies in the depth of their approach, from a narrow focus on memorisation to specific types of inductive thinking, depending on the nature of their designed purposes. These differences and the nature of their aims are clear from the information processing

models in Table 2.1. Some models in this family in fact provide the learner with information and concepts; some emphasise concept formation and hypothesis testing by the learner; and still others generate creative thinking. A few are designed to enhance general intellectual ability (Joyce & Weil, 1992; Joyce et al., 2004).

Table 2.1: Information Processing Models

Models	Developer (redevelopers)	Purpose
Inductive thinking (classification)	Hilda Taba (Bruce Joyce)	Development of classification skills, hypothesis building and testing, and understanding of how to build conceptual understanding of content areas.
Concept attainment	Jerome Bruner (Fred Lighthall) (Tennyson and Cocchiarella) (Bruce Joyce)	Learning concepts and studying strategies for attaining and applying them. Building and testing hypothesis.
Scientific inquiry	Joseph Schwab	Learning the research system of the academic disciplines – how knowledge is produced and organized.
Inquiry training	Richard Suchman (Howard Jones)	Causal reasoning and understanding of how to collect information, build concepts, and build test hypotheses.
Advance organisers	David Ausubel (Lawton and Wanska)	Designed to increase ability to absorb information and organise it, especially in learning from lectures and readings.
Mnemonics (memory assists)	Michael Pressley Joel Levin Richard Anderson	Increase ability to acquire information, concepts, conceptual systems and metacognitive control of information processing capability.
The Picture-Word Inductive	Emily Calhoun	Learning to read and write, inquiry into language.

Although many researchers have explored the information processing models, the principles associated with those models have not always lent themselves readily to school learning, curricular structure, and instructional design (Schunk, 2004) because it appears that these models fail to capture the complexity of human learning. This does not mean that those models in the information processing family have little educational relevance, but rather indicates that many potential applications are yet to be developed (Schunk, 2004).

Related Learning Theories

The information processing family of models has its roots in information processing theory of learning which focuses on how people attend to environmental events, encode information to be learned and relate it to knowledge in memory (Schunk, 2004) that is seen as central to this theoretical position. The advocators of this theory propose that children's cognitive development occurs in stages and that learning of new skills and concepts should match these stages that involve different cognitive processes for various types of tasks (Moore, 2000). For instance, learning to read will require different processes from learning to spell (Reid, 2005).

Information processing theory has had important influences over the years and has been applied to learning, memory, problem solving, visual and auditory perception, cognitive development, and artificial intelligence (Schunk, 2004). As has been mentioned this theory provided insights into how students operate on information obtained either from direct experience or from mediated sources, so that they develop conceptual control over the areas they study (Joyce & Weil, 1992; Joyce et al., 2004). The main criticism of this theory is that it takes a mechanistic view of the mind and objectifies the human as an unimaginative passive object (Mayer, 1996). My experience as a classroom supervisor suggests the teachers in the Maldives provide very little interaction between themselves and their students in classrooms. In addition, they rarely provoke students into asking questions, although information processing methods of teaching and learning have pedagogical merits such as imparting solid information. The dominant use of teaching methods based on information processing theories of learning in many schools in the Maldives may be quite often a choice, because it may be a familiar method among the teachers and gives importance to them as directors of student learning.

The Behavioural Systems Family

Behaviourism is one of the oldest theories of learning upon which teaching approaches have been based, and it has been influential in education for many years. Behaviourism and some of its associated principles and philosophy is

believed to be useful to teachers and educators in terms of behaviour modification techniques and the place they have in classroom management and learning.

The behavioural systems family of teaching models are also known as social learning theory or behaviour modification, behaviour therapy and cybernetics (Joyce et al., 2004). As Ji-Ping and Collis (1995) indicated, this family of teaching models attempts to build efficient environments for sequencing activities and for shaping behaviour by manipulating reinforcement in which "teachers arrange special contingencies which expedite learning, hastening the appearance of behaviour which would otherwise be acquired slowly or making sure of the appearance of behaviour which otherwise would never occur" (Skinner, 1968, p. 64). Table 2.2 displays the models of teaching and their developers with a brief description of each individual model. It has been adopted from the *Models of Teaching* by Joyce et al., (2004, p. 34).

Table 2.2: Behavioural Systems Family Models

Models	**Developer**	**Purpose**
Social learning	Albert Bandura Carl Thoresen Wes Becker	The management of behaviour. Learning new patterns of behavior, reducing phobic and other dysfunctional patterns, learning self-control.
Mastery learning	Benjamin Bloom James Block	Mastery of academic skills and content of all types.
Programmed learning	B. F. Skinner	Mastery of skills, concepts, factual information.
Simulation	Carl Smith and Mary Foltz Smith.	Mastery of complex skills and concepts in a wide range of areas of study.
Direct teaching	Thomas Good Jere Brophy Wes Becker Siegfried Englemann Carl Bereiter	Mastery of academic content and skills in a wide range of areas of study.

The models in Table 2.2 were developed from an analysis of the processes by which human behaviour is shaped and reinforced in which the main emphasis of behavioural theory is the changing of the learner's observable behaviour (Ji-Ping & Collis, 1995). The behavioral systems family models of teaching consist of techniques designed to take advantage of human tendencies to modify behaviours

based on experiences and related positive and negative consequences, and offer an array of procedures that are extremely useful to teachers and educators (Mafune, 2006) that can usually be employed in most educational settings (Ji-Ping & Collis, 1995). In this respect Joyce et al., (2004) have stated that:

> because these models concentrate on observable behaviour and clearly defined tasks and methods for communicating progress to the student, this family of teaching models has a firm research foundation. Behavioural techniques are appropriate for learners of all ages and for an impressive range of educational goals (p. 33).

Teaching based on the models in this family tend to rely on exercises that provide the consistent repetition necessary for effective reinforcement of response patterns in which students learn passively through teacher-centred approaches. These teacher-centred models are often described as direct teaching and appear to play a limited but important role in a comprehensive education programme (Joyce et al., 2004). Behaviourist approaches seem not as evident in today's classrooms as in the past decades (Ryan & Cooper, 1995, 2004). However, many schools in the Maldives still follow these traditional teacher-centred methods to teach economics. The skills and knowledge are transmitted to students through formal, didactic, expository and teacher-centred approaches of lectures and direct explanations. The best learner is the one who can reproduce good results in the exam by memorising the content that has been taught. In addition, models in this family also tend to rely on the use of positive reinforcements such as verbal praise, good grades, and prizes. Research has shown the effectiveness of behavioural techniques with a wide range of problems, from phobias to social skill deficits, behavioural problems, and test anxiety (Mafune, 2006).

Related Learning Theories

As a theory of learning, behaviourism dominated much of the psychology of learning and teaching for the first half of the past century. Learning is explained in terms of environmental events. Mental processes are not necessary to explain the learning aquisition, maintenance, and generalisation of behaviour (Schunk, 2004). Behavioural theorists (e.g., Skinner, 1976) believe that learning takes place as the result of a response that follows on a specific stimulus. In other words, learners begin to connect certain responses with certain stimuli (Moore, 2000), implying that learning is a behaviour that can be influenced and enhanced by other

behaviours (Reid, 2004). The point of education, therefore, is to present the learner with the appropriate repertoire of behavioural responses to specific stimuli and to reinforce those responses through an effective reinforcement schedule (Skinner, 1976). This requires consistent repetition of the material, small but progressive sequences of tasks, and continuous positive reinforcement (Schunk, 2004). It is believed that learned responses would quickly become extinct without continuous positive reinforcement because learners will continue to modify their behaviour until they receive some positive reinforcement. The learner behaviour can be modified and learning is measured by an observable change in behaviour.

In addition, it appears that learning programmes based on behavioural principles are characterised by goals, rewards and targets (Reid, 2004). However, behaviourism and the methods of teaching it espoused are criticised as causing widespread underachievement of students (Hodson, 1988) because of missed opportunities to engage students more actively in their own learning.

The Personal Family

The cluster of models in the personal family of Joyce and Weil (1992) are consistent with humanism which emphasises holistic learning including people's capabilities and potentialities as they make choices and seek control over their lives (Schunk, 2004). In other words, the personal family models of teaching are based upon the perspective of the selfhood of the individual (Joyce & Weil, 1992; Joyce et al., 2004) as the source of educational growth, paying great attention to personal development and the processes by which the individual constructs and organises his or her reality (Ji-Ping & Collis, 1995). Table 2.3 summarises a list of models and the purposes of each model in the personal family that have been adopted from Joyce et al., (2004, p. 32).

Table 2.3: Personal Family Models

Models	Developer (redeveloper)	Purpose
Nondirective teaching	Carl Rogers	Building capacity for personal development, self-understanding, autonomy and esteem of self.
Enhancing Self-esteem	Abraham Maslow (Bruce Joyce)	Development of personal understanding and capacity for development.

In describing the models of teaching in Table 2.3, Joyce et al., (2004) stated that "they [the personal family models] attempt to shape education so that we come to understand ourselves better, take responsibility for our education, and learn to reach beyond our current development to become stronger, more sensitive, and more creative in our search for high-quality lives" (p. 31).

As has been indicated the principles of the personal family models are consistent with the principles of the humanistic approaches that are believed to be highly relevant to classroom teaching (Schunk, 2004). Hence, the personal family models of teaching can be used in several ways. Many of the important principles that these models accentuate can be built into teaching goals. These include the individual perspective, encouragement of personal growth and productive independence and provision of choices and opportunities for students (Schunk, 2004), so they become increasingly self-aware and responsible for their own destinies. In addition, personal models can also be related to the development of social relations and to the individual's information processing capacity (Ji-Ping & Collis, 1995). These models can also be used to enhance the personal qualities and feelings of the students, to improving partnerships between students and teachers, and to communicate affirmatively during classroom interactions (Mafune, 2006).

Since this family of models underpins the belief that the better-developed, more affirmative, self actualising learning can increase learning capabilities, it was argued that personal models can increase academic achievement (Mafune, 2006). In addition, humanistic approaches as applied to learning are largely constructivist and emphasise cognitive and affective processes. They do not explain behaviour in terms of reinforcing responses to environmental stimuli (Schunk, 2004). As has

been mentioned, models of teaching in this family begin with the perspective of the individual and allow teachers to develop self awareness so that students become responsible for their own growth and lifelong learning skills that promote quality of life (Mafune, 2006).

However, the models in the personal family that share the principles of humanism are not without their critics. The main criticism of humanism is that it is seen to be a highly self-centred approach to life. As has already been indicated, humanistic teaching is based upon the perspective of the selfhood of the individual and pays great attention to personal development. Critics argue that if a student is concerned primarily with their own personal growth and development, how can there be a concern with what is good for other students in the class (Reid, 2005)? The advocators of humanistic approaches such as Maslow (1970) refuted this criticism and argued that one of the characteristics of self-actualisation is the tendency for individuals to focus on problems that lie outside themselves. Therefore, the model did not advocate narrow self-centredness.

Since the models in this family have some epistemological links to the social family models, the learning theories related to these two families will be presented after the review of the social family of models in the following section.

The Social Family

The social family of teaching models is oriented toward developing social relations between students and their culture and drawing upon social sources (Ji-Ping & Collis, 1995). In other words the social models combine a belief about learning and a belief about society (Mafune, 2006). The main principle underlying this family of models is to develop a positive school culture that emphasises the development of integrative and productive ways of interacting and norms that support vital learning activity (Joyce & Weil, 1992). In describing the cluster of teaching models in the social family Joyce, Weil, and Calhoun (2004) noted that working together often generates a collective energy called synergy. So "the social models of teaching are constructed to take advantage of this phenomenon by building learning communities" (p. 29). The social family models of teaching in

Table 2.4 is a brief description of each of the models. These models are adapted from the *Models of Teaching* by Joyce et al., (2004, p. 29).

It is clear from Table 2.4 that the models of teaching in this family vary depending on the nature of the model itself. For instance, some models in this family focus on comparatively simple processes, such as organising students to work together, while others are more sophisticated in the processes they advocate, such as promoting democratic social organisation and the analysis of major social problems and critical social values and issues (Mafune, 2006).

Table 2.4: Social Family Models

Models	**Developer (redeveloper)**	**Purpose**
Positive interdependence	David Johnson Roger Johnson Margarita Calderon Elizabeth Cohen	Development of interdependent strategies of social interaction. Understanding of self-other relationships and emotions.
Group investigation	John Dewey Herbert Thelen (Shlomo Sharan) (Bruce Joyce)	Development of skills for participation in democratic process. Simultaneously emphasises social development, academic skills and personal understanding.
Jurisprudential inquiry	James Shaver Donald Oliver	Analysis of policy issues through a jurisprudential framework. Collection of data, analysis of value questions and positions, study of personal beliefs.
Role-playing	Fannie Shaftel	Study of values and their role in social interaction. Personal understanding of values and behaviour.
Structured social inquiry	Robert Slavin and colleagues	Academic inquiry and social and personal development. Cooperative strategies for approaching academic study.

As has been indicated the models in this family combined a belief about learning and society that promotes social constructivism. A key belief about learning is that cooperative interactions in classrooms are beneficial for students socially as well as intellectually. Arguably, because the main purpose of education in any country is to produce responsible citizens it was therefore believed that the central role of education from this perspective is to prepare citizens to perpetuate a democratic social order (Mafune, 2006). The combination of these two beliefs has resulted in the development of many student-centred teaching models based on the principles of social constructivism, including the many cooperative learning

methods in which students work together in small groups to help each other in order to achieve group goals (Johnson & Johnson, 2002). Student-centred teaching and learning through cooperative groups has a particular relevance to the present study. Hence, Chapter Three of the present study reviews major cooperative learning methods. It then presents a cooperative learning model to be trialed as an alternative to the traditional methods of teaching that dominate classroom practices in Maldivian secondary schools.

Related Learning Theories

The theory of learning which is currently popular and which has gradually come to dominate the last thirty years is constructivism, which appears to have epistemological connection to the personal and social families of teaching models discussed earlier.

Although there are different versions it appears the most widely recognised two major forms of constructivism are Piaget's psychological constructivism and Vygotsky's socio-cultural constructivism (Abdal-Haqq, 1998; Quaintance, 2001; Richardson, 1997; 2003; Schunk, 2004). Psychological constructivism is based on the idea that knowledge is constructed and made meaningful through an individual's interactions with and analysis of the environment (Westwood, 2006). In contrast, socio-cultural constructivism views human intellectual development as a cultural process that involves people's changing participation in the cultural activities of their communities (Rogoff, 2003). In psychological constructivism the focus is on the individual constructing knowledge through cognitive processes of analysing and interpreting experiences (Quaintance, 2001). In socio-cultural constructivism, however, knowledge is not solely constructed within the mind of the individual; rather, it is the interactions within a social context that involve learners in sharing and constructing their ideas and beliefs (Abdal-Haqq, 1998; Quaintance, 2001; Rogoff, 2003). In other words, socio-cultural constructivism emphasises that human intelligence initiates in the culture or society (Hsiao, 1996). According to Rogoff (1994) learning in socio-cultural constructivism is "seen as a function of ongoing transformation of roles and understanding in the socio-cultural activities in which one participates" (p. 210). The transformation of participation can be explained in terms of knowledge that is continually enacted

through human participation in a changing environment (Rogoff, Matusov, & White, 1996). It is believed that people change through transforming their participation in socio-cultural activities (Rogoff, 1997) such as peer interaction, scaffolding, and modeling that are important ways to facilitate individual cognitive growth and knowledge acquisition (Quaintance, 2001).

The review of the above models of teaching and theories of learning have provided some insights about how human beings learn. Each of them has its own metaphors of learning, and according to Mayer (1996) the teacher also has different roles for each of these theories in the teaching and learning process. For example, a behaviourist teacher dispenses rigid rewards and punishments, an information processing teacher dispenses information, and a social-constructivist teacher guides the exploration of academic tasks.

However, as far as teaching is concerned teachers are required to try and encourage their students to engage in active learning and discover principles by themselves. Yet, teachers need to simplify the curriculum and translate the materials to be learned into a format appropriate to the learner's current state of understanding.

While oversimplified, the above models of teaching and theories of learning provide a conceptual understanding of the present study that focuses on implementing a cooperative learning model to teach economics at the secondary school level. Cooperative learning methods of teaching appear to link with socio-cultural constructivism. Hence, the following section examines research on teaching and learning in order to understand the constructivist perspectives further in relation to research on teaching and learning.

2.2.3 Research on Teaching and Learning

There has been a considerable body of research that has attempted to investigate the processes of teaching and learning to identify what teachers do in classrooms, and the effect of their actions on students (McGee & Penlington, 2001). During the 1970s, the mainstream research on teaching was preoccupied with the establishment of causal relationships between the teaching methods used by

teachers and improved student achievement. If effective teaching variables could be identified, teachers could then be trained how to use them in classrooms.

Although researchers have continued to investigate causal relationships, it has been difficult to quantify accurately the precise effects of different teaching strategies. Nevertheless, there are some positive relationships between teaching skills and student achievement (Anderson, Brophy, & Evertson, 1979; Gage, 1978; Rosenshine, 1976). However, others have highlighted the complexity of classrooms (Dunkin & Biddle, 1974; Kane et al., 2002; McGee & Penlington, 2001), and have argued that while process-product offers some guidance to teacher educators responsible for pre-service and in-service programmes for teachers, caution is needed in interpreting research results (Flanders, 1983; Haigh & Katterns, 1984). The limitations such as those above have influenced some researchers to look at the nature of teaching and learning in different ways, using a variety of data collection methods.

The concern with exploring the hidden world of thinking that lies behind teacher and student actions has promoted the adoption of more qualitative research approaches or some combination of both the qualitative and quantitative approaches. Further, there is greater acceptance of the view that quantitative methods on their own do not provide an appropriate means of understanding the complexities and the uniqueness of the meanings that students generate over a series of learning experiences. Moreover, Piaget's (1960; 1964) position on students generating their own learning from lessons does not necessarily reflect or match a teacher's objectives, as students' covert actions such as their thinking and past knowledge influence the meaning and cognitive structures they develop as a result of lesson events (Osborne & Wittrock, 1983; Stead & Osborne, 1981). This supports the constructivist perspective of individuals who create their own new understandings through their interactions both inside and outside the classroom, and that knowledge is acquired through engagement with content instead of solely imitation or repetition (Abdal-Haqq, 1998; Kroll & LaBoskey, 1996; V. Richardson, 2003; Westwood, 2006). In a similar fashion Nuthall (1997) stated that:

> … therefore, it no longer makes sense to talk of knowledge simply as a behavioural response or as a kind of substance that is transferred from the mind of the teacher, or the page of the textbook, to the minds of the students. Instead, it is now commonly accepted that knowledge is a product of the ways in which the student's mind is engaged by the activities and resources of the classroom. (pp. 683-684)

However, one should not take constructivism for granted as being the only viable theoretical framework for teaching and learning. It is one, but not the only, way of thinking about how knowledge and understanding are formed. Other theoretical frameworks such as behaviourism and information processing also provide some insight about how humans form knowledge and understanding. Nor are various interpretations of constructivism necessarily incompatible with one another (Mackinnon & Scarff-Seatter, 1997).

Although there are important common understandings in constructivism, there are also considerable disagreements. Constructivism is a descriptive theory of learning (this is the way people learn or develop). It does not automatically translate into a specific approach to teaching. Hence, many have found difficulty in translating or interpreting the descriptive theory of learning into the practice of teaching (Richardson, 1997; 2003). We know that a translation is not a direct procedure because (1) teaching takes place in a social setting and is not just a psychological process, and (2) individual differences and contextual diversities characterise our classrooms. Further, learning does not always require a formal educational process.

Based on the above discussions, the next subsection of the review describes the theoretical framework that the present study uses—based on theories of socio-cultural constructivism.

2.2.4 Theoretical Framework

Social constructivism and socio-cultural theory provides a framework for the present study to explore and investigate the issues of current teaching and learning of economics' practices, and the implementation of cooperative learning by teachers in their classrooms at the secondary school level in the Maldives.

As has been indicated earlier, social constructivism and socio-cultural theory is rooted in the belief that knowledge is constructed and that knowledge is acquired through learners' interactions with the environment (Perret-Clermont, Perret, & Bell, 1991; Vygotsky, 1978) a view based on the belief that human intelligence originates in the society or culture (Hsiao, 1996). A socio-cultural theory of learning views human intelligence as originating in the society or culture (Hsiao, 1996) in which the individual's cognitive gain occurs first through interpersonal interaction with the social environment, which then influences the intrapersonal (Lave & Wenger, 1991).

A social constructivist perspective and socio-cultural theory hypothesises that learning is a process in which students construct knowledge and give their own meaning to knowledge based on their prior experiences, mental structures, beliefs, interactions, and background knowledge (Gillies & Ashman, 2003). A key principle in this view is that learning is dialogic and social. The learner experiences events and socially negotiates meaning in the authentic context of a complex learning environment (Vygotsky, 1978). Therefore, it is believed that when students engage in dialogue with their colleagues, especially more competent partners and adults, they internalise the language of these interactions and use it to organize their individual learning (Berk, 1994). In addition, when students work together and interact with their peers, teacher, and their contextual setting, they can provide information and explain and discuss each other's perspectives, which can in turn lead to greater understanding of the material to be learned (Gillies & Ashman, 1998, 2003; Johnson & Johnson, 2002). Social constructivism and socio-cultural theory also recognises that challenging and helping students to correct their preconceptions and misconceptions is essential to effective learning (Schunk, 2000).

Jean Piaget's theory of socio-cognitive conflict is another theoretical perspective on how students learn from interacting with others. It has long been a part of psychological theories of cognitive change (Abdal-Haqq, 1998; Quaintance, 2001). Socio-cognitive conflict generally means some perceived contradiction between the subject's opinion and the opinions of others (Damon & Killen, 1982). Cognitive conflict is created when students are forced to re-examine their

understandings and perspectives in the light of contradictions that occur from interacting with others (Gillies & Ashman, 2003; Wadsworth, 1996). This creates an environment for students to reflect on their own understanding, seek additional information to clarify the contradictions, and attempt to reconcile their perspectives and understandings to resolve any inconsistencies (Gillies & Ashman, 2003). Therefore, socio-cognitive conflict can be regarded as a means for change as it helps students to reassess their understandings of the world and to construct new conceptions that fit better with the feedback they are receiving (Gillies & Ashman, 2003).

2.2.5 Theory in Practice using Cooperative Learning

Interacting with other students in the classroom can be a primary impetus for change (Gillies & Ashman, 2003) because when they interact with one another they have to explain and discuss each other's perspectives, which can lead them to greater understanding of the material to be learned. According to Slavin (1990), the struggle by students to resolve potential conflicts during collaborative activity results in the development of higher levels of understanding as they help one another to be successful and work together toward group goals. Classroom interactions among students also help to create and build a supportive community which can raise the performance level of each member (Johnson & Johnson, 2002; Kagan, 1985; Slavin, 1996). Moreover, fostering a community of learning can lead to higher self esteem in all students (Webb, 1982). In addition, it is believed that students are "often more receptive to their peers' ideas than to those of their teachers because peers' ideas are seen as more personal and less threatening" (Gillies & Ashman, 2003, p. 11). Furthermore, students' involvement in small group learning activities such as cooperative learning and their interaction with others in the group appear to enhance elaborative thinking and more frequent giving and receiving of explanations, which in turn have the potential to increase depth of understanding, the quality of reasoning, and the accuracy of long term retention (Johnson, Johnson, & Holubec, 1993a). Finally, Johnson and Johnson (1992) described various ways in which classroom interactions among students affect their thinking, including oral rehearsal, perspective-thinking, peer monitoring, feedback and cognitive controversy. Nelson-LeGall (1992) also

captures the importance of social interactions and the nature of student involvement in learning by stating that:

> Learning and understanding are not merely individual processes supported by the social context; rather they are the result of a continuous, dynamic negotiation between the individual and the social setting in which the individual's activity takes place. Both the individual and the social context are active and constructive in producing learning and understanding. (p. 52)

Cooperative techniques based on student interactions create a social constructivist approach when students are actively involved in small groups that provide opportunities for them to define questions in their own language and work out answers together instead of merely reproducing material presented by the teacher (Wooley, Switzer, Foster, Landes, & Robertson, 1990).

Therefore, it is argued that the use of cooperative learning methods can create a positive learning environment where students can improve their learning as outlined in the theoretical base of the socio-cultural constructivist view of Vygotsky (1978). (See Chapter Three for detailed review of cooperative learning methods and the impact of them on student learning).

The above theoretical framework provides some insights for classroom teachers on implementing cooperative learning. First, the process of cooperative learning implementation requires teachers' engagement in classroom learning. For effective implementation of cooperative learning teachers need training on the basic elements of cooperative learning and how to use these effectively (Johnson, Johnson, & Holubec, 1992). Second, when teachers are trained to use cooperative learning their understanding of previous teaching methods and classroom practices may be influenced by the existing knowledge of cooperative teaching practices and methods. In other words, the mechanism of assimilation helps teachers to reorganise the previously received information about cooperative learning to fit their existing schema of teaching (Siegel, 2005). The process of assimilation results in change to teachers' mental frameworks that can influence them to use the new methods of cooperative learning in the classroom. Constructivism, therefore, suggests that teachers' understanding of cooperative learning methods and the implementation of lessons based on them in their classrooms are interrelated. As has been mentioned earlier, a more thorough

review of cooperative learning and its relevance to the present study will be presented in the following Chapter Three.

2.2.6 Summary

This section has provided a list of four families of teaching models and briefly described the characteristics of each family separately. The families of teaching models are being identified as the information processing family, the behavioural systems, the personal family, and the social family. As has been indicated earlier there is no one single teaching model or approach that is best for all learners in all learning situations. Therefore, it was argued that teachers need knowledge and skills in various teaching models or approaches in order to be effective when making decisions about teaching.

This section also provided background information for various theories of learning including behaviourism, information processing, and constructivism, and discussed how these theories of learning explain the complex process of human learning.

In addition, a discussion about research on teaching and learning was provided before outlining a theoretical framework for the present study. Socio-cultural constructivism provides a theoretical framework for the present study. The Vygotskian socio-cultural constructivism views peer-interaction as an important way to facilitate individual cognitive growth and knowledge acquisition in which more capable peers and adults mediate learning by providing the language and strategies for problem solving.

The following section focuses on describing and reviewing the literature on economic education to understand the beliefs that teachers, practitioners, and academics hold about economics teaching in order to better understand their teaching practices.

2.3 RESEARCH ON ECONOMIC EDUCATION

This section critically reviews the research literature that is related to the teaching and learning of economics in general, as well as the limited amount of research

that is available on teaching economics at secondary school level. Before discussing the research on teaching and learning of economics it is important to provide background information on international trends in economic education.

2.3.1 International Trends in Economic Education

Throughout the 1960s and 1970s, economic education in many countries concentrated on the application of economic concepts to understanding and analysing their economies (Nelson, 1997). Since the early 1980s, with the emergence of newly industrialised economies, for example, South Korea, Singapore, Taiwan, Mexico and more recently the issues associated with globalisation and political events in Eastern Europe such as the collapse of Communism, economic education has become increasingly concerned with international issues (Nelson, 1997).

Therefore, the aim of this section is to provide a short historical background on the trends and developments in economic education throughout the world. However, due to the lack of research literature, this section will focus on a few selected countries.

It seems that economic education has in some sense been stronger in terms of research and research dissemination in the US than in any other part of the world. Thus, this section traces major developments in the US and makes reference to other parts of the world in considering economic education from an international perspective. Further, this section covers some concerns associated with economic education in the Maldives that is the context of this study.

Economic education in US

Since 1891, an extensive research literature has been developed on economic education in the US (Becker & Watts, 1998). During the first 50 years, the American Economic Association (AEA) considered the teaching of economics to be an important subject for discussion and debate (Salemi & Siegfried, 1999). The first president of AEA, Francis Walker in 1891, expressed his personal satisfaction with popular interest in economics (Becker & Watts, 1998). Hence, the founders of AEA set as a goal "… to educate public opinion about economic

questions and economic literature" (Hinshaw & Siegfried, 1991, p. 373). As economics began to emerge as a separate discipline from social science towards the end of the nineteenth century, more and more academics began devoting their attention to the problems of teaching economics, and therefore, economics found a niche in the curriculum of many colleges and universities (Hinshaw & Siegfried, 1991).

The attention then shifted towards economics in secondary schools (Hinshaw & Siegfried, 1991). In 1899, Clow discussed the advantages and disadvantages of teaching economics in secondary schools. After a detailed discussion of the educational value of economics, he raised his concerns about the capacity of students in terms of their intellectual ability to acquire economics and questioned

> …. the wisdom of trying to teach [economics] to immature minds. It is a grave question how far minds of the high school period are capable of rising to the delicate distinctions required or how much of what may be taught them at that stage they are capable of carrying with profit into after life. (Clow 1899, p.1999, in Hinshaw & Siegfried, 1991)

However, Clow concluded that economics can be studied successfully in secondary schools if taught by well-prepared and skilful teachers, and he urged its introduction into high schools (cited in Hinshaw & Siegfried, 1991). The rationale was to improve economic literacy—knowledge, skills and positive attitudes, needed for responsible citizenship—among a wider community, by giving a strong emphasis on this subject in the curriculum of secondary schools (Seiter, 1989).

The establishment of the first Committee on Secondary Education in Economics, and consecutive series of roundtable discussions on teaching general economics during the 1920s (Salemi & Siegfried, 1999) has highlighted the importance of secondary and collegiate teaching (Becker & Watts, 1998).

However, during the last 50 years, the leaders of AEA have largely ceded questions on teaching to specialists (Becker & Watts, 1998) until the establishment of the Committee on Economic Education (CEE) that charged and focused on improving the status of economic education within the profession, by stimulating and encouraging economic education sessions in various meetings

(Salemi & Siegfried, 1999). Later the committee revised the charge to include actively "… improving the quality of economic education at all levels, from pre-college to college, adult and general economic education" (Hinshaw & Siegfried, 1991, p. 378).

The publication of the *Journal of Economic Education* (JEE) in 1969 was one of the major steps towards the dissemination of research findings and information about the teaching of economics. Since then many studies have been published in the JEE, and the literature on economic education continued to grow steadily in the 1970s (Becker et al., 1991).

Despite the slow growth of published research on economic education in the 1980s the CEE was active in developing materials, sponsoring conferences, and nurturing young scholars interested in doing research on teaching high school economics (Hinshaw & Siegfried, 1991).

Finally, in the 1990s there appeared a growing concern among the leading professional economists including Anderson (1992); Becker (1997); Becker and Watts (1996; 2001; 1998); Becker, Watts, and Becker (2006); and Siegfried, Saunders, Sonar and Zhang (1996) about the problems of teaching economics. Some critiqued both the goals and effectiveness of economic education, arguing that as tertiary institutions expanded into graduate education, economists lost sight of the importance of undergraduate courses and the way they are taught (Caropreso & Haggerty, 2000). In contrast with other subjects that have moved to a broad teaching repertoire, economics tends to be taught by the lecture method in undergraduate courses (Becker, 1997). Furthermore, Margo and Siegfried (1996) called for a "substantial change in content, management and pedagogical style in the introductory course in the hope of attracting more and better students" (p. 326).

Economic education in other parts of the world

Economics is taught in some form in the secondary schools of nations throughout the world (Walstad, 1994). It is rarely taught in primary schools as a separate subject from social studies (Saunders, 1994). Although economics courses are

offered in colleges and universities, many students end their formal education after secondary school (Hinshaw & Siegfried, 1991). Thus, the best opportunity for the economic education of the youth of a nation occurs in secondary schools (Caropreso & Haggerty, 2000; Walstad, 2001).

The teaching of economics varies across countries. These differences occur because of history, the structure of the education system, and other national factors such as culture (Walstad, 1994). At the same time, there are common elements in the economic education of many countries, especially in content (Kyung-Keun, 1994).

There are several factors associated with recent international trends in economic education. First, the sudden rise of modern human capital theory—that analyses an individual's decisions about education—coinciding with the expanded educational programmes throughout the world to increase the general awareness on economic matters orchestrated by the Organisation for Economic Cooperation Development (Marshall, 1995). Second, the collapse of former Communist countries in Europe and Asia and their accompanying economic reforms has moved from centrally planned to free market economies (Nelson, 1997). A free market economic approach requires a degree of participatory decision making that was neither practised in society nor taught in the schools of former Communist countries (Nelson, 1997). Finally, issues about relationships between economics understanding and the nature of citizenship education, and the impact of it on citizens in a democracy continued to dominate (Nelson, 1997). In many countries, citizenship education is now part of the national curriculum that includes units of work on economic understanding. These include, for example, how the economy functions, including the role of business and financial services, the rights and responsibilities of consumers, employers and employees, the economic relationships between the nations and finally the wider issues and challenges of global interdependence and responsibility including sustainable development (Seiter, 1989).

Hence, one could say that there have been significant developments in economic education programmes during the last two decades involving exchanges between

Central and Eastern European and American economics educators that have promoted teaching and learning about market-based economic systems and democratic governance (Nelson, 1997).

Economic education in the Maldives

In the Maldives, economics is incorporated with history and geography as social studies in the middle school, but taught as a separate subject in both lower and higher secondary. Normally, commerce stream students in lower secondary and business stream students in higher secondary do economics as part of their London based school qualifications. As has been mentioned earlier the school streams provide students with an opportunity to decide the type of education they need for their career. In the Maldives, science used to be the preferred stream by both students of secondary schools and their parents (Ministry of Education, 1995). However, the recent changes in the perceptions of people and the global economy affected the continued preference for science. In other words, more students now choose to do commerce subjects such as Accounting, Commerce, and Economics as their preferred stream in secondary schools.

Although the students' preference for the commerce stream is on the increase in the Maldives the lack of economics knowledge among the high school graduates and their inability to apply the concepts in real life situations is a major concern among practitioners and teacher educators (Ministry of Communication Science and Technology, 2001). My work as a teacher educator at the Faculty of Education (FE), the Maldives College of Higher Education, involved teaching economics and professional studies (teaching and learning of economics) for degree and diploma students who wanted to become economics teachers in secondary schools in the Maldives. During my employment at the FE I found most of the students who enrolled in our programmes had neither sufficient knowledge of economics nor the skills to analyse basic economic problems. This was neither because they had not completed economics courses in their high schools nor because they had not obtained good results in their high school certificates. In fact many of these students had obtained good results at the end of their London General Certificate of Education (GCE) Advanced Level Examination. There may be many reasons for lack of knowledge and skills among

the high school graduates in the Maldives. One possible reason may be that teachers have a traditional approach to teaching economics based on the transmission model that promotes neither the interaction between prior and new knowledge nor the conversations that are necessary for internalisation and deep understanding (Cannella & Reiff, 1994). Traditional teaching is concerned with the teacher being the controller of the learning environment. Power and responsibility are held by the teacher and they play the role of instructor and decision maker. In other words, the traditional teacher views that it is the teacher that causes learning to occur (Novak, 1998). The information acquired from traditional teaching appears not well integrated with other knowledge held by the students. Thus, new knowledge is often only brought forth for school-like activities such as exams, and cannot be used in different contexts (Richardson, 1997).

Another possible reason could be the strong emphasis that is placed on examination oriented teaching in the Maldivian education system. Cannella and Reiff (1994) labelled this type of teaching based on traditional models as didactic, memory-oriented transmission models. Finally, economics as a school subject and its place in the school curriculum are very much under-researched in the Maldives.

Despite these trends and developments in economic education throughout the world and advancement in the "global village," it is still easy to be narrow-minded and inward looking when it comes to teaching practice. However, there is the potential to learn and improve current teaching methods. The following subsection critically examines research on teaching and learning economics and current classroom practices in teaching economics.

2.3.2 Research on Teaching and Learning of Economics

As has been indicated in the earlier section on international trends in economic education, research on teaching economics appears to have a long history. Earlier studies indicate that economics was a part of the social sciences until it began to emerge as a separate discipline. Consequently, more and more professional economists began devoting their attention to the problems associated with its teaching and finding possible ways to improve teaching and learning of

economics (Johnston, McDonald, & Williams, 2001). Hence, this section examines the current practices in teaching economics based on the available literature on economic education at both secondary and tertiary level.

As has been indicated, there has been a growing concern in recent years about the economic literacy among graduates and current practices in teaching economics at different educational levels (Anderson, 1992; Becker, 1997; 2000). Similar concerns are being raised in the Maldives regarding to the lack of knowledge and skills among those Maldivian secondary school graduates who enrol in economics courses at the FE, a problem which was discussed earlier. One of the few research studies available on high school teaching and learning of economics in the US indicates that students tend to be ignorant of key ideas in economics, such as gross national product, inflation, profits, and investment (Walstad & Soper, 1988). These findings are derived from a national survey of 8,205 eleventh and twelfth Grade students in public and private high schools in 33 states (Walstad & Soper, 1988).

Surprising results were found in a study by Aske (2000) in the US, that American public high school seniors and college seniors show widespread ignorance of the basic economics that are necessary for understanding economic events and changes in the national economy. When asked questions about current economic issues and personal finance, only 35 per cent of high school seniors, 39 per cent of the general public, and 51 per cent of college seniors gave correct answers. Another study on teaching economics to undergraduates in Europe by Gartner (2001) raised worries about the economics graduates' inability to communicate effectively in workplaces. Hansen (2001) also raised concerns about graduates' inability to articulate on economic issues, expressing doubts about what they could do when they entered the real world. The lack of economic literacy among those people might be because the field of economics has placed too little value on the importance of teaching and learning in recent decades (Becker, 1997).

A US report shows that economics is consistently one of the lowest ranked disciplines on undergraduate student ratings of both courses and teachers (Cashin, 1990). In 1996, Margo and Siegfried found, for example, the curriculum content

of introductory economics at university level in the US was not very well structured and the prescribed texts were too often hypothetical and did not involve current events and observable phenomena. A barrier to a major shift in the curriculum is that changes to the content of textbooks occur infrequently (Johnston et al., 2001). Gartner's survey in 2001 suggests that a slow pace of change in the contents of textbooks is more of a problem in microeconomics (studying the behaviour of individual decision making units) than macroeconomics (which concentrates on the behaviour of entire economies). In addition, Becker (1997) pointed out that many academic economists are not keeping up with educational changes in their subjects and classroom practices, even though the teachers live in societies and work in a profession where demands are continually changing.

A changing world requires a changing style of education. Young people who are being prepared for entry into adult responsibilities need to be equipped with knowledge, skills and positive attitudes to be successful in this society. Thus, economics teachers must continuously assess the economics' curriculum in terms of the current status of the academic discipline in order to provide students with the latest knowledge and skills necessary for taking part in economic activities (Banaszak, 1987). The primary obligation of the schools, colleges, universities and other educational institutions is believed to be to help the students to "develop the capacity to think clearly, objectively, and with a reasonable degree of sophistication about economic problems" (Lee, 1975, p. 39). The lack of economic literacy and inability to reason out clearly and objectively about economic issues leads to limits in taking part as an effective citizen in economic activities, as indicated by the Banaszak (1987).

Nevertheless, there has been a world-wide movement to improve economics teaching through the use of teaching methods designed to have students actively involved in the learning process (Becker & Watts, 2001, 1998; Becker et al., 2006; Johnston et al., 2001). For example, universities in Australia and elsewhere have been rethinking their approaches to teaching economics at all levels (Johnston et al., 2001). This rethinking has elevated the teaching role of schools and universities in some parts of the world. According to Johnston, McDonald,

and Williams (2001) "senior academics have been appointed to lead teaching initiatives, committees have been created to ensure the quality of teaching, and funds have been allocated to encourage the introduction of instructional technology" (p. 195).

While there may be no theoretical consensus on how to teach economics (Shanahan & Meyer, 2001), much uniformity exists in practice (Becker, 1997). Becker and Watts (2001) found that there was little variation in teaching practices employed in undergraduate economics courses. Their survey on teaching methods in the US undergraduate economics courses found that the results for 2000 had changed very little compared to those found in their 1995 survey. Despite some indications of increased emphasis and interest in teaching over this period, lectures are still the most frequently used teaching strategy by the US economists. A similar survey by Benzing and Christ (1997), and Siegfried et al., (1996) consistently found that academic economists lectured for approximately 80 per cent of their class time. The remainder was filled with recitation, showing overheads, videos, movies, or questions and answers (Caropreso & Haggerty, 2000).

It is not surprising to note the immense usage of lectures as a mode of instruction (Becker & Watts, 1996, 2001), as it is a rapid way of transmitting factual information and it can be delivered in a manner that motivates and entertains students, for example, through the use of cartoons, videos, newspaper clips, and power point animations (Johnston et al., 2001). A lecture can also provide interactive learning by engaging students through direct questioning or short collaborative exercises within the lecture (Johnston et al., 2001). In addition, Good and Brophy (2003) believe when lectures are presented in interesting and enthusiastic ways then they can stimulate interest and raise questions that students will want to follow up. However, Becker's and Watts's (1996; 2001) surveys indicate that these strategies are not often used in teaching economics and that for the vast majority of time lectures are spent using chalk and talk. More recently, this may be whiteboard and talk, and even Powerpoint and talk.

Although the lecture is the most widely used method of teaching, it is my belief that this and other current traditional teaching practices within the post-secondary level will likely move beyond the traditional teaching method that characterised the 20th century method of economics teaching (Becker & Watts, 2001; Benzing & Christ, 1997; Siegfried et al., 1996). This argument is made on the basis that many students expect to be engaged in the learning process and appear unwilling to sit passively through lectures (Becker, 2000). A report based on 100 observations of chemistry lectures stated that students had a noticeable behaviour change (a lapse in attention) about 10 to 18 minutes into a lecture, with lapses becoming more frequent as time passes (Johnstone & Percival, 1976). Hence, they recommended a varied approach to be used, periodically involving students actively in the learning process. In this regard Becker and Watts (1995) stated that some students are natural-born listeners, some are talkers and discussion leaders, and some seem to learn best using group activities that feature "hands-on" demonstration of economic concepts and relations. In addition, Siegfried and Fels (1979) advocated the importance of using alternative methods in teaching economics because "different students learn economics in different ways. The best teaching strategy provides alternative learning methods" (p. 953), methods that can keep students actively involved, with both practice and feedback. Such alternative approaches recommended by Becker and Watts (1995) include games and simulations, experimental economics and classroom activities, writing assignments, economics in literature and drama, the popular and business press and case studies (p. 699).

These alternative teaching methods provide opportunities for students to construct their own understanding through interactions both inside and outside the classroom (Bartlett, 1993, 2006; Becker & Watts, 2001, 1998; Benzing & Christ, 1997; Siegfried et al., 1996). This type of learning has typically meant that students work together to learn and to help each other (Caropreso & Haggerty, 2000). For example, teaching and learning based on alternative teaching methods involve students in experiences in which they construct conceptual understanding of economics through a process of exploring, analysing and evaluating factual examples (Jadallah, 2000). From earlier discussion on teaching models and learning theories, it was apparent that in social constructivist perspectives the

individual learns within a socio-cultural context. In other words, a student's conceptual understanding develops through experiences and is shaped through interactions within other people (Jadallah, 2000). Hence, enhancing the teaching and learning of economics is possible through social constructivist practices.

However, while the speed with which economics teachers embrace new approaches to teaching will depend on many factors, it is worthwhile highlighting first, the willingness of economics teachers to change together with the amount of knowledge they have about the various teaching methods and second, the reward structures in place that might encourage those teachers to change.

2.3.3 Teacher Change

Today, teachers live in a society and work in a profession where demands are continually changing (Ash & Persall, 2000). A changing world requires a changing mode of education. Therefore, teachers are required to respond to the changing needs of education (Rolheiser & Anderson, 2004), just as business has reacted to its changing needs by creating a base for trained employees. Given this significance to education, teachers must be willing to change, learn continuously, and assume greater roles and responsibilities in schools (Ash & Persall, 2000; Lieberman & Miller, 1990). The educational changes not only affect teachers' knowledge, skills and problem solving capacities but also affect a whole web of significant and meaningful relationships that make up the work of a school (Hargreaves, 1994, 2005). Hence, this section briefly discusses the importance of teacher change for effective teaching in schools.

There has been growing recognition of the need for change in the practices of schools over the past 50 years, and the quest for change in schooling practices faces immediate problems (Slavin, 2005). Pellicer and Anderson (1995) have outlined some of the problems that continue to confront change in the practices that appear common to many schools. For example, schools have become larger and more complex than ever before. As a result, teachers have been asked to cope with students who have varying ability levels and widely divergent needs. Teachers themselves have highlighted shortages of teaching resources, teacher

isolation from colleagues, lack of recognition, and unrealistic demands by society among these problems.

With the pressures on schools to improve and raise standards of achievement through innovation (Fink & Stoll, 2005), the demand on teachers to assume greater roles in schools is mounting (Sherrill, 1999). The roles of teachers are changing and becoming more complex and challenging (Fink & Stoll, 2005; Wasley, 1991). In part, this is due to the higher expectations of teachers by pressure groups such as parents and public (Gmelch & Parkay, 1995). Such challenges include the professionalisation of teaching, shared decision-making, resolving conflicts of interest (Sherrill, 1999; Snyder, 1994) and greater accountability (Neufeld, 1992).

In addition, today's schools are becoming more diverse and culturally mixed (Johnson & Johnson, 2002; Whyte, 2005). Hence, teachers need to have a range of teaching strategies to meet a wide range of individual needs (Becker et al., 2006; Berry, 2003). Firstly, teachers must know how to teach the subject using different teaching strategies to cater for individual needs (Johnson & Johnson, 2002). Teachers who have gained mastery in their classrooms have much to offer and can be an asset to the school (Buckner & McDowelle, 2000). Secondly, teachers must have curriculum development skills and take corresponding action to adapt the curriculum and teaching (Sherrill, 1999). Finally, teachers should have both substantial knowledge and skills in assessment and monitoring techniques for identifying and exhibiting a range of learning outcomes (Little, 1995).

Moreover, the arguments are growing for teacher change to create a collaborative environment which encourages working together in new ways in order to improve schooling for all students (Fullan, 1999). It is believed that collegial collaboration is vital for teachers because it appears to have great impact on changing the school environment, improving student achievement (J. Richardson, 2003) and improving quality of teaching in schools (Slavin, 2005; Wasley, 1991). Collegial relationships and collaboration are believed to provide opportunities for teachers to work together so they can better help students and achieve the goals and objectives of the school (Pellicer & Anderson, 1995).

Despite the importance of collegial collaboration for effective teaching and teacher change, the working lives of many teachers can be characterized by isolation from professional colleagues in self-contained classrooms (Ash & Persall, 2000). According to Ash and Persall (2000) many of today's schools are not organised to effectively support and encourage learning because "teachers are isolated, without opportunities to collaboratively solve problems, share information, learn together, and plan for improving student achievement" (p. 1). In addition, teachers have largely been left out of policy discussions, and are being required to accept curricula change that is not of their own choosing or design (Obert, 2006). Consequently many of them resist often ill-designed and poorly implemented change projects in schools (Fink & Stoll, 2005).

For teachers, many of these changes are coming from outside agents and were not something they sought out on their own terms. Past research shows that such outside pressured curricula changes can often lead to feelings of frustration and even feelings of fear and resentment (Fullan, 1993; Hargreaves, 1994) because many teachers find imposed changes meaningless (Fullan, 1993). Similarly, Fullan and Hargreaves (1991) argued that any changes that are not generated from one's own choosing can often lead to resistance and even hostility.

Teacher resistance to change has been an ongoing concern among teacher educators for many years. It is possible that the resistance to using innovative teaching by economics teachers is no different from resistance among teachers of other disciplines. It is also possible that lack of alternative methods used by economics teachers is because of inadequate resources or facilities supplied by the schools or institutions. Furthermore, it is possible that economics teachers' resistance to utilising the different teaching methods reflects an equilibrium in which teaching efficiency has been achieved. Teaching efficiency may reflect the preferences and constraints of both teachers and students (Becker & Watts, 2001).

Although there are problems associated with the teaching and learning of economics, educators continue to believe that various teaching methods available for use in economics offer the means for any teacher to increase both student learning and interest in the subject (Becker & Watts, 2001). It is my view that

teachers require to learn new roles and ways of teaching. This translates into a long-term developmental process requiring teachers to focus on changing their own practice. Teachers must be willing to learn continuously, and expand their abilities as the demands for quality education are continually changing and expanding (Ash & Persall, 2000).

This study therefore aims to develop a cooperative learning model, offering opportunities for students to interact with others in small cooperative groups to learn economics. The study seeks to answer the following research questions by trialing that cooperative learning model at lower secondary school level in the Maldives. The research questions were:

- What are the teachers' and students' perceptions about current teaching methods in economics at secondary school level in the Maldives?
- How do teachers and students perceive cooperative learning as an alternative method to teach and learn economics?
- What influence does the learning of cooperative methods have on teachers' pedagogy and students' learning?

2.3.4 Summary

This section has outlined and described the international trends in economic education in some selected countries. This was done in order to understand the trends and practices of economic education in the world, and to discover how it affects the perception of general public about the economics.

In addition, this section also provided a review of the research literature in economic education to ascertain the beliefs of teachers and researchers about their teaching practices at both tertiary and secondary levels. It appears that the traditional methods of chalk and talk are the main teaching approaches used by teachers throughout the world for teaching economics, despite the calls for greater use of alternative methods to improve classroom teaching.

2.4 CONCLUSION

Since economics is concerned with the efficient use of resources, proper knowledge of economics and the ability to apply it to significant problems and

issues are essential elements of responsible citizenship. This chapter has attempted to explore and examine some of the problems and issues in economic education by outlining recent trends and major developments in the world and current research on teaching and learning.

Although significant research has been done on teaching and learning, there is no one theoretical consensus on teaching. However, the learning theories suggest ways to address problems associated with teaching and learning. In addition, from the review of literature it appears that there has been a shift in research on teaching and learning of economics towards social constructivism that contrasts with traditional teaching approaches based on transmission models. Hence, this study aims to employ a theoretical framework based on social constructivism and socio-cultural theory to deal with the issues addressed in this study.

As has been indicated, social constructivism argues that meaningful learning occurs when students interact with others and bestow their own meaning on knowledge based on their prior experiences and background knowledge (Fosnot, 1996). Cooperative learning is an approach that shares social constructivist principles that promote small group learning in which students work together so that each individual member of the group can participate in a clearly assigned and collective task. Therefore, the aim of this study is to trial a cooperative learning model in selected secondary schools in the Maldives to investigate the research questions mentioned earlier.

The review of related research has indicated the problems and concerns associated with the current teaching of economics. The following chapter aims to review the literature more fully on cooperative learning, including the various models of cooperative learning, and to provide a cooperative learning model for trialing in schools.

CHAPTER THREE

COOPERATIVE LEARNING MODEL

3.1 INTRODUCTION

Cooperative learning has been one of the most thoroughly researched topics in education (Johnson & Johnson, 1989; Johnson, Johnson, & Holubec, 2002; Kagan, 1994; Slavin, 1990). It has been advocated for a number of years, as a basis of teaching approaches or methods in much of the Western world (Sachs, Candlin, Rose, & Scum, 2003; Vaughan, 2002).

There are many positive claims associated with the cooperative learning literature. For example, field research states that cooperative learning arrangements are useful for encouraging student involvement (Polloway, Patton & Serna, 2001), enhancing motivation and interest in learning (Johnson & Johnson, 2002), providing positive relationships among students (Slavin, 1995) and increasing achievement more than competitive or individualistic learning (Brown & Thomson, 2000; Johnson & Johnson, 1989, 1998; Johnson et al., 2002; Kagan, 1985; Sharan & Sharan, 1976; Slavin, 1987).

As indicated in previous chapters the aim of this study is to explore the influence of cooperative learning on students and teachers at the secondary school level in the Maldives, and investigate ways to develop a cooperative learning model for learning economics. Hence, the present chapter reviews the literature on cooperative learning and describes and justifies a model that could be used to teach economics.

In the following sections, I will briefly, first, examine definitions of cooperative learning and second, identify and discuss the reasons and justifications for cooperative learning that have been advocated. This includes how students are regarded as benefiting from working in cooperative learning groups and the rationale for the use of cooperative learning in schools. In addition, some widely

used cooperative learning methods or models will be outlined and reviewed. Finally, a cooperative learning model to teach economics at secondary school level in the Maldives will be described and discussed.

3.2 WHAT IS COOPERATIVE LEARNING?

Some researchers may regard cooperative learning, collaborative learning, peer learning and group learning as distinct and different terms, whereas others use them as synonyms that are interchangeably used to define a process in which students at all levels of performance work together in small groups to achieve an educational task (Boehm & Gallavan, 2000; Boud, Cohen, & Sampson, 1999).

Nevertheless, various definitions have been developed to define cooperative and collaborative learning over the years and some contrasts and differences are evident between the different writers in the field. Sapon-Shevin and Schniedewand (1992), for example, take a broad view regarding cooperative learning as a form of critical pedagogy that helps move schools and societies closer to the ideal of social justice. Others such as Hancock (2004); Johnson et al., (1993a); Slavin (1990); and Veenman, Kenter, and Post (2000) envisaged cooperative learning as a teaching and learning strategy that facilitates students working together cooperatively in small structured groups to accomplish shared learning goals. Collaborative learning is viewed by Vygotsky (1978) as part of a process leading to the social construction of knowledge. Caplow and Kardash (1995) considered collaborative learning as a process in which "knowledge is not transferred from expert to learner, but created and located in the learning environment" (p. 209). From these definitions one could highlight that learning in a cooperative environment is dependent on the socially structured exchange of information between students in groups (Olsen & Kagan, 1992) in which students are held responsible for their team-mates' learning as well as their own (Slavin, 1990), and are motivated to increase the learning of others (Hancock, 2004; Olsen & Kagan, 1992).

Cooperative learning is often referred to as a teaching methodology that provides opportunities for students to develop knowledge and skills in small structured group interactions. Slavin (1983) outlined the features that characterise this

methodology as cooperative behaviour, cooperative task structures, cooperative incentive structures, and cooperative motives. According to Slavin (1983) the most significant feature of cooperation is cooperative behaviour as students are required to work together or help each other in groups. The second feature of cooperation is cooperative task structures when two or more students are required to work together to achieve a common goal. Incentive structures are the third feature of cooperation in which rewards are awarded based on the performance of all group members. Finally, cooperative motives are a situation that allows individual students a choice between cooperative, competitive, or individualistic behaviour. The presence of the latter three features of cooperation does not guarantee that cooperative behaviour will occur in group interactions. It is because cooperative behaviour is "one possible outcome of cooperative incentive or task structures or of cooperative motives" (Slavin, 1983, p. 3).

Although cooperative learning requires that students work together in structured groups to achieve their learning goals, the type and duration of the cooperative groups depends on the learning activities and their learning outcomes. Hence, the following section will review various types of learning situations and discuss both the arguments for rationalising the use of cooperative learning in schools as a teaching method, and how it influences students' learning.

3.3 WHY USE COOPERATIVE LEARNING?

It is common for students to interact in classes both formally and informally with other students as they learn. While there are many ways in which students interact the more formal student interactions in classrooms can be characterised as competitive, individualistic or cooperative. The characteristics of each of these interactions is adapted from Tanner, Chatman, and Allen (2003), and listed in Table 3.1. As a result it is common in classrooms for students to either compete with each other to see who is best, or to work individually on their own to achieve a goal without paying attention to other students, or finally to work cooperatively to help each other achieve a common goal (Johnson & Johnson, 1992).

Table 3.1: An Overview of Competitive, Individualistic, and Cooperative Learning Characteristics

Interactions	Common Characteristics
Competitive Learning	▪ Students work individually. ▪ Students have common learning goals and tasks. ▪ The teacher grades students using norm-referenced methods.
Individualistic Learning	▪ Students work individually. ▪ Students have individualised learning goals and tasks, different from those of other students. ▪ The teacher grades students using criteria-referenced methods.
Cooperative Learning	▪ Students work in small groups. ▪ Students have shared learning goals and tasks within a group which may be similar or different from other groups. ▪ The teacher grades students both on their work as a group and on their individual work.

The above three learning interactions can be separated but are linked in some ways, too. This section, therefore, aims to describe and briefly discuss these three types of student learning situations separately in order to see how cooperative learning differs from other learning situations, and why cooperative learning appears to have positive effects on student learning.

3.3.1 Competitive Learning

In competitive interactions, students compete against each other to win. The competitive learning situations in schools are characterised by negative interdependence, where when one student wins, the other loses (Johnson, Johnson, & Stanne, 2000; Slavin, 1995). They compete against each other and accept the results. For example, if one student does well in an assessment, it hurts another student's chances of winning, and if one student does poorly, it helps another student's chances of winning.

It is believed that this type of interaction is presently the most dominant in many schools—notably secondary schools that focus heavily on exam results—where competitive expectation is fairly widespread in many societies when students enter school and grows stronger as they progress through school (Johnson &

Johnson, 1988). This is not typical of most primary schools however, in countries like New Zealand.

However, competitive learning has been criticised by many and some of these criticisms include: because there is only one winner, all other students must fail; it is linked to high anxiety levels, self-doubt, selfishness and aggression; it may promote cheating, and it interferes with the capacity to problem solve (Johnson & Johnson, 1992). On the other hand, the case for competition includes that most phases of life include some competition, thus it is necessary to provide education for life, otherwise students will be overcome when they encounter competition after and outside school (Dowell, 2001).

3.3.2 Individualistic Learning

Individualistic learning occurs when students work independently to accomplish learning goals unrelated to those of other students (Johnson & Johnson, 1992). This is the main characteristic of individualistic learning where each student faces the learning situation alone, and one student's achievements do not affect another's (Berry, 2003). Consequently, a student's main focus is on his or her self-interest and personal success, and they ignore as irrelevant the successes and failures of others (Johnson & Johnson, 1989).

This type of learning is commonly described as a one-sided model of instruction (Sewal, 2006) in which the teacher transfers the knowledge and skills to the students (Salomon & Perkins, 1989). Students work alone and are not expected to be interrupted by other students. The advocates of individualistic learning argue that this type of learning is beneficial for individual students because it helps them to develop self-reliance and independent thinking (Berry, 2003).

3.3.3 Cooperative Learning

In contrast to competitive and individualistic learning, cooperative learning students work together in small groups towards a common goal. Research has indicated that cooperative learning activities promote academic achievement and prosocial development, and enhance motivation for learning (Johnson & Johnson, 1989; Kagan, 1994; Polloway, Patton, & Serna, 2001; Sharan & Sharan, 1992;

Slavin, 1990, 1991; Webb, 1989). One could wonder why this type of teaching and learning situation is so effective. It is, perhaps, because cooperative learning provides opportunities for students to interact and work together in teams, and encourages them to help and support one another so that students may achieve their team goals (Marr, 1997). As discussed in Chapter Two, cognitive and motivational theories provide theoretical perspectives on how students encourage, learn and benefit from one another as they work in cooperative environments. Cognitive psychology is rooted in the belief that knowledge is constructed and that knowledge is acquired through interactions with the environment (Perret-Clermont et al., 1991; Vygotsky, 1978). In other words, when students interact to discuss concepts and problem-solving, and teach one another, they increase their understanding of critical concepts (Marr, 1997).

When teaching each other they often provide information, prompts, reminders and encouragement to others' requests for help or perceived need for help (Gillies & Ashman, 1998). Vygotsky (1978), one of the prominent advocators of social constructivism, indicated that students' collaboration promotes growth and understanding. One could therefore, say Vygotsky's work stressed the benefits of collaborating with a more expert peer because what a student carries out jointly with another could be incorporated into his or her individual repertoire (Jacob, 1999). In addition, cognitive constructivism is based on the idea that knowledge is constructed and made meaningful through an individual's interactions and analysis of the environment. Hence, Piaget's work stressed the benefits of cognitive conflicts among students that expose students' misconceptions and lead to higher-quality understandings (Jacob, 1999).

In addition, motivational theories of cooperative learning also focus on reward and goal structures that are believed to be the important elements of cooperative learning (Johnson, Johnson, & Smith, 1986; Slavin, 1990). Positive interdependence is one such important element of cooperative learning, where students perceive that their success or failure lies within their working together as a team (Johnson et al., 1986). According to Slavin (1990) "cooperative goal structure creates a situation in which the only way group members can attain their personal goals is if the group is successful" (p. 14). Hence, in order to attain their

personal goals, students are likely to encourage team members to work cooperatively and help each other with the learning activities to succeed and achieve the group goals.

Over the years, in many different countries, cooperative learning has been used extensively within mainstream classrooms (Almasi, 1995; Gambrell, 1996; Jones & Steinbrink, 1991; McTighe & Lyman, 1988) becoming a widely used teaching procedure in all subject areas, and in all aspects of teaching and learning (Johnson et al., 2000). It is believed that over 900 cooperative learning related research studies have been conducted, providing substantial validation for the effectiveness of cooperative learning over competitive and individualistic methods (Cohen, 1994; Johnson & Johnson, 2002; Sharan, 1980; Slavin, 1991).

A wide variety of researchers in different subject areas have reviewed and compared the effectiveness of competitive, individualistic, and cooperative learning methods on student learning (Bartlett, 2006; Becker & Watts, 1998; Humphreys, Johnson, & Johnson, 1982; Johnson & Johnson, 2002; Johnson, Johnson, & Maruyama, 1983; Johnson, Maruyama, Johnson, Nelson, & Skon, 1981; S. Kagan, 1992; Newmann & Thompson, 1987; Sharan & Sharan, 1992; Slavin, 1990). Humphreys, Johnson, and Johnson (1982) conducted a research study in science classes in which they compared competitive, individualistic, and cooperative learning methods to find out the effects of these methods on students' learning. Their findings suggest that students taught by cooperative methods learned and retained significantly more information than students taught by the competitive and individualistic methods. Similar results were reported by Sherman and Thomas (1986) whose study involved high school mathematics' students who were taught by both cooperative and individualistic methods. Moreover, Peterson and Miller (2004) compared the quality of undergraduate educational psychology students' cognitive, affective, and motivational experiences during cooperative and large group teaching, and found that overall the quality of student experiences was greater during cooperative learning.

Slavin's (1983) review of 46 experimental studies indicated that cooperative learning groups performed significantly higher than did control groups in 29

classrooms and no differently in 15 classrooms. His review of another 60 studies of cooperative learning conducted in elementary and secondary schools between 1972 and 1987 found cooperative learning to be an effective means of increasing student achievement (Slavin, 1989). Similarly, a meta-analysis of 122 studies on cooperative learning was carried out by Johnson et al., (1981), and their analysis supports the overwhelming superiority of cooperation for promoting student achievement and productivity over competitive and individualistic methods. Polloway, Patton and Serna (2001) also found that cooperative learning arrangements are useful for increasing achievement, encouraging student involvement, and enhancing motivation for learning. Another study conducted by Veenman et al., (2000) involved teachers' use and evaluation of cooperative learning along with pupils' reactions to cooperative learning and the quality of group cooperation in Dutch primary schools. They found that social skills, on-task behaviour and pupil self-esteem improved as a result of having pupils work in groups. They also found that pupils' attitudes towards cooperative learning were positive and rated their work in groups as effective. Similarly, Whicker, Bol, and Nunnery (1997) conducted a study on the effects of cooperative learning on student achievement and attitudes in a secondary mathematics classroom and found that students in the cooperative learning group had increasingly higher test scores than students in the individualistic group. Their findings also suggest that most students liked working in cooperative groups and appreciated getting help from other students, especially for learning difficult concepts.

In addition, Lampe and Rooze (1996) investigated the effects of cooperative learning and the interaction of gender on social studies and self-esteem at the fourth Grade level in a lower socioeconomic Hispanic population, and concluded that students who received instructions in cooperative learning groups performed more highly than those who received instruction in traditional method based groups. The results of a two-year study of the cooperative elementary model by Stevens and Slavin (1995) suggest that students in cooperative elementary groups had significantly higher achievement in reading vocabulary after the first year of implementation, and significantly higher achievement in reading vocabulary, reading comprehension language expression, and math computation than did their peers in traditional schools.

The overall outcome of the above reviews indicates that cooperative learning can and usually does result in positive student outcomes in three primary domains: academic achievement; interpersonal abilities; and social development (Karnes & Collins, 1997). These include higher achievement and greater productivity, high-level reasoning, generation of new ideas and solutions; motivation for learning; personal responsibility, more caring, supportive, and committed relationships, and social competence and self-esteem. Likewise, Slavin (1983), and Sharan (1980) argued that cooperative learning develops general mutual concern and interpersonal trust among students and increases students' propensity for prosocial behaviour.

Finally, it is believed that teachers who employ cooperative learning methods could accomplish a number of important goals simultaneously. Johnson, Johnson and Holubec (1994) outline how teachers could achieve such goals. Firstly, cooperative learning provides opportunities for teachers to maximise achievement and greater productivity of all students. Secondly, cooperative learning helps to create a positive environment where teachers build positive relationships among students. Thirdly, cooperative learning provides collaborative experiences for students, which are needed for healthy social, psychological, and cognitive development. It is also believed only cooperative learning provides opportunities for students to work on these three fronts at the same time, which places it above other teaching methods such as competitive and individualistic approaches (Johnson et al., 1994).

However, some cooperative learning as a conceptual model alone can be difficult to understand and complicated to implement. Hence, teachers require training and systematic instruction in the various techniques as well as consistent practice and effort to implement it successfully. Such lessons include five essential components—positive interdependence between group members, individual accountability, face-to-face interaction, use of collaborative skills and group processing—these will be discussed later in Section 3.4. Caropreso and Haggerty (2000), Johnson, Johnson and Holubec (1994), and Van der Kley (1991) believe these components are needed for successful cooperative learning groups. However, not every lesson is suitable for cooperative work and there are times

where students can not cooperate and need to work differently, such as by themselves. For example, teachers need to adapt content to appropriate cooperative lessons.

While the literature points to the many benefits of cooperative learning (Abrami et al., 1993; Bartlett, 2006; Ghaith, 2003; Gillies & Ashman, 2003; Johnson et al., 1981; Sapon-Shevin, 2004; Slavin, 1996) some concerns have been raised (Abrami et al., 1993; Sapon-Shevin & Schniedewand, 1992; Slavin, 1990). First, there are practical concerns with regard to the classroom physical arrangements, noise, time, and curriculum materials. As Johnson et al., (2002) indicated face-to-face student interaction is a basic element of cooperative learning; many Maldivian classrooms are generally too small and compact to arrange face-to-face interactions accordingly. In addition, the level of noise associated with small group discussions is often louder than the traditionally controlled classrooms. Hence, Abrami et al. (1993) suggested that "teachers must communicate to the principal and fellow teachers that the increased noise is not evidence of lack of control but of students actively engaged in learning" (p. 63). Furthermore, because cooperative learning is a relatively new teaching method finding appropriate materials for certain topics would be difficult, therefore, teachers need to work together to develop units for different certain topics (Abrami et al., 1993).

There has also been criticism of the possible free-rider problems that could associate with cooperative learning if the group work is not properly implemented (Slavin, 1995). Free-riding occurs when some members of the group limit the work that they put in, forcing others to choose between working harder or accepting a poor project and a lower grade (Maranto & Gresham, 1998). According to Joyce (1999), the free-rider problem is, perhaps, "the biggest negative cost associated with cooperative learning" (p. 271).

Cooperative learning has also been challenged on the grounds that it can lead students to off-task behaviors (Lopata, Miller, & Miller, 2003). Poor communication and group conflicts are regarded as contributors to such student off-task problems in cooperative learning (Lopata et al., 2003). However,

McManus and Gettinger (1996) found that on-task behaviors of students declined when students worked in cooperative groups.

3.3.4 Summary

It appears that the use of cooperative learning in schools is important not only for the academic and social gains related to the teaching-learning process itself, but also to prepare individuals for future situations in their workplace, where more and more activities demand people capable of working in teams (Santoro, Borges, & Santos, 2005). Therefore, based on the discussions in this section one could argue the importance of adopting cooperative learning in mainstream educational practice. First, overwhelming research on cooperative learning reveals the positive effects of cooperative learning on students' achievement, peer relationships and social development. Second, as cognitive theorists (e.g., Vygotsky, 1978) emphasised students' collaboration promotes growth and understanding, and there is a growing realization that students must learn to think, solve problems, integrate their knowledge and apply their skills (Slavin, 1995). Cooperative learning is a vehicle for doing this (Veenman et al., 2000). Third, it has been found that cooperative learning can positively influence the social relations with pupils of different ethnic backgrounds and mainstreamed special education pupils and their classmates (Slavin, 1995). Fourth, as schools are becoming more culturally mixed, increasing amounts of attention and energy are being devoted to developing pedagogical approaches that are appropriate in heterogeneous classrooms (Sapon-Shevin, 2004). Finally, Shuell (1996) suggests that cooperative learning clearly fits with current conceptions of learning as influenced by social and situational factors as well as cognitive ones.

Hence, the following section will outline and review the major cooperative learning methods or models that have been evaluated in field experiments in primary and secondary schools in order to select a method to be used as a guide for training teachers and implementing cooperative learning at lower secondary schools in Maldives.

3.4 COOPERATIVE LEARNING METHODS

Although a large amount of research on cooperative learning has been conducted during the past 90 years, the research on specific methods of cooperative learning began in the early 1970s (Johnson & Johnson, 1992; Slavin, 1987). Since then several different cooperative learning methods have been researched, developed and implemented (Biehler & Snowman, 1997; S. Kagan, 1992; Karnes & Collins, 1997). Although there is no single universal method of cooperative learning, perhaps the best evaluated, most widely used methods of cooperative learning are Student Team Learning (Slavin, 1990), the Structural Approaches (S. Kagan, 1992), Jigsaw (Aronson, Blaney, Sikes, Stephan, & Snapp, 1978), Group Investigation (Sharan & Sharan, 1976), and Learning Together (Johnson & Johnson, 1975). These methods range from specific procedures to conceptual frameworks that teachers may use to build their own cooperative lessons.

The first three methods may be classified as direct cooperative learning methods (Johnson et al., 2000) or peer tutoring methods (Sharan, 1980) because techniques were very specific and well defined, communication was primarily unilateral or bilateral, and teachers can learn these techniques in a few minutes and apply them immediately (Johnson et al., 2000; Sharan, 1980). It is believed that direct cooperative learning or peer tutoring methods "tend to be easy to learn … [and] implement, are often focused on specific subject areas and grade levels, are easy to discontinue as interest wanes, and are not easily adapted to changing conditions" (Johnson et al., 2000, p. 5). Sharan (1980) also argued that peer tutoring methods are similar to the traditional methods of teaching where the emphasis is on basic skills acquisition, individual accountability through assessment, limited discussion of ideas, and there are no common learning goals for students to achieve. On the other hand, the remaining methods were classified as conceptual cooperative learning methods (Johnson et al., 2000) or group investigations (Sharan, 1980) because these methods are complex and involve high levels of thinking processes, and teachers can use them as templates to restructure current lessons and activities into cooperative ones where they can fit these lessons and activities to their specific conditions (Johnson et al., 2000; Sharan, 1980). Conceptual methods may be difficult to learn and implement

initially when compared to direct methods. In contrast to direct methods, conceptual methods can also be applied in any subject areas for any age students, and may be difficult to discontinue once they become internalised and routinely used (Johnson et al., 2000).

As indicated earlier, social science theories provided foundations for cooperative learning, and how students work and benefit from one another as they work in cooperative learning environments prescribed in each of those methods. For example, Student Team Learning by Slavin is based on motivational theory in psychology (Slavin, 1983; 1990). Learning Together by Johnson and Johnson, and Jigsaw by Aronson (1978) is from the social psychological theories of Morton Deutsch and Kurt Lewin (Johnson & Johnson, 1991). Based on the theories that motivated their work, researchers have identified features of cooperative learning that correlate with academic achievement or some other explicit goal (Jacob, 1999) that may have positive effects on student learning in cooperative groups. Some researchers stressed motivational issues and argue the features of individual accountability, interdependence and equal opportunities are reasons for success in improving academic achievement. Others focused on processes within cooperative learning groups such as support from team members (Jacob, 1999). Although the main focus of the above methods is on learning through cooperation, the differences occur in how much structure is provided, what kinds of rewards are offered, methods for holding students individually accountable, and the use of group competition (Jacob, 1999). The following sub-sections, therefore, briefly outline and discuss each of these cooperative learning methods separately.

3.4.1 Student Team Learning

Student Team Learning (STL) is a set of cooperative learning methods developed by Slavin, De Vries & Edwards (Slavin, 1980) that require students to work in four or five-member learning teams that are heterogeneous in terms of academic achievement, gender and race (Brown & Thomson, 2000). These learning teams stay together for five to six weeks or for the duration of a unit of study. In each week the teacher introduces new material in a lecture or some other method of presentation. The team members then study the presented materials in their teams,

making sure all team members understand the materials for quizzes and other forms of weekly assessments (Swisher, 1990).

STL methods are based on the concept of team reward, individual accountability, and equal opportunities for success (Biehler & Snowman, 1997) that are believed to be central to all student team learning methods (Slavin, 1996). Team reward means that teams are not in competition with one another to earn limited rewards, but are available to all students in the team provided the group's objectives are met by all team members (Brown & Thomson, 2000). Team rewards are dependent on how well the team's performance matches a predetermined criterion. For example, all of the teams, some of them, or none of them may achieve whatever rewards are available in a given week. Individual accountability means that each member of the team is responsible for his/her own learning as well as others, ensuring that everyone on the team is ready to perform at a certain level in any given assessment without team-mate help. Equal opportunities for success is the final concept in STL which allows all ability level students to contribute equally to their team's success by improving on their own past performances (Slavin, 1996). According to Slavin (1996) team rewards and individual accountability are essential elements for producing basic skills achievement.

As indicated earlier STL involves a number of team learning methods. The following summary sets out the three principal methods that have been developed, researched, and widely used in different levels of schooling.

Student Teams-Achievement Divisions

Student Teams-Achievement Division (STAD) is one of the three cooperative learning methods developed by Slavin based on the principles of the STL that are based on mixtures of cooperation and inter-group competition (Johnson & Johnson, 1989). As mentioned earlier, the teacher presents a lesson to the students who then work with team members in four-to five-member learning teams that are mixed in performance level, sex, and ethnicity for the purpose of helping each other master worksheets on the material presented (Slavin, 1996). As Slavin insists that learning is an individual responsibility, students take quizzes

individually to demonstrate how much they have learned, and team scores are determined by the degree of individual improvement over previous scores (Brown & Thomson, 2000). The individual quiz scores are totaled to form a team score, and teams are rewarded for their performance as Slavin (1996) indicated:

> Students' quiz scores are compared with their own past averages, and points are awarded based on the degree to which students can meet or exceed their own earlier performance. These points are then summed to form team scores, and teams that meet certain criteria may earn certificates or other recognition. The whole cycle of activities-from teacher presentation to team practice to quiz-usually takes three to five class periods. (p.2)

Although the STAD method can be used in various subjects it is most appropriate for teaching well-defined objectives with single right answers, such as mathematical computations and applications, language usage and mechanics, geography and map skills, and science facts and concepts (Slavin, 1996).

Teams-Games-Tournament

De Vries, Edwards and Slavin (1978) developed the Teams-Games-Tournament (TGT) which was the first cooperative learning method developed under the umbrella of STL (Slavin, 1996). It is similar to the STAD method, except that students are actively engaged in weekly tournaments or games, instead of taking quizzes to measure what the students have learned (Slavin, 1996). In other words, students work in small teams to help one another to learn the material, and compete with students on other teams who have similar achievement (i.e., low achievers of one team compete with low achievers of the other team and vice versa) in order to earn points for their own teams. Individual success is assessed after each game to determine the ability level. For example, high achievers must face an opponent of higher ability and low achievers are matched to a partner of less ability next time (Brown & Thomson, 2000). Rewards or other forms of recognition are given to high-performing teams as in the STAD method (Slavin, 1996).

Team-Assisted Individualisation

Slavin (1982) developed the Team Assisted Individualisation (TAI) method that combines team and individualised learning based on individualistic and cooperative learning procedures (Johnson & Johnson, 1989). This method was

especially designed for use in mathematics classrooms of Grades three to six (Slavin, 1990). Students work on individualized materials in 4-5 member small heterogeneous groups as in STAD and TGT. In TAI, students are required to help one another progress through the material and check each other's work although the tasks are essentially individual. At the end of each week, a team score is given for the quizzes that are taken from each unit, but is based on the number of units completed and the accuracy of the work. Rewards and other recognitions are offered for teams where individual team members achieve and exceed preset team standards.

3.4.2 The Structural Approach

Spencer Kagan developed the Structural Approach (SA) to cooperative learning which is based upon the use of structures that are "content-free ways of organizing the interaction of individuals in a classroom" (Kagan, 1994, p. 5:1) to promote predictable outcomes in the academic, linguistic, cognitive, and social domains (Fathman & Kessler, 2006). Since the structures are building blocks of a lesson, the SA recognises the distinction between 'structures' and classroom 'activities'. Structures usually involve a series of prescribed behavioural steps for presenting lesson content where they shape the interaction between students, and between the students and the teacher. Hence, teachers may use structures repeatedly with almost any subject matter and at any age level. In contrast, it is believed that cooperative activities almost always have specific content bound objectives and thus cannot be used to deliver a range of academic content (Kagan, 1994).

The SA represents numerous arrays of simple group structures ranging from Think-Pair-Share, Line-ups, Roundtable, Numbered Heads Together, Three-Step Interview, Jigsaw, to Pairs Check (Thousand, Villa & Nevin, 1994) that describes specific ways of cooperation, and can serve different functions such as subject-matter review, concept development, cooperative work on projects, and so forth (Fathman & Kessler, 2006). It is believed that SA incorporates some procedures from other cooperative learning methods such as STAD, Jigsaw and GI. According to Thousand, Villa and Nevin (1994) STAD has been considered as a lesson design for developing mastery. The structures associated with SA are believed to have positive outcomes on student academic achievement, improved

ethnic relations, enhanced self-esteem, harmonious classroom climate, and social skills development (Kagan, 1993, 1994).

However, the use of structures alone may not be enough to produce the above positive effects on student learning. Therefore, Kagan (1994) suggested six key concepts for successful implementation of cooperative learning that include teams, cooperative management, the will to cooperate, the skill to cooperate, basic principles, and structures. These concepts are summarised in Table 3.2.

Table 3.2: The Six Key Concepts of Structural Approach

Key Concepts	Descriptions
Teams	Teacher-formed, heterogeneous teams of four members
Cooperative management	Careful attention to classroom management
Will to cooperate	Building the will of students to cooperate through class-building, team-building activities, task and reward structures
Skill to cooperate	Teaching students appropriate social skills needed in cooperative learning
Basic principles	The four basic principles of cooperative learning are included into every lesson: positive independence, individual accountability, equal participation, and simultaneous interaction.
Structures	Various cooperative structures are practical and useful for meeting diverse objectives including class-building, team-building, communication skills, thinking skills, information sharing, and mastery.

It appears that the four basic principles of Kagan outlined in Table 3.2 share common themes with the basic elements of Johnson and Johnsons' Learning Together Model, especially the elements of positive interdependence and individual accountability. For Kagan, understanding of these four basic principles is fundamental and must be incorporated with every cooperative learning lesson in order to be effective although not every key concept of Kagan need be part of each of those lessons (Kagan, 1994).

Although students enjoy the game-like elements of SA and the opportunity for relationship building (Harris & Hanley, 2004), the key problem with the SA is that it is a very structured approach in which certain strategies require students to

work together and then to share with the whole class. For example, the aim of sharing the group work with the whole class is believed to promote student's curiosity to engage with learning, although in some instances generating initial curiosity within the classroom student is extremely difficult (Cohen, Brody, & Sapon-Shevin, 2004).

3.4.3 Jigsaw

In 1978, Elliot Aronson and colleagues at the University of California developed the Jigsaw method of cooperative learning which combines both cooperative and individualistic procedures (Johnson & Johnson, 1989). Students work in four to six member groups to complete assigned academic material that has been broken down into sections. Individual members of each group are given different pieces of information that makes the student in the group an expert on that topic. These "experts" from various groups who have studied the same topics meet to discuss and synthesise their sections. Then they go back to their own groups and take turns to teach their expert information to other members of their groups. By listening to their group-mates they can learn information or sections other than their own because it is believed that students are motivated to support and show interest in one another's work (Slavin, 1996).

Although the Jigsaw method was initially developed by Aronson, a variation of it called Jigsaw II was designed by Slavin and incorporated in the STL programme. In this method students work in small four or five member teams as in STAD and TGT. While Jigsaw requires individual students to work on an assigned unique piece of information, Jigsaw II requires students in groups to begin with a base of common information. However, individuals meet and become "experts" on assigned topics. Students from various groups meet with other experts to study their assigned topic before returning to their own groups to share what they have learnt. At the end of the unit of study, the students are quizzed individually and scores are awarded for groups based on the improvement score system of STAD (Slavin, 1996). Certificates and other recognition may be given for teams meeting the predetermined criteria. Jigsaw is primarily used in social studies and other subjects where learning from texts is important (Slavin, 1991).

3.4.4 Group Investigation

The Group Investigation (GI) method was originally conceived by John Dewey (1970) and developed in detail by Shlomo and Yael Sharan and Rachel Hertz-Lazarowitz (Sharan & Hertz-Lazarowitz, 1981; Sharan & Sharan, 1992). GI is a general classroom organisation plan that stresses cooperative working skills as well as individual responsibility (Marr, 1997). In GI, students work in their own two-to-six member groups where students elaborate on the subject, discuss and explore their ideas, clarify them for themselves and to one another, expand and modify them, and thus remember these ideas more easily (Slavin, 1996; Sharan & Sharan 1992) because students take an active part in examining, experiencing and understanding their study topic. The GI method assumes that knowledge develops as a result of students' collective effort (Fathman & Kessler, 2006), and it requires integration of interaction and communication in the classroom with the process of academic inquiry as indicated by Sharan and Sharan (1992):

> Group Investigation provides students with the opportunity to interact with others who gave investigated different aspects of the same general topic, and who contribute different perspectives on that topic. The cooperative interpretation of information gathered by group members promotes their ability to organize, confirm, and consolidate their findings and thus make sense of them. (p. 100)

As mentioned earlier, students work in small groups based on the six steps outlined in GI where they study a unique project or different aspects of a specific topic over a period of time, in which they make decisions about how to approach the information, organisation and presentation of that particular task. For example, each group takes a broad topic from a unit being studied by the entire class, then breaks it down into subtopics, gathers information about the subtopics from a variety of sources, prepares and presents a final report to the class, and is evaluated based on the quality of this report (Marr, 1997). Classroom interaction, interpretation, and intrinsic motivation combine to enable students to follow a pattern involving six steps of work that consist of GI are adapted from Thousand, Villa and Nevin, (1994) and summarised in the Table 3.3.

Table 3.3: The Six Step Group Investigation Procedures

Stages	Group Investigation Procedures
1	The class determines subtopics and group members organise into small member task oriented research groups
2	Group members plan their investigations cooperatively -what they will study, how they will go about it, and how they will divide the work among themselves.
3	Groups carry out their investigation based on the plan formulated in step 2. Members of each group gather, organise, and analyse information on their topic from several sources.
4	Groups plan their presentations by analyzing and evaluating the information obtained during step 3. Members share and discuss their data with their group and plan the group report together.
5	Groups give their presentations. Reports are made to the entire class in a variety of forms and with the participation of all group members.
6	Teachers and students evaluate the quality of each group's report individually, in groups, and as a class. There are varied means for evaluating the individual members' contribution as well as the group presentation as a whole. Evaluation includes assessment of higher level thinking processes.

3.4.5 Learning Together

Johnson and Johnson at the University of Minnesota developed the Learning Together (LT) method to cooperative learning which involves students working together in small heterogeneous groups to produce a group project (Slavin, 1983). Group members provide help and assistance to one another in a friendly environment based on a collaborative or helping relationship among the participants (McCulloch, 1985; Slavin, 1986). As students work towards a common goal in groups, academic learning and achievement presumably become valued by peers (Slavin, 1987). This is because they know they have to learn assigned material and make sure that all other members of their group do likewise, and also they believe that they can reach their learning goals only if the other students in the learning group also do so (Johnson & Johnson, 1989).

Although the ideal size of the group depends on each lesson's objectives, students' age and experience working in groups, the availability of materials and equipment, and the time limits for the lesson (Johnson & Johnson, 1991), typically it ranges from two to four members in each group. Since the group members produce a single product and receive rewards together, group building

activities and regular discussions within groups about how well they are working together is the main emphasis of this method (Thousand, Villa & Nevin, 1994).

As has been indicated earlier, LT is not a structured process like STL, SA or Jigsaw to cooperative learning (Harris & Hanley, 2004; Jacob, 1999), but it is a conceptual approach that is used for both higher cognitive process as well as mastery of basic facts and skills (Johnson & Johnson, 1989). LT method is based upon the integration of five essential elements into each cooperative activity or assignment that is necessary to construct positive, effective cooperative group learning situations (Thousand et al., 1994), because simply placing students in groups and expecting them to work together does not in and of itself produce a cooperative effort (Johnson & Johnson, 1998; Kagan, 1994; Slavin, 1996). In support of that Gillies and Ashman (2003, p. 37) argued "some children will defer to the more able children in the group who may make over the important roles in ways that benefit them at the expense of other group members. Similarly, other students will be inclined to leave the work to others while they exercise only token commitment to the task". As a result, LT method requires those essential elements to be included if true cooperative learning is to occur in small group learning (Thousand, Villa & Nevin, 1994). These elements are: positive interdependence, face-to-face interaction, individual accountability, interpersonal and small group skills and group processing.

Positive Interdependence

The most important element of the LT method is positive interdependence between group members. Simply it means that one student succeeds only if the other students succeed. Students must feel that they are linked with each other, and need each other in order to complete the allocated tasks for the group (Sirias, 2005), that is, their access to rewards is as a member of an academic team wherein either all members receive a reward or no member does. Therefore, group activities or tasks need to be structured so that students must depend upon one another for their own learning as well as the group's success in completing the assigned tasks and mastering the targeted content and skills (Johnson & Johnson, 1989).

Positive interdependence can be achieved through different approaches. One way is positive goal interdependency (Johnson & Johnson, 1989). Students must perceive that they can achieve their learning goals only if all group members attain their goals. For example, a small part of each person's grade can depend on each member of the team improving his or her performance on assignments, exams or tests (Cooper, Robinson, & McKinney, 2002). Another way is positive reward interdependency (Johnson & Johnson, 1989). Positive interdependence can also be achieved through positive resource interdependency (Johnson & Johnson, 1989), by assigning different members of each team a discrete amount of material to master that must be shared by all members of the group (Cooper et al., 2002). In addition, it can also be promoted by linking the grades given on an assignment not just to an individual performance on the test but to the performance of the other group members (Tanner et al., 2003). Finally, positive role interdependency (Johnson & Johnson, 1989) could be promoted through team roles such as recorder, reporter, minute taker, etc.

Face-to-face Interaction

Face-to-face interaction is the second element of cooperative learning that creates more active rather than passive learning as in the traditional classroom. Through interactions students promote learning by sharing, helping, supporting, encouraging and praising each other's efforts to learn (Johnson & Johnson, 1991). It is believed that cognitive activities and interpersonal dynamics occur only when students get involved in promoting each other's learning (Johnson & Johnson, 1991; Kagan, 1994; Slavin, 1996). This includes orally explaining how to solve problems, discussing the nature of the concepts being learned, teaching one's knowledge to classmates and connecting present with past learning. In addition, face-to-face interaction provides and promotes opportunities for students to develop personal relationships that are essential for developing pluralistic values (Johnson & Johnson, 1989; Johnson et al., 1993a).

The size of the group is an important factor in obtaining a meaningful face-to-face interaction in cooperative learning. It is a common perception that as the size of the group decreases, the amount of pressure peers may place on unmotivated group members increases, and vice versa (Johnson & Johnson, 1991). Hence, the

size of the group needs to be small but could range from two to six members. In addition, assigning group roles, often randomly, to each student in the group, such as facilitator, reporter or recorder could help to achieve face-to-face interactions. This provides every member of the group an entry point for participation and begins to generate individual responsibility within the group (Tanner et al., 2003).

Individual Accountability

The third essential element of cooperative learning is individual accountability, which means that each student is held accountable for learning the material. All members of the group need to be clear about their own task or role and be accountable for achieving the group goals (Jacob, 1999; Johnson & Johnson, 1991). Also each member is accountable for contributing his or her fair share to the group's efforts (Johnson, Johnson, & Holubec, 1993b). It is important the group members know that a 'free rider' situation will not be productive.

Individual accountability can be achieved by grading students both on their individual work and on the work of the group (Tanner et al., 2003). Some of the ways to structure individual accountability include (a) giving an individual test to each student, (b) randomly selecting one student's product to represent the entire group, or (c) having each student explain what they have learned to a classmate (Johnson & Johnson, 1991; Johnson et al., 1993a).

Interpersonal and Small Group Skills

The fourth element of cooperative learning is interpersonal and small group skills. Students are required to learn these social skills in order to be a productive group member because such social skills do not appear magically when cooperative learning is implemented. Also it is unrealistic to expect all members of a group to come to group tasks fully equipped with the social skills necessary for cooperation (Tanner et al., 2003). Hence, they must be taught such skills if they do not already have them, and must be motivated to use them (Jacob, 1999; Johnson & Johnson, 1991).

Ways to foster skill development include teaching leadership, decision-making, trust-building, communication, and conflict-management (Johnson & Johnson,

1991). These skills are necessary for students to manage both teamwork and taskwork successfully in cooperative learning. Finally, today's schools are becoming more culturally mixed, so social skills are required for interacting effectively with peers from other cultures and ethnic groups (Johnson & Johnson, 1989; Johnson et al., 1993a).

Group Processing

Group processing is the fifth element of cooperative learning. It exists when group members are given the time and opportunities to discuss and evaluate how effectively the groups are working to achieve their goals and maintain effective working relationships within the groups (Johnson & Johnson, 1991; Tanner, Chatman, & Allen, 2003). According to Johnson and Johnson (1991) such group processing involves five steps: (1) it allows the groups to focus on group maintenance; (2) each learning group receives feedback; (3) it facilitates the learning of social and collaborative skills; (4) the whole class processes how it is functioning; and (5) groups and the whole class celebrate their successes.

Examples of how group processing can be achieved involve allowing sufficient time, making it specific rather than vague, maintaining student involvement in processing, reminding students to use their social skills while they process, and ensuring that clear expectations as to the purpose of processing have been communicated (Johnson & Johnson, 1991).

Although the literature suggests that cooperative groups can be structured in different ways, the three types of cooperative groups identified by Johnson, Johnson, and Holubec in 1998 seem the most widely used in cooperative learning involving a combination of ad-hoc informal cooperative learning groups that last up to one class period, formal cooperative learning groups that last up to several weeks and base groups with stable membership for long-term mutual support (Thousand, Villa & Nevin, 1994). The main differences between cooperative and traditional learning groups as identified by Johnson & Johnson (1991; p. 59) are listed in Table 3.4.

Table 3.4: Differences between cooperative & traditional learning groups

Cooperative Learning Groups	Traditional Learning Groups
Positive interdependence	No interdependence
Individual accountability	No individual accountability
Heterogeneous membership	Homogenous membership
Shared leadership	One appointed leader
Responsible for each other	Responsible only for self
Task and maintenance emphasised	Only task emphasized
Social skills directly taught	Social skills assumed and ignored
Teacher observes and intervenes	Teacher ignores groups
Group processing occurs	No group processing

Informal Cooperative Learning Groups

Informal cooperative learning groups are temporary, ad-hoc groups that last from a few minutes to a whole class period (Johnson, Johnson, & Holubec, 1992; Johnson, Johnson, & Smith, 1991). Informal cooperative learning groups can be used at any time but according to Johnson and Johnson (2002) they are especially useful during direct teaching such as lectures, demonstrations, or film to "focus students attention on the material to be learned, set a mood conducive to learning, help set expectations about material, what the lesson will cover, ensure that students are cognitively processing the material being taught, and provide closure to an instructional session" (p. 138). The challenges teachers face during direct teaching ensure that students do the intellectual work of organizing material, explaining it, summarizing it, and integrating it into existing conceptual structures or networks (Johnson & Johnson, 1989).

Formal Cooperative Learning groups

Formal cooperative learning groups range in length from one class period to several weeks to complete a specific task or assignment. Teachers can plan and structure any academic task, assignment or course requirement for formal cooperative learning. In formal cooperative learning there are five tasks or steps that teachers need to follow before and during the implementation of a lesson on cooperative learning. Johnson and Johnson (2002) outlined these steps. According to them, firstly, teachers need to specify the academic and social objectives to be

learned from the lesson or small group skills to be used and mastered during the lesson. Secondly, teachers need to make a number of decisions before implementing the lesson regarding the size of groups, the method of assigning students to groups and their assigned group roles, the materials needed to conduct the lesson and how the room would be arranged. Thirdly, teachers need to explain the task and the positive interdependence and individual accountability. Fourthly, teachers need to monitor students' learning and intervene within the groups to provide task assistance or to increase students' interpersonal and group skills. Finally, teachers need to assess students' learning and help students process how well their groups functioned.

The heart of formal cooperative learning groups is to "ensure that students are actively involved in the intellectual work of organizing material, explaining it, summarizing it, and integrating it into existing conceptual structures" (Johnson, Johnson & Holubec, 1998, p. 1:7).

Cooperative Base Groups

Cooperative base groups are long-term, heterogeneous cooperative learning groups with stable membership (Johnson, Johnson, & Smith, 1991), whose primary responsibility is to provide each student with the support, help, encouragement, and assistance needed to progress academically (Johnson, Johnson, & Holubec, 1998).

Base groups consist of three or four participants who stay together during the entire course. It provides students with long-term committed relationships that help groups personalise the work required and the learning experiences in the course and improve the quality and quantity of learning (Johnson & Johnson, 2002). Base groups meet formally to discuss academic progress of each member, and informally, members interact every day within and between classes, discussing assignments, and helping each other with homework (Johnson et al., 1998).

3.4.6 Summary

The distinction between competitive, individualistic, and cooperative learning situations was outlined. It appears that in the cooperative learning situations, students perceive that their goal achievements are positively related. Conversely, in competitive and individualist situations, students work against each other, and work individually to accomplish goals unrelated to those of their peers respectively (Thousand et al., 1994). Although competitive learning is believed to be negatively correlated to student achievement there is no correlation among participants' goal attainments in individualistic learning (Johnson & Johnson, 1989; Slavin, 1996).

The major cooperative learning methods also have been briefly described and discussed. These methods include STL, SA, Jigsaw, GI, and LT. The structures of these methods range from the development of higher cognitive process to the mastery of basic concepts and skills. However, it appeared that all of these methods of cooperative learning require students to work in small groups to accomplish their assigned activities or tasks. Although individuals work toward a group goal each team member is assigned varied responsibilities within the group and the members are held accountable for their own learning and contributing to the group goal.

The next section will focus on selecting a method from the above methods to be used as a guide for training teachers to implement cooperative learning at lower secondary schools in the Maldives.

3.5 IMPLEMENTATION OF COOPERATIVE LEARNING MODEL

For cooperative learning to be effective as group-based learning a 'free rider' pitfall must be avoided (Slavin, 1995). As mentioned earlier, the cooperative learning methods can create opportunities for some group members to do most or all of the work and others simply to go along for the ride if it is not properly planned and implemented. The free rider effect can be eliminated by allocating group roles for individual members where each group member is responsible for a

unique part of the group's task and individually accountable for their own learning (Veenman et al., 2000).

3.5.1 The Model

As has been mentioned, simply placing students into groups to learn will not necessarily promote cooperative learning (Kagan, 1994; Johnson & Johnson, 1989; 1991; & Slavin, 1996). Instead, it requires certain principles or basic elements to be incorporated within the individual lessons in order to generate true cooperative learning (Johnson & Johnson, 1989). As Gillies and Ashman (2003) indicated, when groups are established where positive goal interdependence does not exist, groups are not truly cooperative because interdependence is believed to be the heart of cooperative learning. Instead group goals motivate students to help their group-mates learn (Stevens & Slavin, 1995).

As discussed in the previous section, the LT method to cooperative learning by Johnson and Johnson is one of the methods that requires teachers to include five basic elements of positive interdependence, face-to-face interaction, individual accountability, social skills and group process in every cooperative lesson. When these elements are incorporated into group work, the activities become cooperative learning structures and can make a difference in the students' academic and social development (Marr, 1997). It is argued that cooperative learning methods that incorporate these elements consistently increase student achievement more than traditional methods of teaching (Johnson & Johnson, 1989; Stevens & Slavin, 1995). In addition, the emphasis is placed on group processing or reflection of the team's ability to function and the development of small-group interpersonal skills (Johnson & Johnson, 1999).

The LT is one of the methods that emphasizes the use of team-building activities before students begin working together and regular discussions within groups about how well group members are working together (Slavin, 1996). It also provides guidelines that teachers can follow to design lessons so that they can help to incorporate the basic elements and create approaches to monitor and help students to cooperate (Fathman & Kessler, 2006).

In contrast to other cooperative learning methods discussed earlier, the LT model places a greater emphasis on teaching students how to productively work together, and recommends using team grades, rather than certificates or other forms of recognition, as positive reinforcers (Biehler & Snowman, 1997). It is also less discrete and less prescriptive than the Kagan's Structural Approach and Slavin's Student Team Learning models that employ specific steps in lesson planning and somewhat "pre-packaged curricula, lessons, and strategies in a prescribed manner" (Johnson & Johnson, 1998, p. 226). In addition, the LT model is a conceptual framework for teachers to plan and tailor cooperative learning according to their circumstances, student needs, and school contexts (Johnson & Johnson, 1999). Moreover, it can be used for teaching basic concepts and skills as well as promoting higher cognitive processes that involve higher level reasoning among the students (Thousand, Villa & Nevin, 1994). As a conceptual approach, LT emphasises the importance of a learning process that enables students to be productive and the development of social skills that are essential for the work world. It also focuses on building the self-esteem of all group members which makes it a valuable part of any cooperative learning programme (Harris & Hanley, 2004).

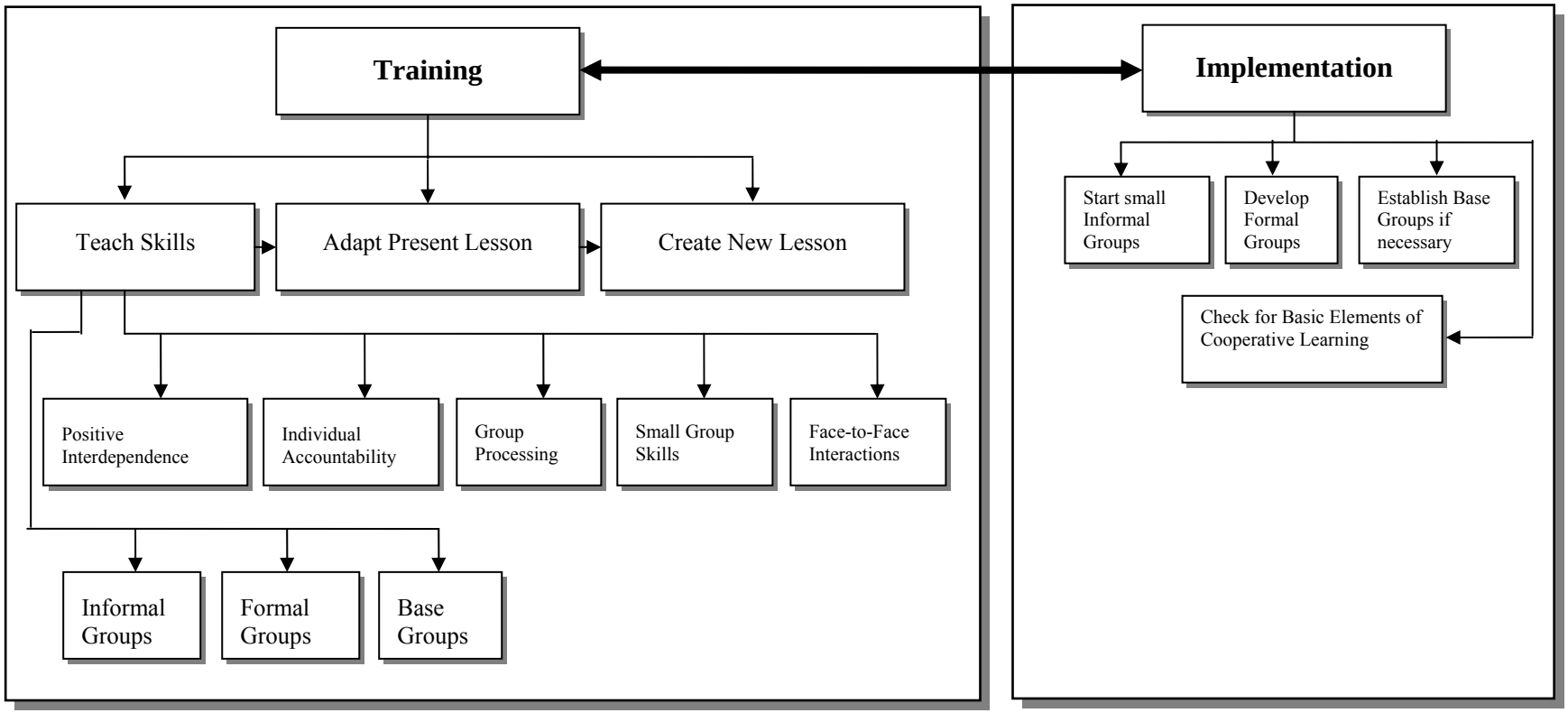
The cooperative learning methods reviewed in the previous section have been extensively researched over many years (Thousand et al., 1994) and more specifically the LT and STL methods probably account for more than 80% of all empirical studies conducted on practical cooperative learning (Slavin, 1990). Johnson et al., (2000) examined 164 studies investigating eight cooperative learning methods and found all those methods had a positive impact on students' learning. However, their results suggest that the LT method has the greatest impact when compared with competitive and individualistic learning respectively.

Furthermore, LT has been developed based on cognitive and social constructivist theories. As indicated earlier the constructivist approach suggests that in the process of implementation, teachers and students are engaged in active learning with subject matter and with each other that would help them to learn new concepts (Siegel, 2005).

For the above reasons, the principles of the LT model were selected as the form of intervention in this present study to introduce and implement cooperative learning to see how it influences students to learn and teachers to teach economics in lower secondary schools in the Maldives. Nine teachers in Grades 8, 9 and 10 from the three schools implemented cooperative learning lessons over a period of three months using the conceptual framework for cooperative learning outlined in Figure 3.1.

As has been mentioned, this framework is developed based on the principles of the Learning Together model of cooperative learning that has been described earlier. Figure 3.1 provides a graphic representation of the model including the stages of training teachers and students for cooperative learning and the process of implementation. The arrows in Figure 3.1 provide linkage between the areas of training and the aspects of implementation, and how they connect with one another. Similarly, the highlighted arrow between training and implementation in the model characterises the bold relation between them and the way they depend on one another for effective and successful learning.

Figure 3.1: A Conceptual Framework for Cooperative Learning



3.5.2 How to Implement and Achieve the Cooperative Learning

As has been outlined earlier there is no common universal single method or one right way to achieve cooperative learning. However, based on the cooperative learning literature and the principles of the LT model the above framework for cooperative learning has been used as a guideline to implement cooperative learning for the purpose of this study.

Implementing cooperative learning and creating such a learning environment can be difficult because setting up a cooperative learning situation is not a linear step-by-step process (Brown & Thomson, 2000). It requires different strategies or structures, and well defined learning activities in order to achieve success. For this both teachers and students are required to develop basic skills as a first step for creating cooperative learning environments that are necessary for successful implementation of cooperative learning. The adaptation of present lessons and gradual introduction of new lessons based on the principles of the cooperative learning model also affect the process of implementation. In addition, the successful implementation of cooperative learning requires teachers to start with small informal cooperative groups before moving to the formation of formal or base groups. Finally, the incorporation of the basic elements of cooperative learning within the implementation process is the most important ingredient of cooperative learning.

Teach Skills, Adapt Present Lessons, and Develop New Lessons

It has been argued that training and systematic instruction in various techniques as well as consistent practice and effort (Brown & Thomson, 2000) impact on the success or failure of cooperative learning because the success of cooperative learning strategies is not automatically guaranteed (Johnson & Johnson, 1989; Kagan, 1992; Slavin, 1990). It requires both teachers and students to have initial training on cooperative learning procedures as well as group social skills because it may take some time for students to learn how to interact within the groups successfully (Denise-Muth, 1997). For example, many students have never worked in cooperative learning groups, and therefore, may need knowledge and practice in such skills as active and tolerant listening, helping one another in

mastering content, giving and receiving constructive criticism, and managing disagreements (Davis, 1993). In addition, teachers should adapt present lessons gradually according to the principles of cooperative learning and develop new lessons as students become accustomed with new methods of learning throughout the course of implementation. For example, such lessons should include the basic five components of cooperative learning—positive interdependence between group members, individual accountability, face-to-face interaction, use of collaborative skills and group processing.

As indicated earlier, cooperative learning cannot be successful unless the group goals are attained. Therefore, group goals need to be clearly identified, established, and achievable by all members (Slavin, 1990). Group members need to be accountable for their own learning, and should help each other to learn and achieve the group goals, so that one cannot succeed unless all in the group succeed (Johnson et al., 1991). In other words, the group is affected by each member's contributions because the rewards that are achieved in this type of interaction are based on the work of the group (Berry, 2003). Furthermore, it is important for teachers to create and continue to provide on-going monitoring and reinforcement to the students for implementing the procedures that can develop a cooperative community of learners. Setting the rules for cooperation, teachers can unobtrusively monitor group activities so as to provide the appropriate level of help at the appropriate time and to prevent the problems of group domination and free-rider effects (Johnson & Johnson, 2002). Davis (1993), and Johnson and Johnson (1989) have provided some guidelines for teachers implementing cooperative learning. Table 3.5 provides a summary of their suggested guidelines.

Table 3.5: Guidelines for Teachers Implementing Cooperative Learning

Guidelines for teachers implementing cooperative learning
▪ Create cooperative learning environment by gradually teaching students the social and interpersonal skills necessary to work in cooperative groups
▪ Start with students working cooperatively in pairs before introducing small groups of about four heterogeneous member teams
▪ Arrange the classroom in a way that group members can sit face-to-face to interact and promote communication within the groups
▪ Assign group roles such as group leader, recorder, time keeper, material manager,

participation checker, etc.
▪ Explain all learning and group tasks clearly and allow students to ask questions. Make sure group objectives are clearly defined and individual groups know exactly what they should come up with when the tasks are completed. Let students know exactly how long they will have to complete their assigned tasks
▪ Let students know that working in cooperative groups students are responsible for their own learning as well as learning of others.
▪ Monitor group activities and encourage them to work cooperatively. Let them know the importance of equal participation, and intervene if necessary.
▪ Provide specific feedback at the end of each assigned tasks outlining how well each group worked together

Start Small and Keep Building

As has been indicated, learning how to work cooperatively in groups is a gradual process that requires time, practice and effort on the part of the teacher. King (1993) has recommended that teachers gradually introduce group work, beginning with brief informal groups of pairs or threes and keep building straightforward tasks through formal or base groups if necessary, and increasing to more complex and demanding tasks as the groups refine their abilities to work cooperatively (Marr, 1997). For example, teachers should start with simple activities that can help students get to know each other through informal groups before moving to more sophisticated tasks in formal or base groups. According to Johnson et al., (1991) the less skilful the group members, the smaller the groups should be. They also indicated that the shorter amount of time available, the smaller the groups should be. Teachers can allow individual group members to assume varied roles of responsibility as they go along with the activities throughout the year.

Check for Basic Elements

As has been repeatedly mentioned the LT model to cooperative learning organises instruction according to the principles of positive interdependence, individual accountability, face-to-face interaction, social skills, and group processing that are necessary to implement if truly cooperative learning is to be established in classrooms. Hence, teachers are required to organise the lessons based on these principles and learning activities in a way that students can achieve the assigned learning outcomes.

3.5.3 Summary

This section focused on selecting a cooperative learning model from the various models discussed in previous sections to be used as a guide to implement cooperative learning at lower secondary schools in the Maldives. The Learning Together Model of cooperative learning was selected, and a conceptual framework was drawn up and discussed based on the principles of the LT model for the purpose of this study.

3.6 CONCLUSION

In this chapter cooperative learning was defined in some detail followed by a review of the characteristics of competitive, individualistic and cooperative learning situations with particular reference to cognitive and motivational theories in order to rationalise the use of cooperative learning in schools. It appears that the positive effects that cooperation has on so many important outcomes makes cooperative learning one of the most effective teaching methods available for teachers (Sapon-Shevin, 2004). According to Marr (1997) cooperative learning not only increases students' academic achievement but also helps the development of prosocial skills among the students. The chapter also reviewed the major and most commonly used cooperative learning models, as background to selecting a model to be used for the purpose of this study. Although the reviewed models share certain key characteristics, a number of models vary in their orientation to specific learning techniques as well as their potential for classroom integration (Fathman & Kessler, 2006). Based on the models reviewed in this chapter, the Learning Together model was selected for this study and a conceptual framework was drawn up for the intervention with reference to its principles because the Learning Together Model encompasses all the cooperative learning elements of heterogeneous grouping, positive interdependence, individual accountability, social skills, and group processing.

In the next chapter, the research methodology and design will be described and discussed.

CHAPTER FOUR

RESEARCH METHODOLOGY AND DESIGN

4.1 INTRODUCTION

The research context and the theoretical development basis of this study was outlined and explained in the previous chapters. Now the focus turns to the actual design and implementation of the research process.

This chapter discusses not only the research methodology but also the philosophical foundations underlying this research, and discusses the particular methods employed in collecting the research data used to inform this study's three research questions presented earlier in Chapter 2.

The literature identified in this chapter was gathered from the relevant research published and unpublished studies. Methods included conducting computer searches through the electronic online databases (e.g. ABI/INFORM, EBSCO, ERIC, JSTOR, ProQuest) and the University of Waikato Library catalogues, and examining bibliography and reference sections of the studies to identify further relevant studies.

It begins with a broad overview of research strategy and moves on to discuss the qualitative research in general before detailing the choice of research methods and the research assumptions. The research design is described in detail with reference to the data collection strategies used. Then an outline of the limitations and difficulties of the study, and ethical considerations is provided before concluding with a description of how the data were analysed.

4.2 RESEARCH STRATEGY

A research strategy is a plan of action that gives direction to conduct research systematically. Hence, this section aims to address the research objectives and some of the general epistemological and foundational issues and implications

concerning qualitative research, which enables us to explore beneath the surface and to consider why people do what they do, think how they think and, in some cases, affect the way they behave (Marks, 2000).

4.2.1 Research Aims

The aim of this study was outlined previously in Chapter 2. As indicated the overall objective of this study was concerned with exploring issues related to the current teaching and learning of economics at lower secondary school level in the Maldives, and trialing a cooperative learning model to be used to help teachers try different teaching approaches and the classroom effects upon how students learn economics.

Specifically, this study aimed to answer the following research questions:

- What are the teachers' and students' perceptions about current teaching methods in economics at secondary school level in the Maldives?
- How do teachers and students perceive cooperative learning as an alternative method to teach and learn economics?
- What influence does the learning of cooperative methods have on teachers' pedagogy and students' learning?

4.2.2 Research Methodology

A theoretical clarification of the terminology needs to be stated as often people use the term research methodology and method synonymously or confuse the two.

Research methodology is a more generic term that can be referred to general logic and theoretical analysis of the methods appropriate to a field of study (Mason, 2002). In contrast, research method is a term that refers to the specific techniques that researchers use to collect data, such as surveys, interviews, observation (Bogdan & Biklen, 2003).

A research methodology that is valid to economic education research at secondary school level and facilitates the in-depth exploration of key issues pertinent to the research questions stated earlier was required. However, it is important to note

that all research both quantitative and qualitative studies, is based on some assumptions about what constitutes 'valid' research and which research methods are appropriate (Myers, 1997). Therefore, it is worth knowing what these assumptions are in order to carry out research. The most pertinent philosophical assumptions for this study are those which related to the underlying epistemology which guides this research.

This section, therefore, aims to illustrate the underlying philosophical assumptions in the following subsections.

Research Philosophy

A research paradigm is a loose collection of logically related assumptions, concepts, or propositions that orient thinking and research (Bogdan & Biklen, 2003) and which has a deep philosophical significance, therefore, it should be congruent with a philosophy of knowledge (Byrne, 2001). Philosophy of knowledge is known as epistemology.

Epistemology is a branch of philosophy concerned with the study of knowledge, its presuppositions, sources and foundations, as well as its extent, limits and validity (Ibbitson, 2005). It assumes a separation between knowing and being. According to Orlikowski and Baroudi (1991), epistemological assumptions within a research framework are concerned with the "criteria by which valid knowledge about a phenomenon may be constructed and evaluated" (p. 8).

There are two major philosophical paradigms in the broader context of research theory in the social sciences. They are positivist and interpretivist paradigms. Positivists believe that there is a real world "out there" and consider that knowledge can only be passed on what can be observed and experienced through scientific means similar to those that were developed in the physical science (Gall, Gall, & Borg, 2005). In other words, positivists generally attempt to test theory in an effort to increase the predictive understanding of phenomena under study (Myers, 1997). The associated style of reasoning in positivist studies is 'deductive' where they begin with theories and define variables for study, and predicts their relationships through framing hypotheses that are then tested

(Williamson, 2006). Hence, the experimental design with emphasis on cause and effect is a common research method used in positivist studies in which validity and reliability are key constructs for positivist researchers (Powell, 1997).

In contrast, the interpretivist paradigm takes a different view of the nature of reality (Williamson, 2006). For instance, interpretivist researchers conduct studies with the assumptions that access to reality is only through social constructions such as language, consciousness, shared meanings, experiences and understanding of the social world that sees human action as being the force that creates what we perceive to be society (Streubert & Carpenter, 1995). Similarly, interpretivist research does not predefine dependent and independent variables as it is in the positivist paradigm, rather it focuses on the full capacity of human sense making as the situation emerge (Myers, 1997). Interpretive researchers aim to explore perspectives and shared meanings and to develop insights into situations, such as schools, and classrooms (Wellington, 2000). It also often takes place in natural settings that embrace an inductive style of reasoning, and emphasize qualitative data (Williamson, 2006). The social world is seen as a social construction which is closely associated with constructivism as opposed to positivism. Constructivism is one of several interpretivist paradigms in qualitative research (Williamson, 2006), which is concerned with the ways in which people construct the meaning and understanding of their social world (Denzin & Lincoln, 2005). It maintains that individuals construct their own new understandings through the interaction of what they already know and believe and the ideas, events, and activities with which they come in contact (Cannella & Reiff, 1994; Richardson, 1997).

As has been indicated earlier the purpose of this study was to explore current teaching methods in the Maldives and trail a cooperative learning model to help students to learn economics more meaningfully. An exploratory focused study like this can adopt a constructivist approach of research design because it "assumes a relativist ontology (there are multiple realities), a subjectivist epistemology (knower and respondent cocreate understandings), and a naturalistic (in the natural world) set of methodological procedures" (Denzin & Lincoln, 2000, p. 21). Interpretivist researchers operating within this paradigm are oriented to the production of reconstructed understandings of the social world in contrast to

the positivist criteria of internal and external validity that are replaced by terms such as trustworthiness and authenticity (Denzin & Lincoln, 2005). According to Denzin and Lincoln (2005) a constructivist researcher "value transactional knowledge … [and] … connects action to praxis and builds on antifoundational arguments while encouraging experimental and multivoiced texts" (p. 184). Hence one could argue the appropriateness of this approach to this study because the aim of this study was to understand teachers' and students' perceptions about their own classroom experiences in secondary schools. Constructivism requires a close relationship between researchers and participants to elicit from teachers and students their own stories told in their own words (Charmaz, 2000).

The nature of the phenomenon being investigated in this research study does not lend itself to the extensive use of methods aligned with the traditional positivist paradigm, such as empirical testing of hypotheses. Therefore, this study is designed with the construction of emic understandings of the above outlined school phenomenon and generation of data from the perspectives of teachers and students to tell their stories with precision and appropriate depth (Jones & Hill, 2003). The research methods for this study, therefore, were anchored in a constructivist approach to the design (Charmaz, 2000; Crotty, 1998).

Qualitative Approach

The previous section has discussed the philosophical position for this study. This section aims to outline and discuss the specific methodological approach in order to inform the research focus.

As there are different philosophical paradigms in which qualitative research can inform (Denzin & Lincoln, 2005), there are various qualitative research approaches that enable researchers to move from the underlying philosophical assumptions to research design and data collection (Myers, 1997). Qualitative researchers approach the world from a different perspective and set of understandings from quantitative researchers (Roberts & Wilson, 2002). In other words, while qualitative research methods do not form a monolithic set of traditions, assumptions, and techniques as quantitative research methods tend to do, they certainly share some common characteristics (Bryman, 2004; Werner &

Schoepfle, 1987). With regard to this Lincoln and Guba (2000) stated that the philosophical and ontological foundations of positivist and interpretivist paradigms that underlie these methods are fundamentally incommensurable. The main differences between quantitative and qualitative approaches are linked to what is seen as the different underlying philosophies and worldviews of researchers in the two paradigms (Cupchik, 2001). For example, the quantitative view is described as being 'positivist', while the worldview underlying qualitative research is viewed as being 'subjectivist' (Muijs, 2004).

As has been discussed in the previous section, the underlying philosophical paradigm for this study was a constructivist approach which fits in interpretivist qualitative approaches. Qualitative approaches to research have become increasingly important modes of inquiry for social sciences (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005; Marshall & Rossman, 1990). Yet, settling on one definition of qualitative research is difficult because the qualitative research studies genre is broad, complex and growing. This is primarily due, as Lancy (1993) points out, to the fact that "... topic, theory, and methodology are usually closely interrelated in qualitative research" (p. 3). However, one could say that qualitative research is an approach that usually emphasises meaning rather than quantification in the collection and analysis of data (Bryman, 2004). In this regard, Denzin and Lincoln (1994) describe qualitative research as "multi-method in focus, involving an interpretive, naturalistic approach to its subject matter" (p. 2). In other words, qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2005). Similarly, Cresswell (1994) indicated that qualitative researchers build a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting. Qualitative research is also defined as research methodologies, procedures (Bloland, 1992), or "the nonnumerical examination and interpretation of observation for the purpose of discovering underlying meanings and patterns of relationships" (p. 537). Qualitative research inquiry, therefore, must occur in a natural setting rather than an artificially constrained one such as an experiment (Marshall & Rossman, 1990), and should seek understanding through inductive

analysis – moving from specific observation to the general (Babbie, 2001; Bryman, 2004).

One of the central characteristics of qualitative research is that individuals construct reality in interaction with their social worlds (Denzin & Lincoln, 2005). Constructivist approach thus underlies what I am calling an interpretivist qualitative study. Glesne and Peshkin (1992) claim that "Qualitative inquiry is an umbrella term for various philosophical orientations to interpretive research" (p. 9) that include ethnography, grounded theory, case study, and so on.

According to Bryman (1988) there are several characteristics of qualitative research. Some of these characteristics include the objectives of qualitative research which aims to explore subjects' meanings and interpretations of their setting. Qualitative researchers need to work with subjects and should have prolonged and close relationships with them. In addition, the findings of qualitative research are not to confirm hypotheses but to generate them, and the outcome of the research study should be applied only to the individuals involved in the research. Furthermore, qualitative research assumes that social realities are formed by subjects' consensus of their experiences.

Since the purpose of qualitative research is to produce meaningful and relevant data (Whiteley, 2002) a constructivist paradigm based on the philosophy of interpretivist approach to answer the research questions indicated in the previous section appeared was well suited to this study because of its acceptance of the inherent subjectivity of the research endeavour (Cassell & Symon, 1995). Constructivist approach looks at the systems people create to interpret the world around them and their experiences, and it advocates that each individual constructs his or her own reality or perception (Byrne, 2001).

As stated, the overall objective of this study was to explore the influence of cooperative learning on students and teachers, and qualitative research methodology appeared to be the most appropriate research methodology for it. First, exploring teaching and learning of economics issues and trialing a cooperative learning model intended to help students to learn economics in a

meaningful way was a situation that involved "sociocultural patterns of human behaviour" (Zevenbergen, 1998, p. 19). Second, qualitative research is a systematic enquiry that can trace and document certain teaching and learning effects (Brantlinger et al., 2005). Third, qualitative approach focuses on the participant's perspectives, interpretations of their social world, and recognises that these are of value in understanding behaviour. Therefore, it was envisaged that qualitative data would enable me to capture the dilemmas, understandings, feelings, values and experiences of the teachers and students in secondary schools as they occur. Thus, this study employed some elements of both ethnographic and grounded theory approaches and included observations, workshops, interviews, and questionnaires. Ethnographic and grounded theory methods would enable me to understand the meanings and perspectives of teachers and students, and their particular words to be used to convey their meanings directly to the reader.

The following subsections will provide an outline of the elements of both ethnographic and grounded theory approaches.

Ethnography

Although the literal meaning of the word ethnography is writing about people, in a broad sense it encompasses any study of a group of people for the purpose of describing their socio-cultural activities and patterns (Burns, 1995). In that sense Harris and Johnson (2000) described ethnography as a "written description of a particular culture - the customs, beliefs, and behavior - based on information collected through fieldwork" (p. 45). Similarly, O'Connell-Davidson and Layder (1994) state that ethnography is concerned with studying people in their natural environments which "centralises the importance of understanding the meanings and cultural practices of people from which the everyday settings in which they take place" (p. 165). Therefore ethnography is an approach used for examining aspects of people by finding out their point of view and creating for the reader the shared beliefs, practices, artefacts, folk knowledge, and behaviours of some group of people (Goetz & Le Compte, 1984). An ethnographer studies and investigates these aspects of socio-cultural phenomena by actively participating and establishing face-to-face relationships with informants as the fundamental way of

demonstrating to them that he or she is there to learn about their lives without passing judgment on them (Brewer, 2000; Gold, 1997).

As with all interpretivist approaches ethnographic researchers are flexible and "open to the setting and subjects of their study" (Gorman & Clayton, 1997, p. 38). With regard to this Bow (2002) indicated that there is no single way of undertaking an ethnographic research. The researcher participation or engagement has been described as the most prominent feature of the ethnographic approach because the researcher is in the situation as things actually happen and observing things first-hand (Woods, 1994, p. 310). Also interaction with people helps the researcher to see how people lead their lives and come to understand people's experiences (Adam, 2004). In this respect, ethnographers stress moving within social worlds to understand the customs, beliefs and behaviour and take account of cultural context.

Ironically the word 'culture' is difficult to define. Culture can encompasses more than traditional focus on societal ways of life (Ramanathan & Atkinson, 1999) and include social institutions within those societies such as schools or classrooms. As has been indicated earlier this study explores the issues of classroom teaching and learning in secondary schools which can be identified as social institutions. Given the meaning of culture and for the purpose of the present study, I would like to draw upon a definition of culture proposed by Spindler and Spindler (1992):

> For each social setting (i.e. classroom) in which various scenes (e.g. reading, 'meddlin', going to the bathroom) are studied, there is the prior (native) cultural knowledge held by each of the various actors, the action itself, and the emerging, stabilising rules, expectations, and some understandings that are tacit. Together these constitute a 'classroom' or 'school' culture. (p. 70)

Ethnographic research relies on a variety of different kinds of data based on the principle that multiple perspectives enable more valid description of complex social realities than any single kind of data could alone (Ramanathan & Atkinson, 1999), which involve observations, interviews, questionnaires, and so on, to arrive at a theoretically comprehensive understanding of a situation being investigated. One of the main characteristics of ethnography is to emphasise data and analysis which move from detailed description to the identification of concepts and

theories which are grounded in the data collected within the location, event or setting (Pole & Morrison, 2003). Therefore, the issue for the researcher is how the particulars in a given situation are interrelated. In other words, the researcher needs to explain the relationships within the data that are collected and see their relevance to the study being investigated. In this respect Bannister, Burman, Parker, Taylor and Tindall (1994) indicated that: (a) the researcher needs an ability to comprehend the language of the informants; (b) the researcher needs to see relationships within the data that are collected or observed; and (c) the researcher needs to see the relevance of data to the particular study.

Like any other research methodology, ethnography has its own limitations or challenges. One of the criticisms of ethnography is that it requires a great many hours of observation to understand the environment being studied. In addition, a qualified or sophisticated observer is needed to write clearly and rapidly, and often the observational records tend to be very long and therefore difficult to quantify and interpret (Burns, 1995). Ethnography has been accused of subjectivity that may distort the findings (Burns, 1995; Cohen, Manion, & Morrison, 2003), with some arguing that a particular interpretation of specific social action by the researchers concerned is little more than anecdote and opinions presented in a style that perhaps has more in common with journalism than science (Pole & Morrison, 2003). As a result, its concentration on the location being studied is seen to have little to contribute to understand the wider social issues, being both time and space bound. Furthermore, because the observers often become active participants, the issue of power relationships may arise between the researchers and the informants, even when the research is collaborative (Zevenbergen, 1998).

From the above discussion it is not difficult to identify the link between ethnographic research methodology and a study concerned with aspects of teaching and learning of economics in secondary schools. Since the purpose of ethnographic research in education is to uncover social, cultural or normative patterns of the school (Burns, 1995), ethnographic evaluation was a relevant methodology for a study like this because it investigated teaching and learning of economics in schools, which involved socio-cultural patterns of human behaviour.

In addition, an ethnographic approach allowed the researcher to take into account the cultural context of the participants and thus gain insights about their experiences, which helped to investigate the research questions of this study. The researcher (being a Maldivian who speaks the language and appreciates the cultural values and norms) was able to participate fully in the study and was more likely to understand the participants' point of view. As Goulding (2002) indicates:

> The researcher must have some basic understanding of the culture and norms of behaviour of the particular society/culture under study … be fluent in the language of those studied in order to ensure accurate translation of informant's words. Words may take on a different meaning when translated literally by an outsider, and other considerations need to be given to the culture significance of non-verbal communication. (p. 27)

Throughout the research it was very much a collaborative effort, although some of the participants may have assumed some power differences given that the researcher's main work at the Faculty of Education of the Maldives College of Higher Education was training economics teachers for secondary schools. As Zevenbergen (1998) notes:

> In spite of intentions being democratic and collaborative, the researcher enters the fieldwork in a position that is privileged and authoritative ... Ultimately, the researcher has the power over what will be observed; what will be asked in the interviews; how the observations, data, or both will be used; who will gain most from the research; and what discourses will be used to frame the research, observations, and data. (p. 30)

Grounded Theory

Grounded theory is a qualitative research methodology that is aimed at the development of theory grounded in empirical data (Geiger & Turley, 2003), and it is believed that it has become by far the most widely used framework for analysing qualitative data (Bryman, 2004). The grounded theory approach, therefore can be defined as a "general methodology of analysis linked with data collection that uses a systematically applied set of methods to generate an inductive theory about a substantive area" (Glaser, 1992, p. 5). Strauss and Corbin (1998) extended further, stating that in this method, "data collection, analysis, and eventually theory stand in close relationship to one another" (p. 12). Grounded theory methods share a number of characteristics with other qualitative methodologies (Goulding, 2002), but a major distinguishing characteristic of grounded theory is the emphasis on the close examination of empirical data prior to focused reading in the literature (Glaser & Strauss, 1967). In addition, it is an

interpretivist mode of enquiry which has its roots in symbolic interactionsim, where individuals engage in a world which requires reflective interaction as opposed to environmental response (Goulding, 2002).

Barney Glaser and Anselm Strauss originally developed the grounded theory approach that was characterized as one oriented towards the inductive generation of theory from data that has been systematically obtained and analysed (Glaser & Strauss, 1967). In 1967 they published the *Discovery of Grounded Theory* in which they argued the importance of a method that would allow researchers to move from data to theory, so the theories would be specific to the context in which they had been developed (Willig, 2001). Hence, grounded theory was designed to open up a space for the development of new, contextualized theories generated within the qualitative paradigm that evolved during the research process itself, and is a product of continuous interplay between data collection and analysis (Glaser, 1978, 1992; Glaser & Strauss, 1967; Goulding, 1998, 2002; Strauss, 1991; Strauss & Corbin, 1990, 1994).

Distinct differences in perception of the grounded theory method have appeared between the two authors of the above book—the *Discovery of Grounded Theory*—since its inception (Bryman, 2004; Goulding, 2002). The complex process of systematic coding approach to grounded theory promoted, most notably in Strauss (1987), and Strauss & Corbin (1990) was criticised by Glaser (1992) on the basis that what it contained was a methodology which ignored 90 per cent of the original ideas. Glaser argued that it was too prescriptive and emphasised too much the development of concepts rather than of theories. Basically, to Glaser, it was an erosion of grounded theory (Stern, 1994) because he is more deeply committed to the principles and practices generally associated with what can be described as the qualitative paradigm, and therefore, believes the theory should only explain the phenomenon under study. Strauss however, advocates excessive use of coding matrixes to conceptualise beyond the immediate field of study (Goulding, 2002). Strauss' repeated emphasis on grounded theory retaining "canons of good science" such as replicability, generalizability, precision, significance, and verification may place him much closer to more traditional quantitative doctrines (Babchuk, 1996). These philosophical and procedural differences among the originators of the

grounded theory and the diffusion of grounded theory methodology across a number of disciplines have produced an adaptation of this methodology in ways that may not be completely congruent with all of the original principles. The adaptation of grounded theory elements were advocated by numerous researchers based on the argument that procedures outlined in grounded theory are a guide to be built upon according to the nature of the research problem (Dey, 1999; Glaser & Strauss, 1967; Urquhart, 1999). However, regardless of the discipline there remain a set of fundamental processes that need to be followed if the study is to be recognised as a product of the methodology (Goulding, 1998).

There are three main elements of grounded theory—namely concepts, categories and propositions. Concepts are the underlying meaning or pattern within a set of descriptive incidents (Glaser, 1992) that are the basic units of analysis since it is from conceptualisation of data, not the actual data per se, that theory is developed (Pandit, 1996). In this regard Corbin and Strauss (1990) stated that:

> Theories can't be built with actual incidents or activities as observed or reported; that is, from "raw data." The incidents, events, happenings are taken as, or analysed as, potential indicators of phenomena, which are thereby given conceptual labels. (p. 7)

The second element of grounded theory is category, which is a higher level that is more abstract than the concepts it represents (Glaser & Strauss, 1967). Categories designate the grouping together of instances that share central features or characteristics with one another (Willig, 2001), which represent the "cornerstones" of developing theory (Glaser & Strauss, 1967). Researchers are able to identify categories when they progress the analysis through the comparison of the contents of one interview or observation episode with another, and with emerging theoretical concepts in an effort to identify underlying themes (Barnes, 1996; Wells, 1995). The constant comparative analyses highlight similarities and differences that lead to derivation of theoretical categories that help explain the phenomenon under investigation (Glaser & Strauss, 1967; Glaser, 1992). Willig (2001) stated that the main objective of "constant comparative analysis is to link and integrate categories in such a way that all instances of variation are captured by the emerging theory" (p. 33). In this way, advocates of grounded theory seek a

continuous interplay between data collection and theoretical analysis for the purpose of theoretical saturation.

Meanwhile, propositions indicate generalised relationships between a category and its concepts and between discrete categories (Pandit, 1996). The generation and development of concepts, categories and propositions is an iterative process (Pandit, 1996) that involves the progressive identification and integration of these elements. The whole process of integration of these elements is to make meaning from the data (Willig, 2001).

The coding process is the heart of grounded theory analysis (Bryman, 2004). It involves reviewing transcripts or field notes and naming or labelling things such as categories and properties. According to Charmaz (1983) codes serve "as shorthand device to label, separate, compile, and organise data" (p. 186), which is comprise of three types in grounded theory: open, axial and selective (Strauss & Corbin, 1990). Open coding is the process of breaking down the data into distinct units of meaning (Goulding, 2002; Strauss & Corbin, 1990) concerned with identifying, naming, categorizing and describing phenomena found in the text. In open coding, a full transcription of interviews, observation or field notes is read line by line in an attempt to identify key words or phrases that group together through constant comparison to form categories and properties (Bryman, 2004; Goulding, 2002; Strauss, 1987), which are the basic building blocks in grounded theory construction (Glaser & Strauss, 1967).

As open coding breaks down the data into concepts and categories, axial coding puts those data back together in new ways by making connections between categories and properties (Strauss & Corbin, 1990). Thus, axial coding is the process of developing and delineating core categories and their sub-categories that involve moving to a higher level of abstraction (Goulding, 2002) through a combination of inductive and deductive thinking (Babchuk, 1996).

Selective coding, on the other hand, represents the integration of the categories that have been developed to form the initial theoretical framework (Pandit, 1996). For example, selecting or choosing one category to be the core category, and

relating all other categories to that category. According to Strauss and Corbin (1990), selective coding is "the procedure of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development" (p. 116). The integration of all categories to form core categories becomes the basis for grounded theory as it is what Strauss and Corbin (1990) call the storyline that frames the account.

There are some limitations with grounded theory as is the case with all research methodologies. The most widely raised criticism of grounded theory concerns its epistemological roots. It has been argued that grounded theory subscribes to a positivist epistemology and that it sidesteps questions of reflexivity (Willig, 2001, p. 5). In addition, the process of grounded theory research is extremely time-consuming and involves long periods of uncertainty (Pandit, 1996).

Based on the above discussions of ethnography and grounded theory, it can be suggested that both methodologies are highly compatible and the many characteristics held in common between the two methods justify incorporating elements of grounded theory and ethnographic approaches in this study.

As previously reviewed, ethnographic research can provide a thick description that is believed to be very useful data for grounded theory analysis (Glaser & Strauss, 1967). Unlike other qualitative methods grounded theory shares with ethnographic approaches a style of analysis that interweaves data collection and theory building (Locke, 2001). In addition, ethnographic research involves studying people in their natural environments (O'Connell-Davidson & Layder, 1994). Similarly, grounded theory performs best with data generated in natural settings (Robrecht, 1995). This study investigated social, cultural or normative patterns of the three selected schools in their natural environments. Furthermore, ethnography and grounded theory both have derived from the symbolic interactionist perspective (Goulding, 1998; Robrecht 1995), and both often rely on participant observations (Wells, 1995). Finally, grounded theory is applied in problem areas where there is not much existing literature (Urquhart, 2001). A search of the literature on teaching and learning of economics at secondary school

level reveals that the area which is the main focus of this study appears to be under-researched (Walstad, 2001). Therefore, one could say that ethnography offers a method of data collection that is conducive to inductive theory building (Glaser & Strauss 1967).

In this section I have highlighted the basic elements of both ethnography and the grounded theory approaches. With this understanding of the research approaches in mind, the following section now outlines the research assumptions.

4.3 THE ASSUMPTIONS

The Maldives is a small community. Being a member of this community and being involved in the teacher education programmes for the past few years, I assumed that some of the teachers at these schools may have been known to me or some of them might be former students of mine who graduated from the Faculty of Education (FE) of MCHE. If this was the case, it was assumed that our relationship would aid communication and enhance the sharing of information. It emerged, however, that teachers from the three schools who participated in the study were neither known to me, nor former students of mine. The overall assumption was that because I am a local who is conducting the research with the consent and approval from the MoE, the data that I get would be richer and the outcome of this research would be more realistic to the Maldivian school environment.

In addition, the Maldives is a Muslim country and has a long tradition of extended family values, which encourage people to share and help each other in everyday life. Although we encourage our children to learn Islamic cooperative values at home, in schools we teach them to be individualistic or competitive against fellow students to get high marks. For this reason, I assumed that if we implement cooperative learning which reflects values inherent in the Maldivian culture, students would help each other to achieve in schools.

Furthermore, based on my experience through teacher education at the FE and classroom observations at lower secondary school level in the Maldives, I believe that current teaching methods used in schools to teach economics have little

meaning for the students, due to the absence of connection between the economic curriculum content and real life situations. Similarly, many would argue that lack of students' interest in learning economics in schools could be because there are few interactions between teachers and students and even less among students themselves. Furthermore, the traditional method of teaching based on rote memorisation can lead to little long-term retention of what was learnt. Many of my former FE students critiqued their former secondary school experience by stating that they have been taught by rote memorisation and were required to sit passively in the classroom. I wondered, therefore, if cooperative learning methods would increase students' interest and would help them to learn economics more meaningfully.

4.4 RESEARCH DESIGN

Easterby-Smith, Thorpe, and Towe (1991) defined research design as "... the overall configuration of a piece of research: what kind of evidence is gathered from where, and how such evidence is interpreted in order to provide good answers to the basic research question[s]" (p.21). To answer the research questions as stated earlier, elements of ethnographic and grounded theory methodology were drawn upon. The methods employed included workshops, classroom observations, interviews, video tapes and student questionnaires which were used to collect data from three schools over a period of three months. The various methods of data collection used gave a richness of data and allowed meaningful triangulation that strengthened the validity of findings. Findings are considered to be more credible when they are based on analysis of data from various sources (Patton, 1980). This section attempts to provide a summary sequence of the data collection before briefly outlining the methods used to collect data.

Qualitative researchers use rich-thick description when they present their research findings (Denzin & Lincoln, 2005) and depend on small samples that are purposively or purposefully selected (Patton, 1990). Subjects are selected because of who they are and what they know, rather than by chance. Purposive sampling is popular in qualitative research and Patton (1990) observed that:

> the logic and power of purposeful sampling lies in selecting information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of research; thus the term purposeful sampling (p. 169).

The research was conducted at three lower secondary schools in Male', the Capital of the Maldives. The initial plan was to select two schools from Male' and a school from an outer island, but due to the time and financial constraints as mentioned earlier, the plan was changed to select three schools from Male'. The Maldives is a small homogenous society with one religion and one language, so the cultural context of the research would have been more or less the same even if more schools from different atolls of the Maldives were involved. Data were collected during the second term of the schools that spanned from the last week of April to mid-July 2004.

The three selected schools (two boys' and one girls' school) were typical Maldivian schools and the selections of these schools were carried out after consultation between the schools and the Ministry of Education. A total of nine teachers and 232 students took part in this study. Three teachers were selected from each school based on one from each Grade (i.e., Grade 8, 9, and 10), and one class of their designated Grade was chosen for each of them. The Head of Economics in each school briefed the teachers about the study before I met the teachers, and informed them that their participation in the study was voluntary. I also reiterated this during the meetings that I had with them. After separate meetings with teachers in each school, the Heads of Economics selected teachers and the teachers themselves selected the classes. The written consent from schools and teachers was sought before the beginning of the research.

Seven out of the nine teachers were expatriates from neighbouring India, and the other two were locals. They were all university/college graduates, some with teaching qualifications ranging from diplomas to masters degrees. Their teaching experiences ranged from two to 15 years at secondary school level. All teachers in Grades 8 and 9 were females and the Grade 10 teachers were all males. Table 4.1 gives an overview of the sample structure of participants.

Table 4.1: Participants involved in the Study

Grades	Teachers		Students		Total
	Male	Female	Male	Female	
8	0	3	40	29	69
9	0	3	43	30	73
10	3	0	60	30	90
Total	9		143	89	232

The research was conducted in three stages over a period of three months. Summaries of the data collection events are given in the Table 4. 2.

Table 4.2: Summary of Events

Session	Session Type	Summary of Events
1 14.04.04 (WED)	Meeting	▪ Met the Executive Director of the Department of Higher Education and Training and got the final consent for conducting the research in schools.
2 15.04.04 (THUR)	Meeting	▪ Met the Director General of the school systems at the MoE. ▪ Debriefed regarding the proposed research and advice was sought about which schools the research is to be conducted in.
3 18.04.04 (SUN)	Meeting	▪ Met the Principal and her deputy of the girls' school and the consent was sought to conduct the research. ▪ The principal and her team confirmed support and assistance for the research ▪ Met the teachers and head of Economics at girls' school and information regarding the research was given. ▪ Three teachers were selected and the consent was sought from them.
4 19.04.04 (MON)	Meeting	▪ Met the Principal of the first boys' school and the information was given about the research. ▪ The principal was delighted, assured me of support for the research. ▪ Met the teachers and head of Economics at first boys' school and information regarding the research was given. ▪ Three teachers were selected and the consent was sought from them.
5 20.04.04 (TUE)	Meeting	▪ Met the Assistant Principal of the second boys' school and the information was given about the research ▪ The Assistant Principal assured me of support for the

		research ▪ Met the teachers and head of Economics at second boys' school and information regarding the research was given ▪ Three teachers were selected and the consent was sought from the them
PRE-OBSERVATIONS		
6 25.04.04 (SUN)	Classroom Observation	▪ Two teachers of Grade 8 and 9 at girls' school were observed.
7 26.04.04 (MON)	Classroom Observation	▪ Grade 10 teacher at girls' school was observed. ▪ Two teachers of Grade 8 and 9 at first boys' school were observed.
8 27.04.04 (TUE)	Classroom Observation	▪ Two teachers of Grade 8 and 9 at second boys' school were observed. ▪
9 28.04.04 (WED)	Classroom Observation	▪ Two Grade 10 teachers at first and second boys' school were observed.
PRE-STUDENT QUESTIONNAIRE		
10 28.04.04 (WED)	Student Questionnaire	▪ Pre-student questionnaire was distributed to the students of Grades 8, 9 and 10.
PRE-INTERVIEWS		
11 29.04.04 (THUR)	Interviews with Teachers	▪ Two interviews were made with Grade 8 and 9 teachers at girls' school.
12 03.05.04 (MON)	Interviews with Students	▪ Three interviews were made with three students from Grade 8, 9 and 10 at girls' school.
13 04.05.04 (TUE)	Interviews with Teachers	▪ Two interviews were made with Grade 8 and 9 teachers at first boy's school.
14 05.05.04 (WED)	Interviews with Students	▪ Three interviews were made with three students from Grade 8, 9 and 10 at first boys' school.
15 06.05.04 (THU)	Interviews with Teachers	▪ Two interviews were made with Grade 8 and 9 teachers at first second boy's school.

16 09.05.04 (SUN)	Interviews with Students	▪ Three interviews were made with three students from Grade 8, 9 and 10 at second boys' school.
17 10.05.04 (MON)	Interviews with Teachers	▪ Three interviews were made with Grade 10 teachers from three schools.
PRE-STUDENT QUESTIONNAIRE		
18 10.05.04 (MON)	Student Questionnaire	▪ Pre-student questionnaire was collected from the students of Grades 8, 9 and 10.
WORKSHOPS ON COOPERATIVE LEARNING		
19 11.05.04 (TUE)	Workshop 1	▪ Time: 5-8pm. ▪ An outline of the research was presented. ▪ Research on teaching and learning of economics was presented and discussed. ▪ Existing method of teaching and learning of economics in the Maldives was highlighted and discussed. ▪ Cooperative learning method was introduced.
20 12.05.04 (WED)	Workshop 2	▪ Time: 5-8pm. ▪ Material on cooperative learning was presented and discussed. ▪ Cooperative learning as an alternative method to teach economics was discussed.
21 13.05.04 (THU)	Workshop 3	▪ Time: 5-8pm. ▪ Based on the Grade they teach, teachers were divided into three different groups. ▪ In groups of three each Grade teachers discussed the cooperative lesson plans.
22 15.05.04 (SAT)	Workshop 4	▪ Time: 5-8pm. ▪ Developed some lesson plans on cooperative learning in groups. ▪ Developed some materials in groups.
POST-OBSERVATIONS		
23 16.05.04 (SUN)	Classroom Observation	▪ Observed two teachers from Grades 9 and 10 at first boys' school. ▪ Observed Grade 8 teacher at second boys' school.
24 17.05.04 (MON)	Classroom Observation	▪ Observed two teachers from Grades 9 and 10 at second boys' school.
25	Classroom	▪ Observed two teachers from Grades 8 and 9 at girls'

18.05.04 (TUE)	Observation	school.
26 19.05.04 (WED)	Classroom Observation	▪ Observed Grade 8 teacher at first boys' school.
27 20.05.04 (THU)	Classroom Observation	▪ Observed Grade 10 teacher at girls' school.
28 30.05.04 (SUN)	Classroom Observation	▪ Observed two teachers from Grades 9 and 10 at second boys' school. ▪ Observed Grade 8 teacher at first boys' school.
29 31.05.04 (MON)	Classroom Observation	▪ Observed two teachers from Grades 9 and 10 at first boys' school.
30 01.06.04 (TUE)	Classroom Observation	▪ Observed two teachers from Grades 8 and 9 at girls' school.
31 02.06.04 (WED)	Classroom Observation	▪ Observed Grade 10 teacher at girls' school.
32 03.06.04 (THU)	Classroom Observation	▪ Observed Grade 8 teacher at second boys' school.
POST-STUDENT QUESTIONNAIRE		
33 03.06.04 (THU)	Post-student questionnaire	▪ Post-student questionnaire was distributed to the students of Grades 8, 9 and 10.
POST-INTERVIEWS		
34 13.06.04 (SUN)	Interviews with Teachers	▪ Two interviews were made with two teachers from Grades 8 and 9 at first boys' school.
35 15.06.04 (TUE)	Interviews with Teachers	▪ An interview was made with Grade 10 teacher at first boys' school.
36 16.06.04 (WED)	Interviews with Teachers	▪ Two interviews were made with two teachers from Grades 9 and 10 at second boys' school.
37	Interviews with	▪ An interview was made with Grade 8 teacher at second

20.06.04 (SUN)	Teachers	boys' school.
38 22.06.04 (TUE)	Interviews with Teachers	▪ Two interviews were made with two teachers from Grades 8 and 9 at girls' school.
39 24.06.04 (THU)	Interviews with Teachers	▪ An interview was made with Grade 10 teacher at girls' school.
40 27.06.04 (SUN)	Interviews with Students	▪ Three interviews were made with three students from Grade 8, 9 and 10 at girls' school.
41 29.06.04 (TUE)	Interviews with Students	▪ Three interviews were made with three students from Grade 8, 9 and 10 at first boys' school.
42 01.07.04 (TUR)	Interviews with Students	▪ Three interviews were made with three students from Grade 8, 9 and 10 at second boys' school.
POST-STUDENT QUESTIONNAIRE		
43 01.07.04 (THU)	Post-student questionnaire	▪ Post-student questionnaire was collected from the students of Grades 8, 9 and 10.

4.4.1 Workshops

Extended workshop-type sessions can be used to expand the capacity of basic group techniques. These workshops can be useful with professional target groups (Hedges & Duncan, 2000) such as teachers and students.

Five workshops were conducted for teachers. These workshops were held at the Faculty of Education (FE) of the Maldives College of Higher Education in Male'. Teachers suggested the venue and permission from the FE was sought and school authorities were informed about these workshops. Due to the nature of school sessions − morning and afternoon, initially it was quite difficult to agree on a suitable time for everyone during the day. However, after negotiations with teachers and school authorities they agreed on sessions being held in the evening after school or during the weekends.

The purpose of these workshops was to induct teachers in the research; to explain the purpose of doing this research; to provide information on cooperative learning and discuss the issues relating the learning and teaching of economics at lower secondary level in the Maldives, and finally to develop lesson plans and materials on cooperative learning to be implemented in selected classes of Grades 8, 9 and 10 in three lower secondary schools in Male'.

As indicated in Chapter Three, Johnson and Johnson's (1989, 1991) learning together model was used in these workshops as a guide for providing information for teachers, and developing sample lesson plans of cooperative learning.

In the workshops teachers were given the opportunities to familiarise themselves with the model and to discuss the issues related to cooperative learning as an alternative method to teaching economics in lower secondary schools in the Maldives. As a facilitator I provided necessary materials and guidelines that are needed for cooperative learning lessons. I also helped teachers to develop five lesson plans on each selected topic such as economic systems, saving and consumption, and economic growth from each of Grades 8, 9 and 10. These topics were taken from the schemes of work of the second term. The topics were discussed with their heads of economics in schools and the lesson plans were made according to the criteria outlined in cooperative learning. Respective Grade teachers in their select classes implemented these lesson plans.

The five lesson plans were drawn from the themes of economic systems, saving and consumption and economic growth for each of three Grades that include:

Grade 8: Economic Systems

The lesson plans on economic systems provide opportunities for students to participate in simulation games/activities of the three basic economic systems, (market, command, and tradition). By working in each of the systems, students focus on the fundamental values present in each system. The aim is that they also gain insights into the basic advantages and disadvantages of each system.

Grade 9: Saving and Consumption

The aim of these lesson plans was to provide activities for students to work together to find out the decisions that people make such as what they want and what they actually need, in relation to consumption and saving. Through these activities, students should understand that individual income (financial resources) is limited and therefore a person must choose a bundle of goods that first fulfil his or her needs and only after those are met can they fulfil as many of their wants as possible.

Grade 10: Economic Growth

The classes on economic growth examine the Maldivian patterns of growth using data available from government sources. They then compare these patterns with those seen in a developed country (U.S., Japan, U.K., etc) and a lesser-developed country. This data can be obtained from the OECD, the World Bank and the IMF.

4.4.2 Classroom Observations

Observation in general can be described as a research method that is "characterized by a prolonged period of intense social interaction between the researcher and the subjects, in the milieu of the latter, during which time data, in the form of field notes, are unobtrusively and systematically collected" (Bogdan, 1972, p. 3). Observation is a powerful tool for researchers (Williamson, 2006) which can enable them to see and understand the participants' surroundings that play a part in the way in which they behave, they act and interact with others, and in the ways their actions are perceived by others (Wilkinson & Birmingham, 2003). It is, therefore, a distinct method which allows collecting rich detailed and different data (Hornsby-Smith, 1993).

Observations may vary from being a complete observer to being an active participant (Wilkinson & Birmingham, 2003). A complete observer is unknown to those being observed. On the other hand, participant observer might be someone who is a member of the group who is participating while observing. For example, in this study my role was a participant observer.

Although it has been used as a powerful research method (Hornsby-Smith, 1993; Williamson, 2006), Lofland (1972) described observation as the most intimate and morally hazardous form of social research. Wilkinson and Birmingham (2003) also indicated the process of observation can be more demanding and taxing than any other research methods.

As has been indicated my role was a participant observer. Nine pre-observations and 18 post-observations of nine teachers were made in three schools. Pre-observations were made before conducting the workshops on cooperative learning. Post-observations were made during the implementation of the lessons that were prepared on cooperative learning during the workshops. The purpose of pre-observation was to understand the existing teaching practices employed by the teachers to teach economics. The post-observations were made after the workshops to find out the effectiveness of alternative teaching methods, and to see which lessons students were more engaged in—competitive, individualistic or cooperative learning.

After discussion with the teachers and Heads of Economics, an external observer was invited to all classes to help with my observations. The external observer was a secondary school economics teacher who has previous experiences in classroom observations in different schools throughout the Maldives. The aim of having another observer in the classroom was to record all possible events during the lesson and to bolster validity. The role of observation was divided between the external observer and myself. The external observer's role was to record the descriptive events of the lessons. He was debriefed about the nature of observations, including the structure of the observations to record during the lesson. My role mainly was focussing on the teacher-student interactions in regard to the style of teaching and learning.

Some of the parameters (Appendix A) used for observation were: content organisation; use of resources and learning environment; teacher-student interactions; and use of teaching methods/skills. The external observer and I took the notes based on these parameters.

At the end of each week of the classroom observation, the external observer and I met in the AV-room at the FE to cross-check the observation notes against the video tapes in order to maximise the accuracy of written notes. Since, we had different roles in the classroom observations we didn't cross-check each other's notes. Rather, individual notes were compared against the video tapes. Some differences between the written notes and video tapes were seen but it was left for each individual observer to change these differences. Hence, there was no disagreement between us regarding the classroom observations.

4.4.3 Video Tapes

Although video-camera is not intrinsically a research instrument, it is rapidly catching up in the research community (Wilkinson & Birmingham, 2003). Video-camera helps researchers to record interviews and observations in their natural settings.

The pre and post-observations of all 27 sessions were filmed. A video camera was placed at the back of each class to record the lessons, and the consent from the teachers was sought in advance. Consent of students is not required in the Maldives for such research.

When the classroom observations were completed for each particular week my colleague-observer and I watched the videos and checked our observation notes to evaluate the accuracy of those notes. This process continued each week at the FE's AV-room throughout the data collection.

The aim of filming was to check and verify the observation records made by the observers, and perhaps to get an external point of view regarding the nature of the learning and teaching process being observed.

4.4.4 Questionnaires

A survey questionnaire is research method usually composed of one or more questions that are put to a 'large' number of people (Grinnell & Williams, 1990). For example, a questionnaire can help to collect potential information from a large portion of a group. Some questionnaires can be very detailed, covering many

subjects or issues, while others can be very simple and focus on one important area (Wilkinson & Birmingham, 2003). In addition, some of the data collected from survey questionnaires can be qualitative in nature (e.g., people's views or perceptions of an issue) and these may contribute to the development of theory as much as interview or observational data (Wellington, 2000).

Some of the disadvantages of survey questionnaires are that they are difficult to design and analyse, and the questions posed can be misleading or ambiguous. However, it is believed well-planned and well-executed questionnaires can produce rich data in a format ready for analysis and simple interpretation (Wilkinson & Birmingham, 2003).

Semi-structured questionnaires were used in this study to ascertain students' perceptions about the existing methods of teaching and cooperative learning strategies in learning economics. Data gathered from these questionnaires were aimed to check the students' overall perceptions of teaching and learning, therefore, the utilization of data from these questionnaires in the findings chapter were minor when compared them with interviews and observations data.

The pre-and post-questionnaires (Appendix B and C) were given to all 232 students who took part in this study. There were four sections (A, B, C, and D) in each questionnaire. Sections A, B and C are composed of 30 closed questions. Section D of the pre-questionnaire is composed of one open-ended question while section D of the post-questionnaire is composed of three open-ended questions.

Two identical versions of the same questionnaire were made except for section D of both questionnaires. Section D of the pre-questionnaire was focused on student thinking of what cooperative learning might mean, while section D of the post-questionnaire was focused on their thoughts about the proposed cooperative learning model.

The aim of giving the same questionnaire pre and post was for validity and reliability reasons, and to see whether students' thinking about teaching and learning of economics had changed as a result of the cooperative learning lesson

implementation. Both questionnaires were trialed among the Maldivian students in New Zealand to ensure face validity and make sure the language and the terminologies being used were understood by students of the same age group of lower secondary school (Gall, Borg, & Gall, 1996) before conducting them in the Maldives. There were no problems with language or terminology used on the questionnaires. No student had any trouble understanding the questionnaires or their implications.

The parameters outlined in each section of these questionnaires include: (a) conceptions about economics; (b) conceptions about the learning of economics; (c) conceptions about the teaching of economics; (d) student thinking of what cooperative learning might mean (pre); and thoughts on the proposed cooperative learning model (post).

Semi-structured questionnaires were used to ascertain students' perceptions about the existing methods of teaching and cooperative learning strategies in learning economics. I administered both questionnaires with the help of teachers.

4.4.5 Interviews

Interviewing is designed to get a rich understanding of the subjects' ways of thinking (Bogdan & Biklen, 2003). It also allows researcher to understand the meanings that everyday activities hold for people (Marshall & Rossman, 2006). It may involve one-to-one interactions, large group interviews or focus groups, and may take face-to-face, or over the phone or the internet (Mason, 2002).

Interviewing people can be one of the interesting activities in a research study which allows a researcher to investigate and prompt things that can not be sought though other methods (Wellington, 2000). It is one of the most commonly recognized forms of qualitative research methods (Mason, 2002). Rogers and Bouey (1996) also point out that "Without a doubt, the most utilized data collection method in qualitative research studies is the interview" (p. 52). Patton (1990) puts interviews into three categories: structured interviews, unstructured interviews, and semi-structured interviews.

Structured interviews are sometimes referred to as patterned or standardized interviews (Marshall & Rossman, 2006). These type of interviews are very straightforward and force organised communication between the interviewees and interviewers. The interviewer has a standard set of questions which makes it easier for the interviewer to evaluate and compare interviewees' answers to the same questions. Unstructured interviews also called conversational interviews which provide a general overview of the problem area whereas the structured interviews provide a more detailed view. These types of interviews normally do not have any predetermined set of questions but rather, the interviewers and interviewees talk freely (Burgess, 1991). These interviews are simple and generally lack organization, and this saves time when preparing for the interview. Although they may look simple and easy to conduct, untrained interviewers may find them difficult because they have to generate and develop questions according to what the interviewees say.

Semi-structured interviews are sometimes called guided conversations where broad questions are asked. This is relatively informal discussion based around a predetermined topic. Questions are generally straight forward and open-ended which allow interviewers to generate their own questions to develop interesting areas of inquiry during the interviews. It is believed that this type of interview is widely used as the qualitative interview (Flick, 1998).

There are certain advantages and disadvantages of interviews to gather research data. The main advantage of conducting interviews is their adaptability. For example a well-trained interviewer can alter the interview situation at any time in order to obtain the fullest possible response from the interviewees (Gall et al., 2005). Meanwhile interviewees' unwillingness to share all that the interviewers' hope to explore can be a disadvantage of interviews (Marshall & Rossman, 2006). The direct interaction between interviwers and interviewees make it easy for subjectivity and bias to occur (Gall et al., 2005) which is another disadvantage of interviews.

Semi-structured interviews were conducted for all nine teachers and nine students and involved three teachers and three students from each school. As has been said

earlier, semi-structured interviews provided a fairly open framework which allowed to converse freely for between the interviewer and interviewees.

One pre and post-interview for each participant was carried out. The aim of the pre-interviews was to find out their perceptions about the current teaching practices in these schools. The post-interviews aimed to get their feedback about the potential use of cooperative learning strategies to teach economics.
The questions included in the interview guide focused on the teachers' and students' perceptions of the issues and process of current learning and teaching of economics, and how they regard the implementation of cooperative learning to learn economics at the lower secondary school level in the Maldives. The interviewing questions were semi-structured but the questions in the Appendix D were used as a guide.

The interviews were tape-recorded and lasted approximately one hour, and were completed at each teacher's and student's respective school site. The issues of privacy and confidentiality were raised and consent was sought before the interviews.

4.4.6 Informal Discussions

Informal discussions were maintained between the teachers and myself during the period of data collection. Almost every lesson that has been observed was discussed informally before and after the lesson. During these discussions, teachers discussed the issues related to the implementations, such as teaching techniques, activities and assessments.

4.4.7 Other Resources

Although there were limited written reports about the general education system in the Maldives, none of the documents were found on general issues of teaching and learning practices in the Maldives. However, schemes of work for individual teaching subjects which simplify the school curriculum were available for teachers. These schemes of work were produced by the subject teachers that include weekly topics, learning outcomes for individual topics, assessment and general procedures for implementing such weekly topics. Therefore, these

documents were used to provide the research context and for referencing purposes.

In addition, randomly selected pages of three student notebooks from each Grade of 8, 9, and 10 in each school were photocopied before and after the implementation of cooperative learning. This was to find out the patterns of their recorded classroom activities and to see whether any changes have been made in the way they recorded classroom activities in schools.

4.5 IMPLEMENTATION

The second phase of the research involved working with the teachers and students who agreed to participate in the study. As has been indicated the workshops were used to induct teachers and students about cooperative learning and how to implement the learning together (LT) model of cooperative learning in classrooms. The workshops included presentations, discussions, and individual and group activities.

The LT model was explained in detail with specific guidelines on how to use the principles of that model when planning lessons for the classroom. Based on a checklist of teachers' roles and lesson templates designed by Johnson, Johnson, and Holubec (1987) detailed lesson plans were designed and developed for each Grade. These lesson plans included lesson objectives, group size, list of teaching materials, group roles, classroom activities and instructions for arranging the classrooms. The lesson plans also included the explanations of classroom tasks, procedures to structure the basic elements of LT model, and criteria for success.

In addition, teachers were instructed to introduce LT procedures to their students before the lessons being implemented. These procedures included explaining the basic elements of the cooperative learning model (positive interdependence, individual accountability, group processing, face-to-face interaction, and small group skills), group roles (such as recorder, checker, praiser, and monitor), and group recognition. This was important because Slavin (1995) stated that cooperative learning can produce a free-rider effect if not properly implemented. As indicated previously, the free-rider effects can be eliminated by allocating

group roles and making sure that individual members are accountable for their own learning as well as that of others.

After the completion of workshops teachers implemented the lessons that had been prepared according to the guidelines provided at the workshops. As has been mentioned, five lessons were planned for each Grade. Teachers provided instructions and the purpose of each lesson for students at the beginning of each class period. They also explained the expected group behaviours such as how to deal and manage the group disagreements, praising one another, encouraging and helping each other. Throughout the implementation of observed lessons, teachers randomly divided students into groups, with group sizes ranging from two to six depending on class size. Although some teachers initially started with two students in each group, later the size of the groups gradually increased to five students in a group as students became familiar with group processing.

4.6 LIMITATIONS AND DIFFICULTIES

There were quite number of limitations and difficulties incurred during the data collection in Male', which spanned over three months. First, this study investigated learning and teaching of economics in three selected lower secondary schools in the Maldives. It was believed that the complex process of teaching and learning of this nature would require significant time and funds for investigation. As the Maldives islands are geographically dispersed and the main form of transport between them is by boat, it was decided to abandon the initial plan of conducting the research in both Male' and an outer island due to the fear that the data collection may not be able to be completed within the time frame of three months. Therefore, the study was limited to nine teachers and 232 students from three schools in Male'. These selected schools were typical Maldivian schools.

Second, the schools in Male' are overpopulated so they run in two sessions: morning and afternoon sessions. Morning session is for Grades 9 and 10 students, and afternoon session is for Grade 8 students. Since the teachers from these three Grades are involved in this study, finding a time during the weekdays to have the workshops was a difficult task. When I considered the possibility of having the workshops on weeknights I realized that many of the teachers had private tuition

at weeknights and some weekends. So after the negotiations we agreed to take three weeknights and one-weekend night to conduct the workshops.

Third, the subject teachers' committee is responsible for preparing the schemes of works for schools. The committee members are drawn from different schools. The schemes of work are booklets that sequence the topics for each school term from the curriculum, and list the learning outcomes, teaching strategies and assessment criteria. According to the many teachers that I have spoken with during the data collection, the main purpose of these schemes of work is to have a common strategy for all teachers to follow in implementing the curriculum. Although all schools follow the same schemes of work in each school term, some schools have their own way of sequencing the topics during the term. This made it difficult for the teachers to prepare common lesson plans during the workshops because one of the three schools had already completed one of the selected topics for the term ahead of the other two schools.

Fourth, because the students of Grade 10 sit the Cambridge examinations towards the end of the year, Grade 10 teachers were mainly focusing on revising the topics and working through previous exam papers. So some of the Grade 10 teachers were somewhat reluctant to implement a new style of teaching and learning in these Grades.

Fifth, the majority of the teachers who participated in the study have been teaching economics for quite some time. During this time they have been following the same traditional method of teaching so in my opinion it was a large shift for them to consider a totally new approach to teaching. Many of them had never heard of cooperative learning before the workshops in this study.

4.7 ETHICAL CONSIDERATIONS

Issues of ethics surrounding a research design, implementation and reporting seem simple. However, they often pose vexing questions regarding privacy, confidentiality, informed consent, accountability, and so on. In order to address such issues, a research design should anticipate the array of ethical challenges that would occur (Marshall & Rossman, 2006). Smith (1995) explained it stating that

the "understanding of ethics is not just a study of theoretical knowledge, but includes an understanding of the applicability of ethics to real world situations" (p. 480).

In carrying out this research, the ethical guidelines of the University of Waikato on research on humans were followed. These included general ethical considerations of informed consent and protecting participants' anonymity. However, I would like to note that because of the differences in ethical standards in both the Maldives and New Zealand, some of the ethical issues raised in the ethics applications at the University of Waikato did not apply or had no relevance to the Maldives. For example, a written consent from the participants is not required yet in the Maldives as it is required in New Zealand.

Consent forms and information sheets for participants of this study were designed and arrangements for confidentially were explained (see Appendix E and F). These forms briefly outlined a statement about the nature and purpose of the study and detailed of how and where the data is likely to be presented. It also included a statement about their right to terminate proceedings at any time should they feel uncomfortable with any aspects of the research being observed, interviewed or recorded.

Before going home (the Maldives) to collect data, a written consent from the MoE of the Maldives was sought. Later, a couple of meetings with the MoE's officials were held in the respective departments of the MoE to explain the purpose and nature of this study. After that, separate meetings with the principals, heads of economics and teachers in each school were held. The written consents from the principals and teachers were sought before the research was conducted. Participants were assured of privacy and anonymity of the data that were collected and reported in the study. In addition, students were reassured that their individual identities would not be revealed to their teachers and nor would they be held accountable for any criticisms they express about current teaching and learning practices in their classes. This is to protect students from any negative feedback from their teachers and to ensure that they feel safe to express their opinions. However, it cannot be guaranteed, since the research was conducted

within a small community where it would be possible that individuals or groups could be identified. They were also informed that their participation in the study was voluntary and they had the right to withdraw from this study at any time without penalty. The issue of withdrawal did not arise during the process of data collection.

As has been indicated earlier the nature of school shifts and the tradition of long working hours in the Maldives were not quite easy for the participants. Therefore, to minimise harm to participants I tried to negotiate times for workshops and interviews that suited everyone and were the least disruptive to them and their energy levels.

Finally, the reciprocal nature of research provided opportunities for participants to gain knowledge and skills in alternative teaching and learning methods to learn economics. Hence, it is important to note that this study has taken reciprocity seriously and offered things to help and improve the situation for the participants of this study.

4.8 THE ANALYSIS

As I mentioned earlier to answer the research questions, some elements of both ethnographic and grounded theory methodologies were employed for the study and data gathering including the methods of observations, workshops, interviews, and questionnaires in order to gain different view points. Sequences of events in Table 4.2 show the data sources and order of collection.

After the interviews, questionnaires and observations notes were transcribed, each phrase or unit of words that stood alone in meaning was separated and coded, read in detail several times, and analysed using comparative analytic techniques (e.g., Glaser & Strauss, 1976) outlined in grounded theory methods. Data analysis can be described as a "process of bringing order, structure, and meaning to the mass of data collected" (Marshall & Rossman, 1990, p. 114).

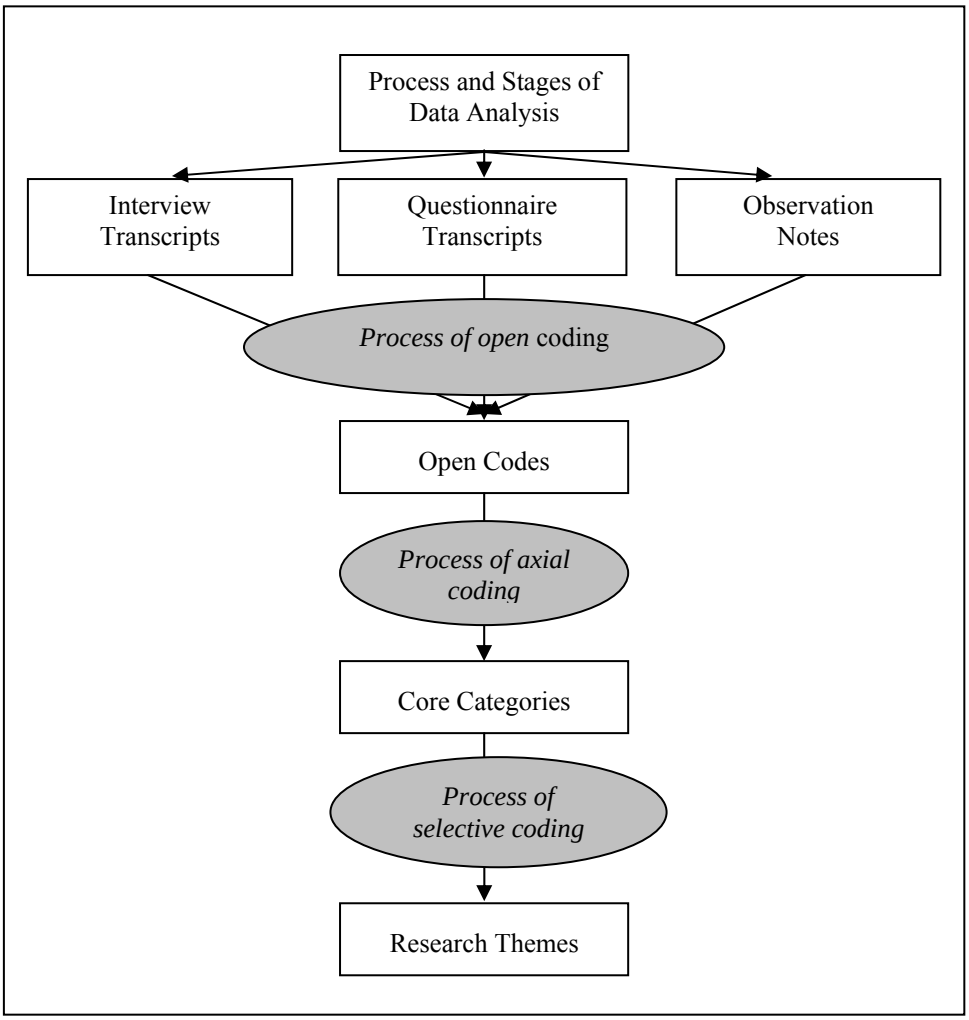
To ensure that the grounded theory building process was systematic and rigorous, a set of coding procedures was used to guide the data analysis. As mentioned

earlier, within the general framework of grounded theory, a three-stage process of coding for data analysis was used that involved open coding, axial coding, and selective coding (Strauss, 1987). Data analysis for this study involved generating concepts through the process of coding which

> ... represents the operations by which data are broken down, conceptualised, and put back together in new ways. It is the central process by which theories are built from data. (Strauss & Corbin, 1990, p. 57)

Figure 4.1 provides an illustration of the stages of analysis undertaken. Each of these stages will be described in detail in the following sub-sections.

Figure 4.1: Process and Stages of Data Analysis



4.8.1 Open Coding

As stated in section 4.2.2, open coding is the first stage of theoretical analysis that concerns the discovery of categories and their properties (Glaser, 1992). Within the context of this research study, interviews, classroom observations and student questionnaires collected from respective schools were subjected to open coding that involved examination of the verbatim data to generate concepts or codes (Strauss, 1987). As open coding requires a comparative method of analysis, data were compared and similar incidents were grouped together and given the same conceptual label or name. Table 4.3 provides an example of the process of allocating open codes.

Table 4.3: Examples of some open codes generated from data

Examples of Quotes from Transcripts	Examples of Open Codes
"There were no written plans or outlines for the lessons. But they had some thoughts and ideas from their past experiences and from the schemes of work".	Lesson planning, lack of preparation, teaching experiences, schemes of work as a guide.
"I don't like my students to interrupt the lesson while I explain. They should wait until I give them chance to speak".	Autocratic teaching, classroom control, limited interactions, passive learning, perception of good teaching.

The examples in the above table provide a brief glimpse of the process of open coding that initially generated hundreds of open codes from the data. As indicated, this process involved several rounds of comparative analysis and data interpretation in order to be certain about the consistency with the meaning of concepts generated from the data. Once the open codes were selected, the process of integration of these open codes was begun within the next stage of analysis which is axial coding.

4.8.2 Axial Coding

As outlined above, axial coding is the second phase of the three stage coding process in the general framework of grounded theory. Axial coding is a process where data are put back together in new ways after open coding, by making connections between categories (Strauss & Corbin, 1990). Thus, it can be referred to as the process of developing categories and their sub-categories that involve

moving to a higher level of abstraction (Goulding, 2002) through a combination of inductive and deductive thinking (Babchuk, 1996).

The open codes generated in the initial phase of analysis were then re-examined, redefined, compared and combined with other similar codes, and grouped to form categories. The purpose of this comparison between the categories and codes is to ensure that any developing theory is wholly grounded in the data (Dey, 1999; Marshall & Rossman, 1990). The example of connections between categories, and how these categories are grouped according to a particular phenomenon is provided in Table 4.4.

Table 4.4: Examples of the link between open codes and axial codes

Examples of Open Codes	Examples of Axial Codes
Limited planning, lack of preparation, teaching experiences	⇒ Lesson planning
Curriculum, syllabus, schemes of work, audio-visual aids, economics data, textbooks, computers, internet	⇒ Teaching resources
Autocratic teaching, direct explanations, classroom control, limited interactions, exam oriented teaching, perception of good teaching	⇒ Teaching methods
Exam oriented, one-way communication, pay attention to receive information, competitive culture, lack of illustrations, classroom control	⇒ Lesson implementation

As can be seen from the examples in Table 4.4, the axial codes were generated from grouping the open codes based on the similarities in the same phenomenon. For example, the axial code 'Lesson Planning' includes open codes such as *Limited planning, lack of preparation,* and *teaching experiences*, that represent the way the teachers plan and prepare the lessons that they implement in various Grades in those selected schools.

The names assigned for grouping in the above examples may have different interpretations. However, based on the context and observations made by the researcher it is believed the names were considered most appropriate for the purpose of this study.

4.8.3 Selective Coding

As indicated earlier, selective coding involves the integration of the categories that have been developed to form the initial theoretical framework.

After the process of axial coding was undertaken the recurring patterns of the axial codes were revised and re-examined to discover the relationship patterns between them. This was done in order to generate core categories which have been described as the central phenomenon around which all other categories are integrated (Strauss & Corbin, 1990). As a result a total of 22 core categories were identified as issues of particular relevance to the teaching and learning of economics at lower secondary schools of the Maldives, with respect to the previously mentioned research questions. Table 4.5 presents examples of these core categories and how they were generated from the axial codes.

Table 4.5: Examples of the link between Core Categories and Axial Codes

Examples of Open Codes	Axial Codes	Core Categories	Themes
Lesson planning, lack of coordination, dependency on schemes of work, no daily plans, weekly lesson outline	⇒ Lesson planning	Planning and Preparation	**Teaching Issues**
Lack of preparation, extra curricula activities, common printed notes, simple worksheets	⇒ Teaching material preparation		
Direct explanation, similar pattern of teaching, teacher centred teaching, perception of good teaching	⇒ Teaching strategies	Teaching Method	
Exam oriented, one-way communication, pay attention to receive information, competitive culture, lack of illustrations, classroom control	⇒ Lesson implementation		
Classroom discussions, student involvement, classroom relationship,	⇒ Student involvement & interactions	Group Work	

student behaviour, communications, social interactions			
Curriculum, syllabus, schemes of work, subject teachers committee, flexibility & freedom	⇒ Syllabus	Syllabus	
Textbooks, OHP, statistics, economic data, chalkboard, printed common notes	⇒ Teaching aids	Resources	
A/V aides, internet, computers,	⇒ Information technology		
Abstract subject, student motivation, lack of interest in learning, lack of content knowledge among students, bureaucratic procedures,	⇒ Motivation & interest	Motivation and interest	**Learning issues**
Lack of student participation, limited role for students, school culture, perception of participation	⇒ Student participation	Involvement	
Limited time for students to ask questions, inquiry is not allowed, school culture, teachers' perception of inquiring,	⇒ Inquiring	Inquiring	
Exam focused learning, rote memorization, dependency on private tuition	⇒ Economics learning perceptions	Understanding	
Group learning, cooperative groups, helping each other to learn, individual accountability	⇒ Cooperative learning	Definition of Cooperative Learning	**Cooperative learning Implementation Issues**
Lack of training, limited programmes for teachers to up-skill, lack of professional help	⇒ Professional development	Professional Development	
Limited knowledge about cooperative learning, introduce cooperative learning at early stages	⇒ Stages of implementation	Stages of Implementation	

Weekly planning, difficult to plan according to cooperative learning criteria	⇒ Planning	Lesson Planning	
Extended family values at home, competitive & individualistic values at school, respect for teachers	⇒ Cultural norms	Culture	
Lack of English proficiency, articulation problems, Dhivehi as a medium for communication,	⇒ Language	Language	
Challenge, threat, resistance to change, reluctance,	⇒ Reluctance	Resistance	
Lack of time, extra curricular activities, multiple jobs	⇒ Workload	Workload	
Schools over-populated, not enough time to implement, short periods	⇒ Class time	Duration of Class Time	
Changed teaching, attitude, perceptions about cooperative learning, perception about economics teaching	⇒ Teaching of economics	Teaching	**Students' and Teachers' Reactions to cooperative learning**
Meaningful learning, increased classroom interactions, motivation & interest in economics, perception about economics learning, behaviour and attitude towards economics	⇒ Learning of economics	Learning	
Effectiveness of teaching & learning, optimism about cooperative learning, individual and group performance	⇒ Effectiveness of cooperative learning	Effectiveness of Cooperative Learning	
Student participation, help each other, quicker to understand the concepts, helps to develop social and communication skills	⇒ Advantages of cooperative learning	Advantages and disadvantages of Cooperative	

Large groups difficult to manage, time consuming, lack of resources, class time is not sufficient	⇒ Disadvantages of cooperative learning	Learning	

As can be seen from the above table, the process of coding led to identifying and developing the themes in terms of their properties. The coding also put the data together in new ways by making connections between a category and sub-categories to develop four main themes. These themes were teaching issues, learning issues, cooperative learning implementing issues, and students' and teachers' reactions to cooperative learning. A summary of the participant coding system is in the Table 4.6.

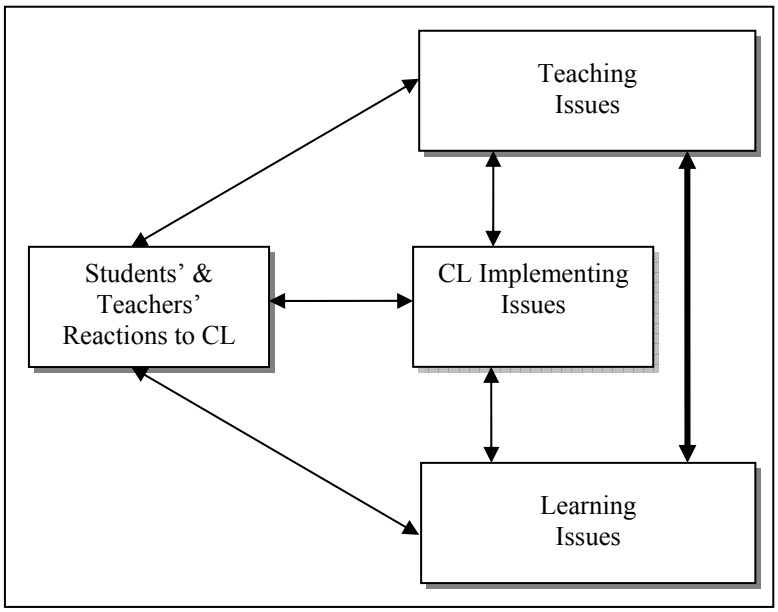
Table 4.6: Participants Coding System

Type	Total Number	Code
Pre-teacher Observations	9	PRETO1, PRETO2, … PRETO9
Post-teacher Observations	18	POSTTO1, POSTTO2, …. POSTTO18
Pre-student Questionnaire	119	PRESQ1, PRESQ2, … PRESQ119
Post-student Questionnaire	96	POSTSQ1, POSTSQ2, … POSTSQ96
Pre-teacher Interviews	9	PRETI1, PRETI2, … PRETI9
Post-teacher Interviews	9	POSTTI1, POSTTI2, … POSTTI9
Pre-student Interviews	9	PRESI1, PRESI2, … PRESI9
Post-student Interviews	9	POSTSI1, POSTSI2, … POSTSI9
Total	278	

4.9 RELATIONSHIPS BETWEEN THE THEMES

The four themes identified in Table 4.5 have been derived from the data analysis of interviews, classroom observations, student questionnaires, and video tapes. Analysis of this combined data showed significant but varied relations between each of the themes. Figure 4.2 graphically represents the relationships between the research themes of *Teaching Issues, Learning Issues, Cooperative Learning Implementing Issues,* and *Students' and Teachers' Reactions to Cooperative Learning*.

Figure 4.2: The Relationships between the Research Themes



Since the principal aim of this study was to explore the influence of cooperative learning on both students' learning and teachers' pedagogy, the analysis of data indicated the interrelationships between the four research themes. Figure 4.2 graphically represents the relationships between these themes. However, the causal relationship between the *Teaching Issues* and *Learning Issues* seems to be greater than the relationships that existed between them and the rest of the themes. The thick-line that connects these two themes signifies the existence of greater relationship between these two than between the others.

The themes and associated findings will be presented in Chapter Five and discussed in detail in Chapter Six.

4.10 CONCLUSION

As has been stated, a qualitative research method was chosen to carry out the research for this study. In particular, the elements of both ethnographic and grounded theory approaches were selected for that purpose and their relevance to this study was described and discussed in this chapter.

In addition, a detailed research design for collecting data, including the limitations and difficulties of the data collection, was provided and discussed. This chapter also outlined the ethical issues, and provided the stages of data analysis with the chain of evidence in order to contribute to the quality of the study. According to Miles and Huberman (1994) it is important to provide detailed research methods and procedures so the reader can follow the actual sequence of how data were collected, processed, analysed, and transformed into the research themes. From the process of data analysis, four research themes were derived: *Teaching Issues; Learning Issues; Cooperative Learning Implementing Issues;* and *Students' and Teachers' Reactions to Cooperative Learning*.

The findings of this study followed by discussion will be presented in the following two Chapters Five and Six respectively.

CHAPTER FIVE

FINDINGS

5.1 INTRODUCTION

As outlined in the previous chapter, this study is concerned with exploring the issues related to the current teaching and learning of economics in lower secondary schools in the Maldives, and trialing a cooperative learning model intended to help students to learn economics in a meaningful way. Therefore, this study attempted to answer the following research questions:

- What are the teachers' and students' perceptions about current teaching methods in economics at secondary school level in the Maldives?
- How do teachers and students perceive cooperative learning as an alternative method to teach and learn economics?
- What influence does the learning of cooperative methods have on teachers' pedagogy and students' learning?

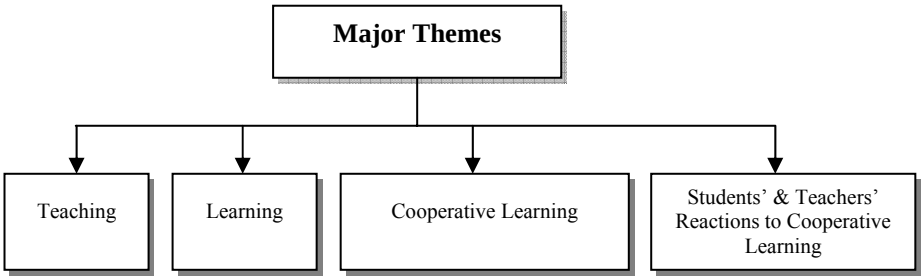
As identified previously in Chapter Four, data analysis progressed through the stages of coding with reference to the above research questions. Written and recorded classroom observations, video footage, student questionnaires and transcribed interviews were coded, read in detail several times, and analysed using constant comparative analytic techniques (e.g., Glaser & Strauss, 1967). The objective was to explicitly note similarities and differences in the data, which were then used to derive theoretical categories that helped to explain the phenomenon under investigation (Glaser & Strauss 1967; Glaser 1992). The process of coding led to the identification and development of the themes in terms of their properties. Also, the coding put the data together in new ways by making connections between categories and their sub-categories to develop several main themes.

Thus, this chapter is organised into four main themes that emerged through the process of data analysis. These themes are: teaching issues, learning issues, co-

operative learning implementation issues, and students' and teachers' reactions to cooperative learning. The themes are listed in Figure 5.1.

The results of each of these themes are presented in the following sections from the participants' points of view. The participants include nine teachers and 232 students of Grades 8, 9 and 10 in three selected lower secondary schools in Male', the capital of the Maldives.

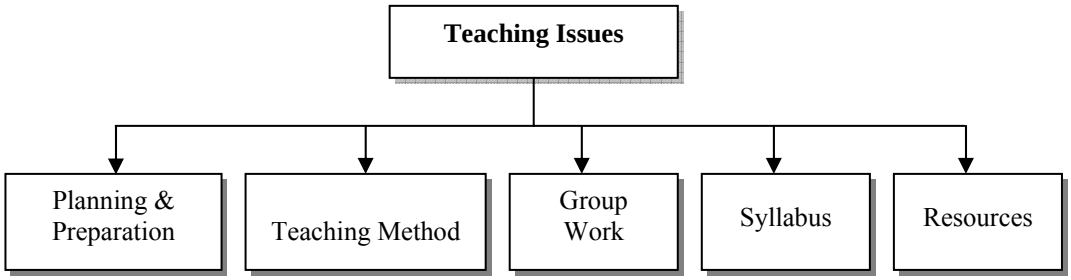
Figure 5.1: Major Themes



5.2 TEACHING ISSUES

In this section, the issues related to the teaching of economics will be presented, as reported by the participants for both the pre-and post-intervention phases of this research project. Some sub-themes arose from the issues of teaching that are listed in Figure 5.2. Each of these sub-themes will be presented separately in the following sub-sections.

Figure 5.2: Teaching Issues



5.2.1 Planning and Preparation

Pre-Intervention

Lesson planning can be defined as preactive decision making that takes place before the lesson being implemented (Panasuk, Stone, & Todd, 2002). Clark and Joyce (1981) stated that consciously and unconsciously teachers make decisions that affect their behaviour and that of their students. However, eight out of nine teachers who participated in the study had neither written lesson plans nor outlines of the lessons that were observed during the first phase of the intervention.

In the Maldives, teachers follow schemes of work, which outline the weekly topics, learning outcomes and assessment criteria. These schemes of work do not provide detailed teaching strategies and learning outcomes for each lesson; therefore, in general people expect teachers to have their own planning and preparation before the implementation of such lessons in addition to scheme guidelines. However, classroom observations of eight teachers before the intervention indicated that:

> *There were no written plans or outlines for the lessons. But they had some thoughts and ideas from their past experiences and from the schemes of work, which outlines the learning outcomes, teaching strategies and assessment criteria, regarding how to implement each general topic [PRETO1].*

The issue of planning and preparation was also raised by the students during the pre-intervention interviews. Seven out of nine students noted the lack of planning and preparation among their teachers, and constant use of the same method of teaching to implement the lessons. The two quotes below reveal similar beliefs:

> *Here they [teachers] don't prepare for the classes. Our Miss comes to the class with no plan I think. She stays at the board and explains things from there. Most of the time she dictates notes for us from her notebook [PRESI1].*

> *Actually our Sir doesn't prepare anything for us ... [PRESI7].*

It appeared that one student did not see lack of planning and preparation as an issue that would disadvantage or impediment his/her from learning but rather

regarded the teachers who do not use notes to explain the lessons as knowledgeable, and therefore, did not expect them to have such lesson plans and relevant materials. It might be a cultural thing, because in Maldivian society teachers are very well respected and regarded as the primary source of knowledge for teaching and learning.

> *I think our teacher knows economics very well. He doesn't bring any notes to the class. But explains everything without looking at the textbook. Normally he … draws couple of diagrams on the board and starts elaborating them. He tells us to listen to him carefully when he explains the lesson [PRESI7].*

In contrast, only one teacher had some lesson planning and teaching materials for the lessons that were implemented and observed during the pre-intervention phase. It became known during the interviews that the teacher plans regularly for weeks although s/he did not have individual lesson plans for each class period:

> *I don't make individual lesson plans but I have the outlines for whole week's lessons [PRETI6].*

The classroom observation notes also suggest that the above teacher was in fact well organised with the teaching materials even though s/he did not have a specific lesson plan for it:

> *[The teacher] was very well prepared for the lesson and brought lots of teaching aids such as flashcards and posters to the class [PRETO1].*

Similarly, a student from the above teacher's class confirmed the observation of that particular teacher during the pre-intervention interview stating that:

> *Econ Miss comes to the class on time not like other teachers. Miss brings lot of materials for us … Everything is printed so we don't need to write too much in the class. I think that's very good [PRESI3].*

Post-Intervention

After the workshops on cooperative learning, it appeared that teachers were more attentive to lesson plans and developing materials for lessons beforehand. Unlike the pre-intervention phase, the classroom observation notes suggest that all teachers had lesson plans, teaching materials and learning activities for students in

each of those two lessons that we observed for each teacher during the post-intervention.

> *Teachers were well prepared for the lessons. Student activities were carefully done according to the guidelines discussed during the workshops [POSTTO2].*

Planning and preparation according to cooperative learning criteria was not an easy task, especially for teachers whose teaching was based on the traditional method where they had little planning or preparation for lessons. As expected, teachers raised the issue of preparation time and mentioned some difficulties that they would face in implementing cooperative learning in an environment where the teachers were overloaded with teaching and extra curricular activities. Their main concern was the time that required preparing such lesson plans according to cooperative learning criteria. However, they seemed optimistic about this new method of teaching and learning, and believed it would require time to become accustomed to. One teacher even paid tribute to the effectiveness of cooperative learning, but could not see much time available based on current workload to prepare lessons accordingly:

> *… we need to make thorough lesson plans and learning materials to implement that [cooperative] lesson. It would be very hard for us to find that much time for planning and preparation. But if we can plan out like that then it would be very effective and successful teaching method [POSTTI6].*

Another teacher also commented on the time demands associated with cooperative learning but acknowledged that it could become part of routine teaching life once it was able to be done in a systematic manner. The experience was characterized thus:

> *It [cooperative learning] is a time consuming procedure. But once you are able to do it in a systematic manner, … as we do prepare lesson plans nowadays, I think that will become part of our routine life and then later on it will be attached with us. So there won't be any problems in the future [POSTTI1].*

5.2.2 Teaching Method

Pre-Intervention

All nine teachers had confirmed that they were accustomed to the traditional teaching method of giving students information, along with some student

discussion; this was their preferred method of teaching. As previously stated in this traditional teaching method, information is transferred from teachers to students through direct explanations, therefore, it does not require students' interactions in the actual lesson. They argued that this method was effective for delivering and controlling the flow of the lesson content. Therefore, students were expected to receive the content without making any noise and to pay attention to the teacher throughout a lesson. Some of the comments that teachers made with regard to their preferred method of teaching reflect this teaching method. The following three comments were typical across nine teachers.

> *... I use chalkboard to explain, ask students to copy from it and most of the time I dictate notes for them [PRETI6].*

> *For me that method [traditional] is more convenient ... [and] effective. I ask students also to pay attention and copy the lesson when I finish the explanation [PRETI2].*

> *... being at the chalkboard just in front of the students gives me the total control of the class ... So I prefer to go with the explanation method [PRETI9].*

Even the students expressed their opinions about the teaching methods in which they indicated there was a particular pattern which was regular and typical. The following excerpt is from an interview with a student is representative of all nine students' ideas:

> *Miss asks questions about the last class then writes the new topic on the board then she starts explaining the new topic until she finishes it. Miss uses the board all the time to explain the topic. We copy things from the board and sometime Miss dictates notes if she can finish the explaining part before the bell goes off [PRESI4].*

Classroom observations of nine teachers during the pre-intervention also indicated similar patterns of teaching practices across the three schools. Direct explanations constituted the teaching method although one out of the nine teachers had some sort of classroom interactions within the lesson, as shown in the observation notes on that teacher:

> *… her [teacher] method of teaching was teacher centred. She did all the talking while students set passively to listen to the teacher. The class was very small when compared with other classes that I observed in three schools. Towards end of the lesson she gave a worksheet for students. The worksheet was very simple, no need for*

> *discussion, but she explained it before passing to the students…and solved it on the chalkboard with the help from the students [PRETO1].*

It seemed evident that teachers were not concerned with building relationships with their students or relationships between students through interaction such as group projects or assignments. In addition, it is a tradition in the Maldives where teachers would have distant and formal relationships with their students, believing that due respect for teachers would not be given if they are too familiar with the students. One classroom observation note characterises the nature of relationships between teachers and students across the three schools.

> *It seemed the teacher was not very friendly with the students. Several times during the lesson s/he yelled at few students and showed them a kind of angry face throughout the lesson [PRETO2].*

Students also commented on their perceptions about the relationships between teachers and students, and the limited role that they have in interacting with teachers and their peers. It appeared that due to this lack of relationship in the classes, some of the students have already abstained from the social interactions that are believed to contribute to student learning. A comment made by a student reflects the nature of their relationships and how that could affect their learning:

> *Some students they have already given distance to Miss so they don't try to approach Miss even if they don't understand the lesson because she is always angry with us [PRESI4].*

Finally, the teaching was very much focused on the examinations. It appeared that this was mainly because the school authorities would like to get good results for their schools at the end of each academic year in order to get a good ranking from the MoE. Each year the MoE ranks all lower secondary schools based on the results of their Cambridge and Secondary School Certificate—Dhivehi and Islam, examinations. Although this has already been criticised by many in the Maldives due to the criteria—which are believed to be more favourable for schools with fewer students—it appeared that competition exists to get high marks in the examinations across the three schools. Some comments made by the teachers reflect the nature of their exam-oriented teaching and how they were pressured to produce good results, as the following teachers' comments show:

> *Here we use exam-oriented teaching ... This method is very effective because students don't make noises during the explanation [PRETI8].*
>
> *Every year MoE ranks schools according to the exam results. Last year the economics pass rate in this school was 56 per cent or something like that which was good. So we are always under pressure to get good results. We are very much focused on the results rather than teaching for understanding. This is the department policy [PRETI6].*

Similarly, another teacher raised the issue of good teaching, and concluded that the economics department and the MoE perceive good teaching as getting high marks in the examinations. In addition, s/he highlighted that those teachers who bring good results for schools become school heroes, therefore, all teachers try to get such recognition because ultimately that would help them to improve their image not only in schools but also in the society at large. In the words of one teacher:

> *... good teaching for the department or the MoE is good results in the examinations because they always put pressure on us to bring good results. If any teacher brings better results in the exam then that teacher becomes the school hero. I think the main reason for this is because the MoE ranks secondary schools each year based on the Cambridge Examination results, so everyone wants to get their school to be in the top [PRETI9].*

Post-Intervention

Workshops on cooperative learning provided teachers with knowledge and skills for lesson planning, developing learning activities and implementing such lessons in classrooms. Although the training focused upon basic cooperative learning techniques, the changes observed in teachers' teaching style during the post intervention were considerable. First, their perception of direct explanation of content in order to pass the knowledge from teachers to students evolved, with more student involvement in teaching. Second, teachers' attitudes or behaviours towards group-based teaching and learning seemed changed. Third, teachers were more willing to create environments where positive relationships could form between teachers and students and between students themselves. Fourth, teachers were more relaxed in the classrooms and seemed to help individual students more than they ever did during the pre-intervention phase. In addition, they

acknowledged the benefits that this new method could bring for their students' learning, as the following two teachers' quotes show:

> *My past way of teaching has changed because of the training during the workshop on cooperative learning. Consequently there is a change in the classroom behaviour, increased students' interest in the subject and their active involvement in teaching and learning process [POSTTI5].*

> *I have observed changes in my class although I have received a little training from the workshop. ... I strongly believe if we have given more training the results will be much better because we have seen students' keen interest in learning due to this cooperative learning [POSTTI2].*

When I asked the question whether they have seen any changes in the way they teach economics, all nine teachers who participated in the study acknowledged the changes. They not only acknowledged the changed teaching but also highlighted the importance of having various teaching techniques to be effective in the classroom, arguing that teaching is not only explaining the lesson content to students. One teacher remarked:

> *Teaching is not only delivering the lesson plans to students. It should have different techniques in order to be effective. I think cooperative learning has changed our teaching ... [it] made me to think about the way I teach economics, and now I prefer to involve students in teaching and learning rather than encouraging them to sit passively in the classroom [POSTTI4].*

Similarly, another teacher highlighted the changed teaching by relating it to the changed classroom behaviour and claimed that cooperative learning techniques would result in changed teaching, as s/he noted:

> *Yes! I have observed the changes during this short period of time. After implementing the cooperative lessons students are looking forward to learn more … [and] excited about it ... I am very grateful to take part in this research project and learn this new method of teaching. I believe it will bring positive changes to the way we teach economics [POSTTI9].*

5.2.3 Group Work

Pre-Intervention

It appeared teachers who followed the traditional method of teaching did not usually require much student interaction in classes. As previously indicated the

students' role was to sit quietly and pay attention to the teachers in order to receive the knowledge. This was one of the dominant features of traditional method-based teaching, and the overwhelming majority of the teachers who participated in this study strongly believed this view during the pre-intervention phase mainly for three reasons. First, they believed teaching cannot be conducted in an environment where there is any level of noise. Second, it was a tradition that teachers needed to have full control of their classes in order to implement lessons successfully. Third, there was a fear of discipline problems that could follow if group-based learning activities were introduced.

It was evident from the data that eight out of the nine teachers felt that using group work in class would disturb other classes and feared that it would create discipline problems. The following three quotes were typical across the nine teachers:

> *Head of department and I actually don't expect much noise in the classes. If they are interacting in the groups then there will be some level of noise. That will create problems for other classes then they will complain against me, [they] may think I can't control the class. Hence, I haven't done any group based activities in the classrooms [PRETI4].*

> *… I don't like my students to create such problems and get blame from others for not being controlled the class [PRETI8].*

> *They [students] don't [have group works] because of the discipline problems ... So we are not allowed to do such group activities [PRETI4].*

In contrast, classroom observations of nine classes during the pre-intervention phase indicated that generally students were very well behaved throughout the lessons:

> *The students were very well behaved. They have been instructed to sit passively and pay attention to the teachers through out the lessons [PRETO1].*

It emerged that developing activities for group work was another hurdle for teachers who claimed that they had not enough time to prepare the work, although the average teaching time for teachers who participated in the study was four 35-

minute periods a day. One teacher commented how tight time is during a school day:

> *Time limitation is another factor. Most of the time we teach then they expect us to involve in the extra curricula activities, so we don't get much time to prepare activities for group work. So we prefer the traditional teaching because it is easy ... [PRETI8].*

In addition, the length of teaching time in each period was a concern of the teachers who feared that they would not be able to implement group-based activities effectively in such short class periods – 35 minutes per period. However, it appeared that each class had one-double period (i.e., 70 minutes) besides the three 35-minute single periods each week. Two teachers commented during the pre-interviews on the length of teaching time and how it could effect the implementation of group work. The quote below illustrates their ideas:

> *We have only 35-minute periods; it is not enough to have group activities ... However, once I have done the group work. But for some classes it is not possible, they will try to take the advantages of it [PRETI3].*

Furthermore, three of the nine teachers put the blame on the students for not creating the group work environment in the classes, arguing that group work would lead to uncooperative and disruptive behaviours. The following comments reflect their arguments:

> *The main limitation is the tendency of some students who disrupt the class when having group work. For example, there are few students who do not want to work and try to disturb others when they work in groups [PRETI6].*

> *Though we give worksheets I never ask them to sit in groups because group formation becomes difficult then they will sit together and talk instead of concentrating on the work … so we ask them to do on their own instead of sitting in the group and discussing about it [PRETI1].*

> *… all the students are not the same type. If they are given group works, some students take that seriously but some others play instead of doing the work. Hence, I haven't done any group based activities in the classrooms [PRETI4].*

However, eight out of the nine students who were interviewed during the pre-intervention phase did not agree with the above comments, arguing that they were not given opportunities to discuss or share their ideas in class but rather were

instructed to sit quietly. The following three comments were typical across the eight students:

> *The problem is we don't get chances to share ideas and ask questions, so many of us prefer to stay quietly without asking questions [PRESI5].*

> *Our Miss is a strict teacher. She doesn't want us to make any noise during the lesson. So we don't have group works [PRESI6].*

> *… there are no group works in this class. I think Sir doesn't like us to discuss in the class [PRESI8].*

Post-Intervention

It seemed the teachers' perception of group work changed noticeably after the intervention. As mentioned earlier their main concern about having group work was the level of noise, discipline problems and the classroom control. Nevertheless, after the implementation of group work all nine teachers indicated the likely benefits of working in groups on their students' learning. They also noted that student behaviour and involvement changed, and were surprised to observe the cooperative behaviour of students while they were working in groups. In addition, classroom observations of 18 lessons suggest that there was not sufficient evidence to support the claim that group work would disrupt the classes and create discipline problems as claimed by the teachers before the intervention. In fact, the traditional method was more likely to create restlessness and boredom among the students, which was evident from the post-teacher interviews. The following three comments were typical across the nine teachers:

> *… they [students] are more interested in involving in the classroom activities. For example, now they want more group activities and discussions. They all want help each other rather than working individually. I am very pleased with their cooperation [POSTTI2].*

> *No strange behaviour now because if you ask them to work like this [group works] they will keep on working without disturbing the teacher, but it is difficult for them to sit, listen and write for whole 35 minutes … [POSTTI5].*

> *... cooperative learning made me think about the way I teach economics and now I prefer to involve students in teaching and learning rather than encouraging them to sit passively in the classroom [POSTTI4].*

Likewise the classroom observations indicated that students were actively involved in group work activities throughout the lessons. Thus, it appeared that students' involvement and their behaviours changed due to the cooperative learning, as one of the field notes indicated:

> *Students were actively involved in group activities. They seemed very much enjoyed the lesson. Teacher and students were cooperative and no discipline problems were observed [POSTTO2].*

5.2.4 Syllabus

Pre-Intervention

The International General Certificate of Secondary Education (IGCSE) from the University of Cambridge, London, is an internally based curriculum allowing teaching to be placed in a localised context. Within the curriculum there is a balanced mix of practical experience and theoretical knowledge. The IGCSE is suitable for students with different levels of ability. Although the curriculum was designed as a two-year course, it has been divided into a three-year course in the Maldives. The Subject Teachers Committee (STC) writes the schemes of work based on the curriculum and reorganises the subject contents according to the school terms of Grades 8, 9 and 10 levels. There are four terms in each academic year. Normally the curriculum contents are covered in Grades 8 and 9. In Grade 10 the focus would be on reviewing the contents covered in previous years and preparing students for the final examinations.

The initial comments made by three teachers suggested that they support the traditional method of teaching economics at these schools due to the constraints that they had in completing the curriculum during the specified time frame. The two comments below represent the three teachers:

> *We have limitations because we are given a curriculum which has to be completed during a specified time period. So if you go for such kind of discussions you may not be able to finish the curriculum during the time period [PRETI1].*

> *Every week this STC and the HoD will tell you to complete this and that. Sometimes it is not possible for us to complete it. So this year we have re-modified the schemes of work according to the difficulties that we faced last year [PRETI5].*

However, one participant did not agree with the above comments, indicating that teachers were given the freedom of selecting the methods of teaching and there was no limitation on them to implement the syllabus:

> *Actually HoD gave us total freedom to do whatever we want to do in the classroom. There are no limitations for us because he says whatever best you can do, you do it. He does not dictate to us or does not impose us to do any such things or to follow any particular method of teaching. He just wants us to do things for the benefits of student [PRETI5].*

Post-Intervention

My own informal discussions with HoDs and interactions with school syllabus/schemes of work across the three schools indicated that the majority of teachers complete the syllabus within two years—normally in Grades 8 and 9—although the syllabus was stretched to Grades 8, 9 and 10 in the Maldives. No written documents suggest that teachers were forced to complete the syllabus within the first two years of the lower secondary, and revise that content in the final year – Grade 10. Thus, it appeared that the current syllabus itself would not impede them in implementing cooperative learning, rather it provided a balanced mix of practical experience and theoretical knowledge.

Since the implementation of cooperative learning teachers appeared to have more confidence in interpreting the syllabus and planning classroom activities. Although they were a little skeptical about the flexibility of syllabus with regard to the implementation of cooperative learning prior to intervention, it seemed in general their perception changed after the intervention. Six out of the nine teachers reflected on the way they have been interpreting the syllabus and realised the current syllabus can be used to conduct cooperative learning. The following comment reflects their view:

> *In the past we are very much focused on the schemes of work, but I now realise the importance of revisiting the syllabus that provide a great deal of flexibility for teachers to implement it [POSTTI4].*

In contrast, another teacher viewed the schemes of work as a strict interpretation of the syllabus and expressed the importance of following it throughout the school terms to be consistent, with others indicating that:

> *If we all interpret the syllabus in our own way to conduct lessons … teachers may have various interpretations that ultimately may affect student learning [POSTTI7].*

5.2.5 Resources

Pre-Intervention

Although the schools utilise internationally prescribed textbooks as part of the overseas curriculum, locally produced materials such as textbooks, statistics, economics data, and newspaper articles are also available to teach economics. Beside these materials, in each school teachers have audiovisual materials, computer-based power-point facilities, and internet access. This was clear from one of the teacher's remarks on teaching resources:

> *I must be very thankful to the school and the management. They have provided us all the current modern technology available for classroom teaching [PRETI7].*

However, two teachers did not agree with the above comment and claimed that because there were not enough resources available in schools they had no choice but to utilise traditional methods to teach economics:

> *… we don't have enough resources. So we are sticking with what is called lecture methods ... they [students] don't have anything new. For instance, you take Biology. They have lab practical, videos, slides etc ... in economics they don't have any such kind of videos or audios or visual aids etc… [PRETI1].*

In addition, it was interesting to find that common printed notes, worksheets and other materials were given to students in one of the schools. Although it was not an official policy of that school to provide common printed materials, the economics department had been practicing this for quite some time. My interactions with teachers of other departments of that school suggest that not many departments provide common printed notes for their students. The rationale for providing common notes for students included: (a) saving teachers' preparation and dictating time in the class; (b) they can be reused many times in the future; (c) teachers would have more time to explain the lesson content; (d) easy for students to read for exams; (e) slow writers would not miss out information presented in the class; and (f) students would have more time to pay attention to the teachers when their hands are free from copying things from the

chalk-board. The following two comments justify the three teachers' views of giving printed notes:

> *… all teachers and the head of economics together prepare these notes. It is easy and saves our time, and once you prepare these notes then you can keep them here to reuse in the future for many years … Actually if we don't give common materials then they [students] will come with complaints saying this is not included, etc [PRETI2].*

> *We give them printed materials also because the department's policy is to have the uniform notes for students in the same Grade … If I cannot provide printed materials then I dictate the notes for them in the class [PRETI8].*

In contrast, the idea of common printed notes was rejected by teachers of another two schools. Their argument was that printed materials not only made students lazy and increased the dependency on teachers, but also created an environment for restlessness and boredom due to passive listening for a whole period. Instead, involving students in writing in the class and encouraging them to take notes from the teachers, and organising information by themselves would help them to learn and understand the information much quicker, and perhaps retain it longer in their memory. The following comment was typical across the six teachers:

> *... they have to write because printed notes won't help at all. If they [students] write their own notes from the board then it would help them to learn quicker and retain the information for longer in their memory [PRETI3].*

Post-Intervention

My classroom observations and discussions with teachers and the heads of economics departments indicate that the view of common printed materials for students has changed after the implementation of cooperative learning. Instead, background information for various topics was given to students with prepared class activities in each class period to discuss in small groups. In addition, the photocopies of students' notebooks pre and post-intervention indicate that more of the students' own notes were recorded in their notebooks after the implementation of cooperative learning.

5.2.6 Summary

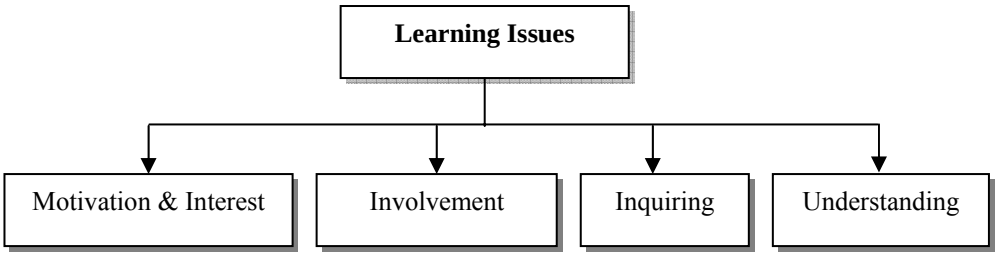
This section has presented issues in teaching economics at the three lower secondary schools in the Maldives. Based on the findings presented the following observations were made as a result of the intervention. First, it appeared that teachers recognised the need for lesson planning and preparation of learning activities in order to have more effective teaching in classrooms. Second, it seemed that teachers' perceptions of teaching methods have changed considerably after the implementation of cooperative learning. Third, it was observed that students' behaviour and involvement changed during the implementation of cooperative learning. Fourth, the findings suggest that the syllabus was not an impediment to implementing group based teaching and learning. Finally, the findings also suggest that the resources available at those schools were adequate to support alternative teaching methods in economics.

The following section now focuses on the second theme of the research findings—the learning issues.

5.3 LEARNING ISSUES

This section presents the research findings on the issues related to the learning of economics. The issues that arose from the data analysis were motivation and interest in the subject, student involvement in learning inquiring and understanding of the content. These issues are depicted in Figure 5.3 and presented separately in the following sub-sections as reported by the participants in both pre and post-implementation of the lessons on cooperative learning.

Figure 5.3: Learning Issues



5.3.1 Motivation and Interest

Pre-Intervention

Student motivation and interest in the learning of economics is one of the issues that arose from the data analysis. It was raised as one of their major concerns by five teachers during the pre-intervention phase. They perceived that a majority of the students in their classes were not motivated or interested in learning economics for various reasons.

First, economics is full of theory and it remains an abstract subject to many of their students. Thus, they believed the nature of economics itself made the students deviate from learning, as evidenced by the statement made by a teacher who stated that:

> *… economics is an abstract subject … students they feel it very dry like, you know, so they are not motivated because they see theories all the time [PRETI1].*

Two of the students also described economics as an abstract subject and indicated the difficulties they had in learning it at school due to the absence of connection between the economics theories and their practical relevance to real life. The following comment reveals their views:

> *Economics is a difficult subject to learn because there is no connection between the theory and real life situations in the classrooms, so we find it really hard to understand it [PRESI8].*

Second, lack of sufficient content knowledge among the students was another reason raised by the teachers for their students not being motivated to learn economics. One of the teachers labeled her students as weak in economic content, and argued that some of the students are there not to learn but to disrupt the classes, indicating that their influence on other students in the classroom destabilised the classroom learning atmosphere:

> *… they are weak students [low achievers], if you ignore them we cannot get a good atmosphere in the class because they are not interested in learning… Of course, we can't make them to study, a child like [student name], and no way... He won't do it [PRETI3].*

Third, the bureaucratic procedures across the schools were blamed for the failure of their efforts to increase the students' motivation in economics. For instance, three teachers noted some of their efforts to organise activities such as the inter-school economic debate competition once or twice a year, enterprising schemes for all Grade students, and the establishment of student forums in all schools. However, their ideas were either rejected or ignored by the HoDs of respective schools. For example, one of the school's economics students has been fighting for a club for many years but only last year they were told by the HoD that they need to show good results for the school for two consecutive years in order to register it. This was evident from a teacher's comment indicating that:

> *… we need to bring good results [from the year-end examinations] for consecutive two years before we could apply for that [club] [PRETI6].*

As a result many of the teachers were very much focused on the exam results. This was also clear from one of the students as he indicated that teachers are very much obsessed with examination results:

> *… the teacher always talks about exam results. He thinks we are not good enough to make any good results for the school [PRESI7].*

Throughout the observations of the nine teachers before the intervention students in the classrooms sat quietly but it was not clear what they were learning or whether they were interested. One of the observation notes indicated that:

> *It was a general pattern among the students to sit quietly, not necessarily pay attention to the teacher, until the teachers finish their explanations. The sign of demotivation, boredom, and no interest from the students to learn were observed [PRETO1].*

Interestingly, seven out of the nine students rejected the above teachers' arguments, indicating that they were not motivated to learn because of the method of teaching employed by the teachers. It appeared that students were dissatisfied with the teaching, and they argued that the current method of teaching was to be blamed for their lack of interest and motivation for learning economics. One student commented:

> *Always the same lecture. Sitting in the class without making any noise to be a good student! Actually we are bored with this type of teaching… [PRESI5].*

Similarly, another two students reflected on the nature of their roles in the class and how that effected their learning, indicating that:

> *We are not motivated to learn because Miss does not allow us to share our ideas. She dictates notes for us from the textbook. If we ask questions then she says be quiet, or shut up things like that [PRESI1].*

> *… she [teacher] does not often give us chances to engage in the class activities. It is boring to sit in the class to listen the teacher all the time [PRESI2].*

Post-Intervention

After the intervention, it appeared that both teachers and students showed interest in and appreciation for cooperative learning. All nine teachers believed that cooperative learning would increase their students' interest and motivation in the learning of economics. One of the teachers described this method as a "wonderful method" to teach economics, and a new breakthrough for teaching and learning of economics in the Maldives, indicating that they have been:

> *… asking them [students] to show their interest for many years, but only now they have shown their keenness towards this subject. It was a real progress, and a breakthrough in teaching and learning of economics in this country [POSTTI2].*

Another two teachers observed the changed students' behaviour in the classrooms, and outlined the positive effects of this new teaching method on their students' motivation to learn economics.

> *With this learning method [cooperative learning] I see lot of student involvement in teaching and learning. They are motivated and actively involved in discussions … students help each other and their motivation towards learning is much better now [POSTTI3].*

> *… they [students] are performing better now, and they are doing the activities now and they are very keen and interested in take part in the group activities based on this cooperative learning [POSTTI9].*

In addition, another teacher believed that cooperative learning contributed to a more positive learning environment for their students and as a result students' interest in the subject would be higher under cooperative learning.

> *… I believe … it [cooperative learning] will make the lesson interesting and will create a more positive learning environment [POSTTI8].*

Likewise, students also conveyed their interest in cooperative learning because it provided them with opportunities to discuss the learning issues in groups. It also facilitated an environment where they can help each other and make their own decisions. Thus, they believed this new method of teaching increased their motivation to learn economics and changed their perception about the learning of economics. The following two comments are representative of eight out of the nine students:

> *This is what we want. Many of my friends have shown their interest in the subject. We want to take part in the activities. In the past most of us feel sleepy during the lesson because our Miss talks all the time [POSTSI2].*

> *We are very motivated to learn because we can exchange our ideas and also we get more time to think about the issues before making a decision [POSTSI5].*

Finally, the above evidence supports my own classroom observations after the intervention in which we have observed students' interest and motivation in the learning of economics. On many occasions during the above observations students were generally keen in discussions, sharing ideas between them and between teachers and studying activities. One of the observation notes indicates that:

> *… students were very well motivated to complete the activities allocated for them in groups [POSTTO2].*

5.3.2 Student Involvement

Pre-Intervention

Student involvement in learning, or interaction between students and teachers or between the students, was another issue that arose from the data. Before the intervention, it appeared that teachers were reluctant to provide opportunities for their students to interact with them or interact with other students in classes. As I have indicated in the previous section, their main fear with students' interaction was (a) noise, (b) class control, (c) discipline problems. Thus, they preferred their students to be quiet and obedient in the class in order to avoid such problems.

Although the teachers were reluctant to provide opportunities for their students to actively interact in the classrooms, six out of the nine teachers appeared to believe that the questions they asked at the beginning of each lesson would be enough to

claim that students are involved in the lessons. The below two comments in general share their view on student involvement in learning:

> *... I expect my students to be quiet when I explain things in the classroom. They get time to ask questions if they don't understand any aspects of the topic when I finish the explanations ... isn't this enough? [PRETI8].*

> *… depending on the time available after the explanation I give opportunities for students to interact… I don't like my students to interrupt the lesson while I explain. They should wait until I give them chance to speak [PRETI9].*

On the other hand, another teacher expressed the need for students' freedom to interact during the lessons but was anxious about possible discipline problems that may follow from the student interactions:

> *They should have the freedom to interact in the class but sometimes the discipline problems hamper us having such interactions. For example, some old students are not behaving the same way. So in some classes I don't encourage them to have much interaction [PRETI4].*

In addition, our classroom observations showed that a general pattern of interaction was restricted to questions at the beginning of each lesson to review the previous lesson's work. But generally teachers were very strict and did not provide opportunities for their students to interact with others during the lesson. One of the observation notes indicates that:

> *He was a very strict teacher who does not allow students to interact in the lesson unless he gives permission for them to do so. Students were very well behaved. The whole lesson was based on direct teaching by the teacher and no interaction between students or between students and teacher was observed. However, he posed some questions for students to be answered at the beginning of the lesson [PRETO2].*

Furthermore, students of Grades 8 and 9 admitted that normally their teachers did not allow them to interact with others during the lesson. But they acknowledged that some sorts of questions were allowed only after the teacher's explanations of the lesson. The following three comments were typical across the six students:

> *Our Miss is a strict teacher. She doesn't want us to make any noise during the lesson. So very rarely we have chances to talk in the class [PRESI7].*

> *We don't have many interactions. Miss explains all the time and she wants us to stay there quietly. If we stay like that she says you are very good class things like that [PRESI2].*

> *Basically we don't have any other interaction [questions & answers] between us and Miss. But we talk a lot among us during the lesson, off course Miss gets upset about it. Miss wants complete silence in the class, but how can we sit like that? [PRESI5].*

However, some Grade 10 students acknowledged that they were given opportunities to interact with other students during extra classes. These classes are run during weekends and public holidays to provide extra help for students to prepare them for the final examinations. As mentioned earlier, this is because the outcome of these examinations determines the school's ranking. Also the teachers' popularity very much depends on their students' success in those examinations. Hence, both teachers and the school management provide much help for Grade 10 students. One student remarked:

> *Because we are in Grade 10 and soon our exam starts the school has arranged extra classes to do past papers. These classes are more like our private group studies where we get chances to interact among ourselves. We do all the work by ourselves. Teacher helps us if we don't know how to get the answers [PRESI8].*

One teacher explained the rationale behind the opportunities for interaction that are provided for students of Grade 10 through extra classes, indicating that:

> *…. when we ask them to do past paper questions, most of them don't know. What we do is group them, and give them questions…. And ask them to discuss because some concepts when I explain they may not be able to understand. But if a student explains it in his own language, they may understand it much better [PRETI1].*

Post-Intervention

After the intervention it appeared that the perception of teachers and their attitudes towards the student interactions in the classrooms has changed. All nine teachers acknowledged the changes and appreciated the benefit of student interactions in the lessons. When I asked them whether they have noticed any changes in classroom interactions their answers were positive and the following two comments were typical of all nine teachers:

> *Yes, I have actually noticed more smiles in the classroom … [and] I have noticed they were enjoying themselves and they were actually learning something [POSTTI8].*
>
> *I see students' involvement, interest and their motivation towards learning that I didn't see from my students in the past [POSTTI5].*

Although the teachers had some concern earlier about student discipline problems and lack of motivation to study, now seven out of the nine teachers believed cooperative learning in fact helped them to improve classroom behaviour and student involvement in learning. The following two comments were made during the post-interviews:

> *Consequently there is a change in the classroom behaviour and students gain the interest of the subject and there is the vast change in the students' involvement in the learning of economics [POSTTI5].*
>
> *… they are more interested in being involved in the classroom activities. I am very pleased with their cooperation [POSTTI2].*

Another two teachers also agreed with the changes but they were quite skeptical about the student involvement in the learning:

> *I found that the majority of the students were involved, except for some cases. But that happens in any classroom situations. But most of the students were very cooperative and I found them involved in learning [POSTTI1].*
>
> *… I have noticed changes in student involvement in the classroom. Some children are interested and took it very seriously. But I find those children are the ones who are good with their studies [POSTTI3].*

5.3.3 Inquiring

Pre-Intervention

An inquiry based learning approach was not used by the teachers whose main teaching was based on traditional methods. It was a belief among them that learning occurred when information is passed from the teachers to the students through direct explanations. As previously mentioned such teaching involved some questions and answers to revise and summarise the lessons being taught. It appeared that this would allow teachers to measure or understand the degree of learning that occurred among the students. Accordingly all nine teachers that we

observed had a similar pattern of teaching practice that did not encourage students to inquire during the lessons. In fact it was part of the school culture that students were discouraged from inquiring about presented information through discussion, and instead passive learning was promoted that involved sitting quietly while teachers explained the lessons. One of the observation notes indicated that:

> *Teachers do not allow students to ask questions during the lessons, but they ask students few questions at the beginning of each lesson to revise the previous work. And also ask questions towards the end of each lesson, if they have time, to summarise the lessons. Normally teachers select one or two students to answer the questions being posed [PRETO1].*

This was clear from two of the teachers' comments regarding whether or not the teachers invite their students to ask questions during the lesson:

> *Actually I ask questions at the end of each lesson. If any student has a problem or doubt about any aspects of the material that we covered then I try to explain it in another way. Perhaps using different examples or sometimes I invite them to my office for further explanations [PRETI8].*

> *... they can ask anything to me. I am very friendly with them. But during the class time, they should be quiet, they should listen, that's only my policy [PRETI2].*

About eight out of the nine students interviewed indicated that they have been encouraged to sit quietly and not to inquire during the lessons. Some of their comments were:

> *... not many of us ask questions. We are scared to ask questions sometimes because they laugh at us if we make mistakes. Miss always says I can't waste the period [PRESI2].*

> *Our teacher doesn't like us to raise questions during the lesson [PRESI9].*

Although the above students had indicated that the classroom atmosphere was not suitable for them to ask questions, one of the teachers blamed students for not asking questions:

> *…they [students] don't ask questions, even if you ask a question they just keep quiet. So I feel awkward we don't get responses from the students. It becomes very dry like you know. You also get frustrated because there is no response from that side [PRETI1].*

As I have previously indicated, it was the teachers' perception that many students were not motivated for learning, so they would try to disrupt the learning activities if they were given such opportunities to inquire during the lesson. One teacher commented:

> *Sometimes students ask questions without paying attention to the lesson. This is purposefully, so I don't pay attention. I don't really care and I don't give answers for them [PRETI3].*

However, the above statement was refuted by another teacher who believed that teachers who were confident in both content and methodology would not have such problems in class:

> *… see that is in the hand of the teacher. Teachers are not good with the content the problem will come. If the teacher is very good with content and she knows what she is going to teach in that particular day, she may not be worried about the students' questions. They must ask questions and teachers should also be ready to answer or at least tell them that I will explain that later [PRETI5].*

Post-Intervention

After the implementation of the lessons on cooperative learning it was clear that more inquiry-based learning activities were conducted in classes. No major problems were reported or observed. In fact all nine students and eight teachers indicated the importance of inquiry-based discussions for a healthy learning environment in class. Also the classroom observations during the intervention indicated that both teachers and students were very cooperative and keen to encourage dialogue when they had discussions in class. Some of the evidence from the post-interviews and classroom observations are as follows:

> *It was observed that teachers were more willing to accept questions from the students and put these questions before students to discuss. Also teachers' attempt to generate real discussions in classes was observed [POSTTO1].*

> *… now they want more inquiry based activities and discussions [POSTTI2].*

However, one teacher was doubtful about the students' sudden changed behaviour indicating that:

> *… the students were well behaved now, but I have a feeling that these students will try to disturb the classes if they are free to ask questions like this [POSTTI7].*

5.3.4 Understanding

Pre-Intervention

As we have seen in Section 5.2 (Teaching Issues), the teaching of economics in the Maldives is focused on examinations. This method of teaching and learning includes a long history of rote memorisation. Teachers explain things and students try to memorise these things for the exams. Consequently, many of them forget what they have memorised shortly after the examinations.

The issue of teaching for understanding was one of the main issues raised in the data collection. Both teachers and students expressed their views and concerns with regard to the learning of economics in the Maldives. Although the teachers did not have a formal mechanism to assess the students' understanding of the concepts on a regular basis, some of the unit tests and examination results were used to get a general picture of their students' performance. In addition, the classroom questions and answers in each period were also used to assess the comprehension of the material being presented in each period. This was the most common method of student assessment. This was clear from all nine teachers' interviews and my own classroom observations of them before the intervention. The following three comments represent their views:

> *I have only 20 or 24 students in my class and each student I will be observing daily, from the facial reaction I will be able to identify whether they have understood or not. That's very easy to identify [PRETI5].*
>
> *When I give unit test to check their performance again will reflect us how they understand the things here in the classrooms [PRETI5].*
>
> *If individual students have doubts about the things that we covered in the class, they may ask questions and I provide answers for them... Also we give some class or home assignments, if they have any difficulty or problem we discuss that in class. Basically these are the ways that I use to make them understand the material that we explain in the class [PRETI6].*

Another teacher added some more insights about how they assess student understanding of the subject matter and how they provide assistance for those who did not score sufficient marks in each term of the school:

> *After each term-test we check our entire Grade students' marks then we run extra classes in weekends for those students who didn't do well in the exam. In these classes we help them to do past papers and provide them with techniques for exams [PRETI8].*

Another teacher expressed his/her concerns for not having enough time to be able to explain things for students until they understand it:

> *… we have hardly 35-minute periods… What happen is suppose a student is not able to understand. I can't waste my time for one student in that class. So what I normally do is after my session I will call that boy and explain him in a very simple language and make him understand [PRETI5].*

All nine students I interviewed received private tuition. It is very common in the Maldives, and many parents believe that they need to send their children to private tuition in order to get good results in school. Some parents start sending their children to these tuition centres as soon as their children start primary schooling. So by the time they start secondary schooling the majority of these children would be depending on both schools and private tuition where they have different methods of learning. For example, in schools, teachers use direct explanation methods to deliver the concepts but in tuition centres students are given opportunities to discuss the concepts they have been presented with at schools.

When I asked students what happens when they did not understand something during a lesson, five out of the nine students indicated that they try to get help from their private tutors rather than their teacher. Others either seek help from their teachers after the lesson or get help from their peers through home-based group studies. Some of their comments were:

> *All most all students in my class go to private tuition. So if we don't understand something in the school we ask our tutor at night [PRESI7].*

> *I tell Miss if I don't understand anything but not in the class. I go to the staff room sometimes during the interval or after school. If I can't find Miss then I ask my tuition teacher in the evening [PRESI6].*

> *Our teacher doesn't like us to raise questions during the lesson. If we don't understand then we could ask him later but because he is busy he never gets time during the intervals. So we have our own group of students who gather every night to help each other. This group is*

> *very helpful. I think there are many such groups in this school [PRESI9].*

Post-Intervention

After the introduction of cooperative learning both teachers and students were very keen to discuss things in the class. My classroom observations after the intervention suggested that teachers and students were working together during the lessons. When I interviewed the teachers after the classroom observation eight out of the nine teachers believed that cooperative learning helped their students to understand the economic concepts, develop social skills and improve their communication more than traditional methods of teaching. The two comments below represent their views:

> *… it [economics] is a social science so the dynamics of the society can well be discussed and thereby it will be possible for the students to understand things better than the conventional way of teaching [POSTTI7].*

> *I think cooperative learning helps students to understand the economic concepts more meaningfully than the traditional method of teaching, because economics is a theory based on an abstract subject. If we provide them the opportunities to discuss and elaborate things through face-to-face group activities then they will learn things more easily and the things they learn will be retained much longer. I also think it will help students to develop more social skills and better communication among the class and outside the class [POSTTI4].*

Another teacher also agreed with them about the benefits of cooperative learning, but argued that because cooperative learning requires teachers to facilitate and provide background knowledge about the lesson then a combination of both cooperative learning and the traditional method of explanations together would work better for students to understand the subject matter:

> *… conventional way of teaching is very much important for introducing a new topic. But in a way … I should say like combination of conventional learning and cooperative learning will help a lot in understanding and improving students' ability to go in depth into the subject [POSTTI8].*

Students also expressed their appreciation for the cooperative learning, outlining that this method helped them to learn economics more meaningfully and understand the concepts more easily. All nine students commented on this issue

and the following two comments represent their view of student understanding of concepts since the implementation of cooperative learning:

> *We understand the concepts more easily because we have the opportunity to discuss and share our ideas [POSTSI1].*

> *… our way of thinking about economics has changed, and our understanding of the concepts have improved greatly since the group work being implemented [POSTSI7].*

5.3.5 Summary

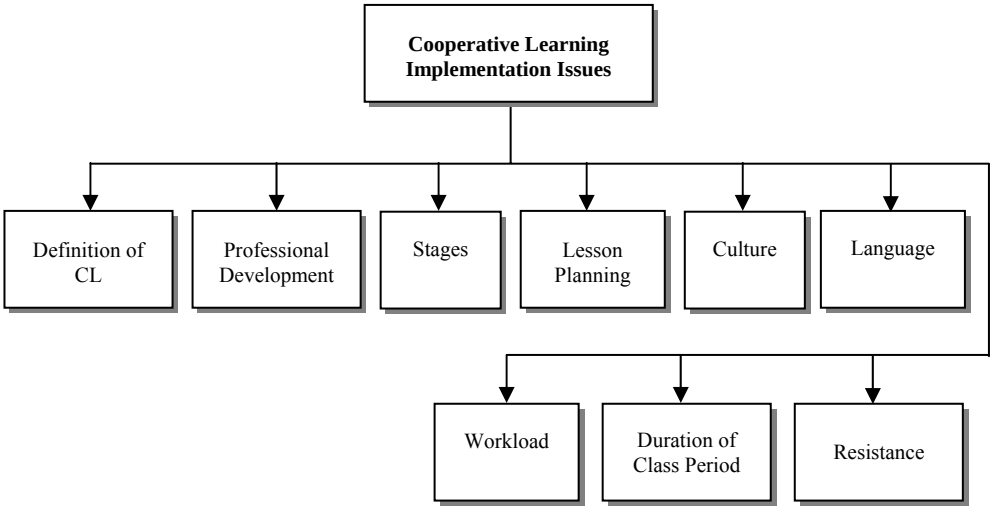
It appeared that students' motivation and interest in economics increased since the implementation of cooperative learning. Teachers' perceptions of student interest in learning seemed to change due to the cooperative learning. Although the teachers feared that student interaction, group work, and providing opportunities for them to inquire might lead to some discipline problems in schools, the findings suggested that the students were generally very well behaved during the implementation of cooperative learning, and it seemed there was no apparent link between student involvement in learning and increased discipline problems in classrooms. Finally, the findings suggest that cooperative learning would help students to learn economic concepts more meaningfully than the traditional method of teaching.

The next section will focus on the third theme of the findings, cooperative learning implementation issues.

5.4 COOPERATIVE LEARNING IMPLEMENTATION ISSUES

This section focuses on cooperative learning implementation issues. The issues that arose from the data were definitions of cooperative learning, professional development, stages, lesson planning, culture, language, resistance, workload and duration of class periods. These issues are depicted in Figure 5.4, and presented separately in the following sub-sections.

Figure 5.4: Cooperative Learning Implementation Issues



5.4.1 Definition of Cooperative Learning

Pre-Intervention

Before the implementation of cooperative learning lessons both teachers and students were asked whether they were familiar with cooperative learning. It appeared that none of them knew what cooperative learning was about, nor how it could be implemented to teach economics. However, two of the nine teachers had heard of the concept of cooperative learning through professional development workshops but were not very sure how it could help students to learn economics.

Cooperative learning, therefore, was a new method of teaching and learning for teachers as well as students. As a result they were unable to define the concept. The following two quotes represent all teachers' comments with regard to the question on whether they have heard of cooperative learning:

> *No, I haven't heard. Not yet. This is the first time that I heard the concept [PRETI1].*

> *Not really, but a supervisor from the MoE once told me that cooperative learning is an effective teaching method. He also said something that students are working in groups to learn things, but I*

> *don't know how students could learn things in groups without a teacher? [PRETI8].*

Post-Intervention

After the implementation of cooperative learning all nine teachers and four students were able to define and explain the elements of cooperative learning. According to their definitions of cooperative learning, students work cooperatively in small groups facing each other, helping one another in order to complete the groups' assigned tasks based on the criteria outlined for them. The following two definitions share their view of cooperative learning:

> *… cooperative learning is the learning where students sit together in groups and help each other to complete the group's learning activities. In other wards individual group members are accountable for their own learning as well as their peers learning… thereby the entire class understand things better than the conventional teaching methods [POSTI2].*

> *… cooperative learning is where students work in groups to help each other in order to complete the group's activities. Students should be accountable for their work as well as their group mate's work. They should work together in groups facing each other and discussing the learning activities based on the criteria to achieve the whole group's learning rather than achieving the individual member's learning [POSTTI9].*

Students also appeared to have broader knowledge about cooperative learning and how it works for them after the intervention. Although they had a clear idea about working cooperatively in groups not all students were able to give a general definition of cooperative learning. However, four of the nine students gave a quite reasonable definition of cooperative learning. The following definition represents all four students.

> *… cooperative learning is a process where students and teachers work together to achieve their learning outcomes. Teacher divides the class into small cooperative groups then asks us to complete certain tasks according to the criteria. We need to help each other to learn the activities [POSTSI6].*

5.4.2 Professional Development

The issue of professional development training programmes, specifically training on issues that are related to the current teaching and learning of economics, were raised by all teachers. Although a couple of teachers had received some type of

professional development training on basic assessment and evaluation, the majority of the teachers did not receive any type of training to up-skill their knowledge with regard to the issues of teaching and learning economics since they had been employed at these schools. Some of them were teaching for more than eight or nine years without professional development training. Lack of training could be a reason why the teachers were unaware of or not familiar with innovative methods such as cooperative learning. Another reason could be because the school authorities and the Ministry of Education did not initiate such training programmes for them or encourage teachers to use different methods of teaching and learning in schools. Whatever the reason it was clear that teachers now believed that they require more training in order to have healthy learning environments in schools. All nine teachers appreciated the training they received from the workshops on cooperative learning, and acknowledged the changes these brought to their classes. The following two comments were made during the post-interviews and represent all nine teachers:

> *So it's better the teachers get trained in this model that will help the implementation of such lessons more effectively in the Maldives. For instance I had a very basic idea of cooperative learning from the workshops. You and I have seen the results in such a short period of time. This training made me to think positively and now I prefer to have more cooperative learning strategies… [POSTTI5].*

> *I do believe better training teachers in cooperative learning methods would give more positive results … training is important for us to implement such innovative techniques. Without training we cannot bring changes to the classrooms [POSTTI1].*

5.4.3 Stages

As we have seen in previous sections (5.2 Teaching Issues; and 5.3 Learning Issues) passive learning by students was demonstrated in each school. Although some students had some kind of informal group-based learning at private tuition centres, generally at school students sit quietly in classrooms while teachers transfer or communicate to their students through direct explanation. This type of teaching and learning has a long history in the Maldivian education system and this traditional approach has been the norm for generations. Teachers who participated in this study appeared to have embraced this method from their predecessors and continued to practice like this in classrooms. Consequently, over

a period of time students became accustomed to this but did not appear to be particularly motivated or enthusiastic about learning. Moreover, they did not have opportunities to discover any other methods of learning until cooperative learning was implemented in their classrooms. This new method of learning appears to appeal to both teachers and students. However, teachers were aware that a sudden change from one particular method to another would not be an easy task but required gradual introduction and the development of necessary skills.

The gradual introduction of aspects of cooperative learning was raised and discussed during the implementation phase. As we discussed during the workshops, all teachers had implemented the lessons by starting with simple tasks in very small groups then gradually making the tasks more sophisticated and increasing the size of the groups. As a result, students seemed to grasp the basic ideas and principles of cooperative learning after a couple of lessons. No major problems with the implementation of those lessons were observed.

However, two out of the nine teachers felt that a sudden introduction of cooperative learning to Grade 10 students would not be an ideal Grade to start with but would be more effective if it had been introduced in Grade 8, then the relevant skills were gradually developed through Grade 9 before students reached Grade 10. They argued this sequence would help students take it more seriously because they would have more time to think and develop the necessary skills for effective learning. The following two comments were made by them regarding the importance of the gradual introduction of cooperative learning:

> *… I think the introduction of cooperative learning in Grade 8 would be a good idea. Because if we could introduce the elements of cooperative learning in early stage then they will be interested and they will follow it, and they will come to know that this is their teaching method… [POSTTI6].*

> *Actually they [students] found it very interesting. But in my class [Grade 10] students may think this is their final year and getting ready to do their final Cambridge Exam soon, so they may think, suddenly, this type of teaching methods is not meant for them. But it would be very effective if we could start from Grade 8 and continue through other Grade levels [POSTTI1].*

5.4.4 Lesson Planning

Cooperative learning requires continuous planning and preparation of lessons and related learning activities. The effectiveness of classroom learning is very much dependent on the teacher's ability to plan and implement such lessons. This requires proper training and time. As mentioned previously, lesson planning and preparation was not a major emphasis for teachers but since the introduction of cooperative learning teachers found it quite difficult and challenging to prepare activities for each lesson. However, they all managed to plan individual lesson plans and prepare learning activities according to the criteria outlined in workshops.

Issues related to planning and preparation were raised during the implementation of the cooperative learning lessons. Four teachers expressed their concern about the lesson planning because of their basic level of knowledge on cooperative learning, the unavailability of resources in schools and the time available for them to do it. The following two comments share the view of all four teachers:

> *Here [at schools] we used to make lessons for each week in advance… We didn't make individual lesson plans but we had the outlines for whole week's lessons. Hence, preparing individual lessons according to the cooperative learning criteria was difficult and time consuming… [POSTTI6].*

> *… for effective lesson planning we need more resources. We cannot depend on only textbooks any more … and also with the basic knowledge of cooperative learning you cannot expect us to do much without further training [POSTTI4].*

5.4.5 Culture

The Maldives has a long history of extended family values that involve helping each other, looking after elderly people and taking care of younger ones (Nazeer, 1997). The whole society is built on the cooperative values of Islamic culture. Islam teaches people to be socially responsible for each other (Lapidus, 1997; Reagan, 2000). Based on these values children are encouraged to help and cooperate with each other in everyday life. For example, parents expect their children to provide all the support when they get older, and children see this as their responsibility.

However, one could say that home-based cultural values in the Maldives, to some degree, contradict the way children have been taught in schools, reflecting competitive and individualistic values. Naturally, such contrasting value systems can have adverse effects on students' thinking, and ultimately it might affect the way they attempt to learn things in the classrooms. According to Heath (1983) and Moll and Dias (1987) children's experiences outside the classroom greatly affect their success at school, and generally the closer the match between the two the better the children's chance at success.

Cultural issues were brought up by the two local teachers who took part in this study. None of the expatriates mentioned anything about the cooperative values in Maldivian culture. In fact local teachers also did not realise the contradicting factors of the values of home and school culture until very late during the implementation phase of cooperative learning. Their reflections were:

> *… and also what you call collective responsibility isn't it part of our Maldivian culture? This is another quality that can be developed among the students through cooperative learning [POSTTI8].*

> *Now I realise that our culture is very much based on the principles of cooperative learning. I think if we have the same cultural values in both schools and homes our children will do better in schools [POSTTI9].*

5.4.6 Language

Although Dhivehi is the official language of the country, English has been the language of school instructions since the introduction of English medium education in the Maldives in the early 1960s. However, it appeared that the majority of students had some kind of difficulty in developing English language skills in schools. Hence, it is believed that poor language skills might affect the students' ability to learn in schools. Three out of the nine teachers expressed their concerns about some of the students' ability to learn due to poor English language. They acknowledged the need for grouping these students in order to maximise learning in schools. Some of their comments with regard to students using Dhivehi language in groups include:

> *… [I] realise the importance of Dhivehi for them to understand the concepts because the majority of them have some difficulty of*

> *English language. They get the opportunity to use Dhivehi when we put them in groups [POSTTI1].*

> *… the other benefit of cooperative learning is good students can explain it in Dhivehi so their peers would take it more easily [POSTTI2].*

> *Mother tongue [Dhivehi] is used more that's what I found also, and they are able to understand the concept well, one boy is able to explain other boy, so they understand things well [POSTTI5].*

However one teacher did not think allowing students to discuss in Dhivehi would help them to maximise their learning, stating that:

> *… they [students] will talk in Dhivehi and ask them to explain in Dhivehi, so it is not very helpful for weak students … [and] we'll not know what they [students] are talking about, that's a problem [POSTTI2].*

The above comment was dismissed by another teacher who allowed the students to use Dhivehi to discuss the issues, arguing that:

> *Low achievers will be gaining more information from their friends, who have scored high marks in the exam or high achievers or intelligent ones because they get chances to talk and discuss in Dhivehi [POSTTI9].*

In contrast, all nine students were in favour of using Dhivehi in groups to discuss the problems and issues because they argued not many of their peers were good with English language. The following quotes share their ideas with regard to cooperative learning and its likely effects on their learning:

> *… I think it is an effective method to learn economics because we understand things much better when we have the opportunity to discuss and share our ideas. Not everyone in this class is good in English so we use Dhivehi that is easy for everyone to understand [POSTSI1].*

> *… I think because we help each other to learn and also we get chances to use Dhivehi language to clarify things [POSTSI6].*

> *… we can share our ideas and help those students who need help in completing the work. There are some of our friends who need help because their English is not very good so they need someone to explain the material in Dhivehi. Group learning provides this opportunity for us to help each other [POSTSI7].*

5.4.7 Resistance

It is quite natural for people to resist new ideas and the changes accompanying those new ideas. Such resistance occurs even in most liberal societies, but it was expected to be greater in predominantly conservative societies like the Maldives.

Cooperative learning was a new method of teaching and learning for both teachers and students in the selected schools. They had previously used traditional methods of teaching for their entire careers. Hence, no one would expect that they would accept such a new method of teaching and learning without questions or concerns being raised. My belief was that teachers and students would resist, to some degree, the cooperative learning at the beginning but gradually would accept the changes as they saw the benefits that it would bring to the climate of the classroom and to student learning.

To my surprise, teachers and students did not seem to resist the changes in teaching and learning methodology as I have previously thought; instead they were very keen to embrace this new method. Also they were quite eager to learn more about this new method. However, as I expected earlier, but to a lesser degree, some of concerns were raised by a few students at the beginning of the implementation phase. It was not a major concern but they were curious to know about the changes in teaching methodology. This was clear from a comment made by one of the teachers:

> *At the beginning I had a few comments from one or two students saying that why are you not dictating the material in the classroom now? I told them about the purpose of this new method and how it helps them to increase their role in the class. I think they are very happy now because many of them came to me later and told me that they now prefer this new method of learning and they want to continue with this method throughout the year [POSTTI4].*

None of the students raised any such concerns during the interviews after the intervention. In fact all nine students seemed delighted with the changes brought with this new method of learning. The following comment captured all students' views with regard to this:

> *Last few weeks we were very happy because this was the first time that we had real opportunity to discuss things in the class [POSTSI1].*

It was evident that teachers were aware of the fact that implementing such a new method of teaching and learning would require time and effort on all sides. In addition, they believed that they would face resistance not only from the students but also from fellow teachers. However, eight out of the nine teachers felt that cooperative learning could be implemented successfully although they had some difficulties in the early stage of implementation. Some of the comments made by the teachers included:

> *… initial stages you may see some difficulties or resistance. I think the cooperative learning culture can be developed in our classrooms if we have more practice to try with students [POSTTI1].*

> *... all of sudden change of teaching methods, the students as well as teachers finds it difficult to cooperate and to cope with the new method, but later on as it happens in many cases they will be used to it. There won't be any problems later [POSTTI1].*

> *… that will happen everywhere even for us, so when we initially implement we may feel bit, I should not say inconvenience, sound of discomfort but once is implemented and we would be able to get the fruits from students, this is the main focus [POSTTI7].*

Although the teachers had the same view with regard to cooperative learning one teacher felt that it could not be used all the time to teach economics because he feared that after a while students may react differently to this new method. Hence, he thought cooperative learning should be used once in a while as an alternative learning methodology to refresh students. The following is his reaction to the question on what happens in the classroom when there is a change in teaching methods/strategies:

> *I think the first thing is amazement, surprise and then most probably enjoyment. But if we do it [cooperative learning] again and again and again most probably they will think other classes [traditional methods] again. So once in a while just to break them you can insert one such lesson so they are much more refreshed and they would know that this is not only for express but for life as well [POSTTI8].*

5.4.8 Workload

All schools in Male' are run in two sessions – morning and afternoon – including those schools that have been selected for this study. Teachers of Grades 9 and 10 work in morning session from 7am to 12.30pm, while teachers of Grade 8 work in the afternoon from 1pm to 6.30pm.

It is important to note that it is a common practice for many employees of the Government in the Maldives to have more than one job. Teachers are not exceptional. So teachers who work in morning sessions could have some part-time jobs in the afternoon, or vice versa. All nine teachers who took part in this study had some kind of private tuition jobs in either morning or afternoon depending on their school working sessions. The basic reason for having more than one job was justified by the teachers and the following comment shares their overall view:

> *I think we all have part time tuition jobs. We have to work. Without these part time jobs we cannot support our families. The thing is that the government salary is not enough to support the whole family who is depending on my income [POSTTI8].*

As I said earlier the average classroom teaching time for teachers who participated in this study was four 35-minute periods a day. That was an average total of 20 periods a week which was five periods less than the national average of 25. Besides the classroom teaching, teachers were expected to do lesson planning, marking and classroom preparation. In addition, they were expected to help and assist with the extra curricular activities organised by the schools.

Although the teachers' teaching workload was below the national average, four out of the nine teachers felt that the most difficult part of implementing cooperative learning was their heavy workload in schools. Some of their comments were:

> *… there are some difficulties at the moment because of the huge workload that we have in this school I found it little bit hard to implement according to the instructions that we received from the workshop [POSTTI6].*
>
> *If we have cooperative learning then we need to make thorough lesson plans and the learning materials that we need to implement*

> *that lesson. At the moment we don't have that much time to spend on planning [POSTTI6].*

> *Well, in the past we talk and explain the materials for whole period, students just sit and listen to us, but now our role is more like a facilitator. For instance, most part of the lesson or at least more than 50% of the work in class will be done by the students. However, the time we spend on preparation and planning is much greater than what we used to [POSTTI9].*

Another teacher recognised the time involved in planning and preparation of cooperative learning but did not regard it as a problem because teachers would get accustomed once it became a part of their routine life:

> *It is time consuming procedure. But once you are able to do it in a systematic manner… I think that will become part of our routine life and then later it will be attached with us. So there won't be any problems in the future [POSTTI1].*

5.4.9 Duration of Class Periods

As I said earlier the schools were run for two sessions. The main reason for that was the mismatch between the population growth and the resource expansion due to the financial constraints. As a result the population of these schools continued to grow over the past two or three decades. So the schools were being forced to have more than one session and squeeze the duration of class periods in each session to accommodate all the subjects.

Like other social science subjects, five economics periods were allocated for each Grade (8, 9 and 10) that involved three singles and one double period each week. Each single period was 35 minutes and a double period was 70 minutes long.

The duration of classroom time was a concern for three teachers who participated in this study. They argued that cooperative learning could not be successful unless there was enough classroom time to implement it. The two following comments express their views:

> *We have 35-minute lessons and we want to deliver the lesson within that time whether the students see things or not, but whereas in cooperative learning we don't have much role right. So they have to come out with the answers. So if they are not able to find answers or if they are not able to cooperate well I don't think the learning outcomes will come [POSTTI1].*

> *The main obstacle that I see for implementing cooperative learning here is the time limitation. We have only 35-minute periods [POSTTI4].*

5.4.10 Summary

The implementation issues of cooperative learning were presented in this section. First, it appeared that both teachers and students were able to define cooperative learning after the intervention although they were unable to do so during the pre-intervention phase. Second, it seemed that teachers were unaware of the alternative teaching methods due to the absence of professional development programmes at those schools for teachers. Third, since cooperative learning was a new method for the Maldives it appeared that it needed to be gradually introduced through the school Grades. Fourth, teachers acknowledged the importance of lesson planning although the time required to plan lessons was great in cooperative learning. Fifth, it emerged that current methods based on individualistic or competitive teaching in some degree contradicts the cooperative values that have been rooted in Maldivian culture for many years. Sixth, use of Dhivehi language appeared to be high when students were grouped due to lack of English proficiency. Seventh, little resistance towards the implementation of cooperative learning emerged. Eighth, teachers' current teaching workload of an average 20 periods a week appeared to be five periods lower than the national average of 25. Finally, the classroom period of 35-minutes appeared to be difficult and insufficient to implement cooperative learning successfully.

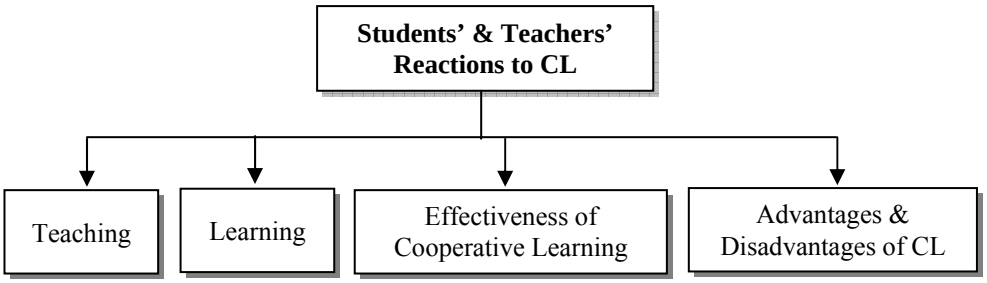
The next section focuses on students' and teachers' reactions to cooperative learning

5.5 STUDENTS' AND TEACHERS' REACTIONS TO COOPERATIVE LEARNING

Students' and teachers' reactions to cooperative learning are presented in this section. It has been divided into four subsections, namely teaching, learning, effectiveness of cooperative learning, and advantages and disadvantages of cooperative learning to teach economics in lower secondary schools.

These issues are depicted in Figure 5.5, and presented separately in the following sub-sections.

Figure 5.5: Students' & Teachers' Reactions to Cooperative Learning



5.5.1 Teaching

As we have seen in Section 5.2, teaching changed in the selected classes due to the implementation of cooperative learning. Teachers seemed be positive about new methods of teaching, and were willing to implement lessons according to the procedures outlined in workshops on cooperative learning.

All nine teachers were optimistic about cooperative learning, and believed that it opened their eyes more towards alternative teaching methods. Furthermore, it changed their perception about the traditional teaching methods that they had been following for their entire teaching career. The following quote summarises their ideas with regard to their perception about cooperative learning:

> *I believe my perception about teaching economics has changed. Now I realise that there is a room for students and I to work together and develop positive relationships among us in order to maximise the learning. This is happening right now… I see my students' interest in learning [POSTTI5].*

Another teacher also agreed with the above comments and reiterated that students would find it difficult to go back to the traditional teaching arguing that students would not want to listen to continuous 35-minute lectures anymore. When I asked whether the changed teaching was due to cooperative learning the following was the reaction:

> *Yes, definitely in the Maldives because 35 minutes going on giving lectures, I don't think students will be interested in anymore [POSTTI5].*

When students were asked whether they had seen any changes in the way the lessons were taught, 90 out of 96 students who completed the post-questionnaires indicated the changes and some of their answers were:

> *… in the past the teacher uses examples very rarely when teaching. But now because of this new method [cooperative learning] that provided more discussions and examples we can remember things and understand the issues more easily [POSTSQ2].*

> *… when we were taught the last few topics [lessons on cooperative learning] in groups the teacher was helping us that I think was a very fine and interesting way of teaching … we were able to know more about what was happening in the topic and … more importantly we were able to make our own decisions that helped a lot to clear our doubts more freely [POSTSQ7].*

> *… they were very interesting lessons and the teacher was more relaxed [POSTSQ50].*

None of the teachers had any major problems with the implementation of the lessons although some minor procedural concerns were raised. Nevertheless, they believed if the teachers were properly trained with cooperative learning techniques these minor things would not be a problem in the future:

> *… I believe if they are properly trained and if they have the proper attitude towards cooperative learning then yes it will change most of the time and will help students to learn in a meaningful way [POSTTI8].*

Although all teachers' reactions were positive about the implementation of cooperative learning in their classrooms and its effects on students' learning outcomes, the idea of combining the traditional and cooperative learning was raised during the post-interviews by a teacher. The following quote reflects her idea of combining these two methods to teach economics:

> *I should say like a combination of conventional and cooperative learning will help a lot in understanding and improving students' ability to go in depth into the subject ... in a way the conventional way of teaching off course may be a bit monotonous I don't say no, but for the introduction of a topic yes it is very much required. But for seeing the practical of the concepts then definitely this cooperative learning will help a lot [POSTTI7].*

Another teacher also had a similar idea of combining both methods in order to maintain the healthy teaching and learning environment:

> *… if we do it [cooperative learning] all the time most probably they will get bored as it happened with the traditional method so I think a combination of these two methods would be needed to maximise their interest in the subject [POSTTI8].*

5.5.2 Learning

Learning economics more meaningfully at lower secondary school level in the Maldives was one of the objectives of this study. It appeared that teachers and students reacted positively to the learning environments created through cooperative learning. All nine teachers agreed that cooperative learning would generate better learning environments for students to learn economics. They also believed that student learning would be more constructive under cooperative learning than the traditional method where students were expected to rote memorise. The following two comments exemplify all teachers' perceptions of how cooperative learning creates better learning environments for students to learn economics more meaningfully:

> *Yes, I believe so because … it [cooperative learning] will make the lesson interesting and will create more positive learning environments for students [POSTTI8].*

> *… see in the conventional learning we don't know how far the slow learners and average learners have picked up, where as here there is far possibility that fast learners will be in the position to transfer the information what they have received and in a way you know, for example, though we teachers teach and students concentrate and listen, the extent of penetration will be more in their minds if one of their friends give the idea, so that's what I feel as an advantage of the cooperative learning [POSTTI7].*

Likewise, students who were interviewed after the intervention also agreed that cooperative learning would create better learning environments, more interesting lessons, make concepts easier to learn, and they would be able to learn more about what was happening in the topics. The following two comments represent eight out of the nine students:

> *I think cooperative learning has helped us to learn economics more easily. We discuss among us and we know we all have to understand*

> *the activities so we all help each other. I think this is a great way of learning [POSTSI2].*
>
> *Yes, the lesson on cooperative learning was very interesting. We were very much interested in doing the activities. Group discussion helped us to understand the lesson better because the students who did know were able to explain to those who didn't. The teacher was able to help all students better [POSTSI5].*

On the other hand students who completed the post-student questionnaires were divided with regard to how they preferred to learn economics. Interestingly, the overwhelming majority of 90 out 96 students responded that their preferred method of learning economics was cooperative learning. Some of their reactions were:

> *I prefer the method that we had in economic growth lessons [cooperative learning] because I believe that we can put more effort in and it provided more opportunities for us to bring out good ideas and help each other in this way. Usually I get really bored in the class but I now believe that economics is really interesting after the lessons that we had recently, and the class is also more live this way [POSTSQ40].*
>
> *I prefer to learn economics the way we have learnt economic growth because the previous method is very boring and we find it very hard to understand anything from the teacher. It is much better to work in groups so we can share ideas and help each other. Also when we are grouped together our cooperation towards each other increases in side the class [POSTSQ31].*

Three out of 96 students preferred the traditional method over cooperative learning. Their reactions were:

> *I prefer the method that we have been following always, because when we have groups some of them will not take part in the activities. Also some students will argue with each other regarding the issues which eventually will be a problem for all of us [POSTSQ52].*
>
> *I prefer the old method because our teacher questions everyone and teaches that way well. On the other hand forming groups could create problems in the classroom because we are not very familiar with such kind of learning techniques [POSTSQ60].*
>
> *I prefer the method we have been following always because the teacher explains everything for us and that makes our life easier [POSTSQ21].*

Finally, a combination of traditional and cooperative learning was raised by a student, indicating that:

> *Both lecture and small group learning gives more opportunities for students to learn economics effectively [POSTSQ80].*

5.5.3 The Effectiveness of Cooperative Learning

The effectiveness of cooperative learning was raised and discussed during the post-interviews with teachers and students. All nine teachers viewed cooperative learning as an effective method but some had their doubts about the effectiveness of cooperative learning to teach all topics in the economics syllabus.

Seven teachers expressed their satisfaction with cooperative learning, indicating that this method has provided opportunities for students to discuss the issues in groups, help each other, and explain things in their own language. Some of their quotes with regard to the effectiveness of cooperative learning include:

> *I think it is an effective approach to teach economics because it provides real opportunities for both students and teachers to discuss issues, analyse real problems and find answers together in classrooms [POSTTI4].*

> *It is more effective because students are interacting in the lesson. They are helping each other, and explaining things in their own language, which is great. They understand things more easily [POSTTI2].*

> *Look our subject is a social science subject: we talk, discuss and find solutions to our social life problems. Cooperative learning provides such environment for students in our schools. So I think students will be more encouraged and interested also when they themselves share their ideas, study about the things going on around the economic systems, business organisations and so on. So I think it is very effective method to teach economics [POSTTI6].*

Another teacher supported the above teachers by relating his own experiences to justify the effectiveness of cooperative learning and its likely effects on student learning in the Maldives.

> *Based on my experience I would say it is extremely effective teaching method to teach economics here in the Maldives. It is because through cooperative learning students will be able to learn from their discussions [POSTTI9].*

Similarly all nine students agreed with those teachers who view cooperative learning as an effective method to learn economics. They believed that cooperative learning has provided them with opportunities to help each other and discuss issues in groups which were not allowed in traditional methods of learning. When they were asked whether they regard cooperative learning as an effective method for learning economics, their answers are illustrated by the following two quotes:

> *Yes, I think because we help each other to learn and also we get chances to use Dhivehi language to clarify things [POSTSI6].*

> *Sure, we can share our ideas and help those students who need help in completing the work. The other thing is the social skills that we learn by working with others. We can't get these skills if we work individually in a competitive environment [POSTSI7].*

However, as previously indicated, one teacher did not see that cooperative learning could be used to teach all the topics in the economics syllabus, although she agreed it in as an effective means of learning economics in general. Her comment with regard to the effectiveness of cooperative learning was:

> *It is effective method but I don't think it can be used for all the lessons and all the topics. But to some extent it is applicable and it is good for teaching certain topics using lots of data analysis, or what you call the graph analysis and those things, it is better to have this method [POSTTI1].*

5.5.4 Advantages and Disadvantages of Cooperative Learning

Any teaching method a teacher uses has advantages and disadvantages, requiring some preliminary preparation. Selecting a teaching method for a particular lesson depends upon many things such as: the age and developmental level of the students, what the students already know, what they need to know to succeed with the lesson, the subject-matter, the objective of the lesson, time, space and material resources and the physical setting.

Teachers selected topics for their respective classes and implemented them according to cooperative learning criteria provided during the workshops on cooperative learning. Table 5.1 summarises the advantages and disadvantages of cooperative learning outlined by the teachers and students after the implementation of cooperative learning lessons.

Table 5.1: Advantages and Disadvantages of Cooperative Learning

Advantages	**Disadvantages**
▪ Allows for participation of everyone ▪ Students help each other ▪ Helps foster mutual responsibility ▪ Students use Dhivehi to clarify things ▪ The extent of penetration will be more in their minds if one of their friends gives the idea ▪ Teacher is more aware what is happening in the classes ▪ Helps to develop social and communication skills ▪ Students often more comfortable in small groups ▪ Students learn to be patient, less critical and more compassionate.	▪ Classroom sizes are too small ▪ Large groups difficult to manage ▪ Difficult to implement in lower Grades ▪ Time consuming ▪ Classroom time is not sufficient ▪ Lack of resources

The above advantages and disadvantages of cooperative learning were outlined by the teachers and students during the post-interviews, and through the post-questionnaires. Students themselves did not list or outline any disadvantages of cooperative learning. Meanwhile, seven out of the nine teachers indicated that advantages of cooperative learning outweigh the disadvantages of it when it comes to the teaching and learning of economics. Some of their comments that all six teachers shared include:

> *I don't find any disadvantages when I went to this method. It is easy for students to understand, they converse with each other, they clarify the doubts and now when they clarify the doubts they use a Dhivehi as a medium to speak among themselves. So they do a better job than the teachers do I think [POSTTI5].*

> *… definitely this cooperative learning will contribute a lot towards self-learning … it will serve as a very useful learning method or learning procedure we can say [POSTTI7].*

Another three teachers outlined some of the disadvantages that they see with the implementation of cooperative learning. Classroom sizes, the effectiveness of cooperative learning in lower Grades, and the size of the groups were some of the disadvantages outlined by these teachers. The two following comments summarise their views:

> *… disadvantages is that because our classrooms are very small and the students in the groups are very large. So there might be a problem [POSTTI8].*

> *… the disadvantage what I feel is, I don't know it is my individual opinion, it may be bit difficult to implement at the lower Grades because the lower Grade's students may not be in a position to understand the significance of the entire educational process [POSTTI7].*

5.5.5 Summary

This section has presented data on students' and teachers' reactions to cooperative learning. It appeared that teachers and students were positive about the implementation of cooperative learning, and the effectiveness of this method in terms of the teaching and learning of economics.

5.6 CONCLUSION

The findings shared in this chapter include teaching and learning issues, cooperative learning implementation issues, and teachers' and students' reactions to cooperative learning. These findings suggest that teachers were unaware of any other teaching method than the traditional methods with minimal group discussion. Thus, their initial perception of teaching focused on transferring information from teachers to students through direct explanation. On the other hand, students perceived the traditional teaching approach as unresponsive, where students sit quietly and pay attention to their teachers without any interaction among themselves or between them and their teachers. The findings also revealed that students and teachers were positive about cooperative learning and perceived it as an effective method for the teaching and learning of economics. In addition, it appeared that training teachers in cooperative learning methods resulted in changed teaching and provided students with greater opportunities to learn economic concepts more meaningfully. Hence, cooperative learning emerged as most students' preferred method of learning economics. Furthermore, the Maldivian culture, which is based on Islamic cooperative values, clashes with a school culture based on individualistic or competitive values but more closely reflects the ethos of cooperative learning. Finally, it appeared that *Dhivehi* was a dominant factor in cooperative groups' success because of lack of English

proficiency among students, even though English is the language of instructions in these schools.

The findings presented in this chapter will be discussed in the following Chapter Six.

CHAPTER SIX

DISCUSSION

6.1 INTRODUCTION

This chapter discusses the research findings with reference to the research questions and existing literature that can be used to inform the research. It also critiques the cooperative learning model described earlier in Chapter Three. The research questions presented in this study were:

- What are the teachers' and students' perceptions about current teaching methods in economics at secondary school level in the Maldives?
- How do teachers and students perceive cooperative learning as an alternative method to teach and learn economics?
- What influence does the learning of cooperative methods have on teachers' pedagogy and students' learning?

The findings reported in this study are based on four research themes that involved teaching issues, learning issues, cooperative learning implementation issues and students' and teachers' reactions to cooperative learning.

As has been indicated earlier this study was designed to explore the issues related to the current teaching of economics in Maldivian secondary schools, and trial a cooperative learning model intended to help students to learn economics.

Research on teaching methods suggests that these play a vital role in student learning (Freiberg & Driscoll, 2005). Various teaching methods have been used to achieve student learning varying from teacher-centred methods of lectures, inquiring, and demonstrations to student-centred methods such as cooperative learning (Freiberg & Driscoll, 2005). The findings of this study suggest that the teacher-centred methods based on the transmission of information from teachers to students through direct explanation with some discussion was the dominant method of teaching employed by teachers in the Maldivian secondary schools.

It appeared that this type of teaching and learning based on rote memorisation practice has a long history in the Maldivian school system as reported in Chapter Five. In addition, this study explored the perceptions of teachers and students about cooperative learning as an alternative method to learn economics. The findings revealed that the participants were very positive about the implementation of cooperative learning, and the overwhelming majority of them perceived it as an effective method of teaching and learning economics. They particularly noted the social benefits of working in groups. They also reported greater on-task behaviour, and more positive attitudes towards economics. The reported positive effects on student on-task behaviour are supported by my classroom observations of the cooperative behaviours of students when working in groups.

In agreement with Siegel (2005) findings from this present study show that training teachers in cooperative learning methods influenced their pedagogy and changed their teaching. They provided students with greater opportunities to learn economics in small groups. Training teachers and ongoing professional development programmes for them appeared essential because there are increasing expectations that all students in schools will achieve, rather than merely those who are relatively easy to teach (Timperley, 2005). Also there is the growing realisation that students' learning can be promoted through greater professionalisation of teachers (Ancess, 2001; Cochran-Smith & Lytle, 2001).

Furthermore, this study found a mismatch between home and school cultures in the Maldives. This links with Kagan (1994) who stated that "If a culture places strong value on cooperative work and the school chooses to have competitive and individualistic structures to the exclusion of cooperative structures, there is a mismatch between home/culture values on one side and school/classroom values on the other" (p. 3:5). Therefore, it is my view that teachers need to be responsive to cultural differences by implementing culturally relevant teaching (Ladson-Billings, 1994) because it is argued that "educational practices must match with the children's culture in ways which ensure the generation of academically important behaviours" (Jordan, 1985, p. 110). In addition, Gay (2000) stated that culturally responsive teaching builds bridges of meaningfulness between home

and school experiences as well as between academic abstractions and lived socio-cultural realities.

Specific findings related to each of the research themes to answer the above research questions are discussed with reference to the existing literature in the following sections.

6.2 TEACHING ISSUES

While a range of teaching issues emerged from the data that were presented in the previous chapter, certain major issues related to the research questions put forward in this study are discussed in this section.

As has been indicated, different teaching methods are used as means of teaching facts, ideas, concepts, skills, and attitudes to the thinking and actions of the students (Freiberg & Driscoll, 2005) whose interactions in classrooms may include various forms, depending upon the teaching methods used. For example, competitive or individualistic interactions may be observed in classrooms where teacher-centred methods (i.e. direct explanation) are being used while cooperative interactions are expected to occur in group-based learning where student-centred methods are used.

The results of analyses that examined teaching issues are discussed in the following subsections.

6.2.1 Planning and Preparation for Classes

The findings suggest that although planning is an important factor for effective teaching (Freiberg & Driscoll, 2005), the majority of the teachers had the view that planning properly for classes was unnecessary, and therefore, they did not have written lesson plans for individual lessons before the intervention.

Research indicates that the concept of lesson planning has become a focus of discussion among educators (Panasuk et al., 2002). As has been mentioned, the concept of planning for teaching can be defined as preactive decision-making that takes place before the lesson being implemented (Panasuk et al., 2002). It is

believed that teachers make decisions consciously and unconsciously that affect their behaviour and that of their students (Clark & Joyce, 1981). Lesson planning for class, therefore, can be regarded as a cognisant decision that involves teachers' conscious efforts in developing a coherent system of activities that would facilitate the development of students' cognitive structures (Panasuk et al., 2002). However, it appeared that lack of planning for classes was a concern for students who indicated their dissatisfaction with their teachers' lack of planning for class lessons:

> *Here they [teachers] don't prepare for the classes. Our Miss comes to the class with no plan I think [PRESI1].*

Analysis of the teachers' approaches to lesson planning for classes revealed similar patterns among the teachers across the three schools in their abilities to think in advance about their teaching. Although the majority of them were dependent upon the schemes of work for general guidance regarding particular techniques for teaching various topics, it seemed that some of the teachers referenced their own previous teaching experiences when interpreting those guidelines from schemes of work and responding to complex events in classrooms. In addition, they trusted their ability to teach (not necessarily with a plan) any topics using the same techniques or procedures, and respond to whatever their students presented in the class. Furthermore, in the absence of written plans, it took conversations with the teachers to discover whether their teaching behaviours were planned in advance or implemented to achieve the student learning outcomes. This may not necessarily be a problem. Many talented teachers appear to have no planning and yet are skilful and effective.

In general, it can be said that the teachers' planning for classes was limited in part by their knowledge base because the data indicated that the teachers were somehow unaware of a variety of pedagogical approaches to teach economics. According to Nierman, Zeichner, and Hobbel (2003) expert teachers should possess at least three types of knowledge - content knowledge, general pedagogical knowledge, and pedagogical content knowledge, that together guide their thinking and action in general, and the classroom in particular. Hence, it is argued that teaching experience itself does not necessarily produce expert teachers

(Feiman-Nemser & Buchmann, 1985) but teachers' knowledge, beliefs, and behaviours need to be integrated with their experiences in order to become expert teachers (Holt-Reynolds, 1991).

Past research indicates that teaching is not a haphazard process (Freiberg & Driscoll, 2005) but is a purposeful activity that is best accomplished when it is carefully planned because this is a basic requirement for successful teaching (Panasuk et al., 2002). As Porter and Brophy (1988) suggested, teachers must be clear about what they intend to achieve and must consider the curriculum standards when planning for classes. However, teachers also need to be flexible and open to the unexpected events in classroom. The findings of this present study suggest that unlike the pre-intervention phase, teachers were more attentive to planning for classes after the implementation of cooperative learning. This required making planning decisions that involved developing a coherent system of activities that facilitated the involvement of students' cognitive structures (Panasuk et al., 2002). As mentioned earlier, teachers' decisions with regard to the implementation of lessons may affect both teachers and students' behaviours because Peterson, Marx, and Clark (1978) found that teacher behaviour in the classroom depends on the plans teachers make. In addition, Clark and Yinger (1979), and McCutcheon (1980) both found that planning tends to give teachers confidence and security. Therefore, planning ahead is required for classrooms to create an environment that is conducive for teachers' pedagogy and student learning.

Planning provides a framework for teaching and learning in an uncertain and changing environment (Freiberg & Driscoll, 2005). In addition, Panasuk et al., (2002) found using a multi-staged planning process helps teachers with flexibility in planning, leading to stronger lessons and learning experiences.

The findings suggest that both teachers and students would benefit from teacher planning for classes, not a lesson plan as a sequence of events, but as a "design that gets set in motion when teachers and students interact" (Robbins, 1999, p. 31). This was illuminated in the data when the teachers attributed the benefits of planning for classes according to cooperative learning as indicated "if we can plan

out like that then it would be very effective and successful teaching method" [POSTTI6].

However, it appeared that many teachers found time to be in short supply to plan for classes according to cooperative learning methods. The most pervasive concern of the teachers was obtaining sufficient time during the school day to plan for classes as they were overloaded with teaching and extra curricula activities. In this light, it should be noted that the findings suggest that teachers' average weekly teaching-load appeared to be five periods less than the national average of 25. Yet one could argue if teacher change is required then there might be a substitute for extra time. Time appears necessary to enable teachers to make changes to their teaching practice. Hence, with greater confidence and experience, less planning is needed over time, so the gains are great.

6.2.2 Teaching Methods

Teaching methods can be defined as organised arrangements of teaching approaches that are intended to achieve a certain and discrete learning outcome (Wilen, Bosse, Hutchison, & Kindsvatter, 2004). As indicated earlier, methods of teaching for student understanding have evolved from models which stress information transmission to ones which emphasise student transformation of knowledge (Joyce et al., 2004). For example, the evolution has been from emphasis on teacher-centred methods (i.e., lectures, direct explanation) to emphasis on the student-centred methods (i.e. cooperative learning) that involved the role of the individual learner in constructing understanding and the influence of the social environment on that construction. As has been outlined in Chapters Two and Three, student-centred learning includes students working together cooperatively in small structured groups to accomplish shared learning goals (Caropreso & Haggerty, 2000; Johnson & Johnson, 2002; Slavin, 1994) in which they construct conceptual understanding through a process of exploring, analysing and evaluating (Jadallah, 2000). In addition, the earlier review of the learning theories in Chapter Two, suggests that in constructivism, individual students learn within a socio-cultural context in which their conceptual understanding develops through experiences and is shaped through interactions with other students (Jadallah, 2000). Based on this and other reasons outlined in earlier chapters (see

Chapters Two & Three) it was argued that meaningful teaching and learning of economics at secondary school level in the Maldives could be achieved if cooperative learning methods were implemented successfully.

Despite the documented effectiveness of cooperative learning (i.e. Johnson et al., 2000; S. Kagan, 1992; Sharan & Sharan, 1992; Slavin, 1994) and frequent criticism (i.e., Goodlad, 1984) of the teacher-centred methods, it appears that teacher-centred methods of teaching have continued to be the prevailing method of teaching economics (Becker & Watts, 2001), particularly in secondary schools (Evertson, 1989). According to Johnson and Johnson (1988) the competitive and individualistic nature of teacher-centred methods are the most dominant in schools where competitive expectation is fairly widespread in many societies when students enter schools and grow stronger as they progress through schools. Research on economic education suggests that academic economists lecture for approximately 80 per cent of their class time (Benzing & Christ, 1997; Siegfried et al., 1996) and the remainder of time is filled with recitation, showing overheads, videos, movies, or questions and answers (Caropreso & Haggerty, 2000). As discussed in Chapter Two, this type of teaching method usually involves teacher review of the previous lesson and presentation of new material to the entire class at one time, class discussion, and assigned independent work toward the end of the class period (Evertson, 1989), where the teacher feels responsible for providing and controlling the flow of the content and the student is expected to receive the content. The findings of this study confirm similar patterns of teaching methods (i.e., direct explanations with some class discussion) employed by the nine teachers at the three schools before the intervention.

The classroom observations and interviews with the participants confirmed that the teacher-centred method was their preferred method of teaching economics. My findings resembled that of Becker's (1997) who claimed that economics teachers are not moving away from the traditional methods of teaching as much as other subjects that have moved to a broad teaching repertoire. In addition, he argued that the field of economics has placed too little value on the importance of variety in teaching and economics has continued to be taught by the lecture method in recent decades. In a longitudinal survey on teaching methods of US

undergraduate economics courses the leading economic education researchers Becker and Watts (2001) found that the results of their 2000 survey had changed very little compared to the findings of their 1995 survey, and concluded that the lecture was the most frequently used method of teaching by US teachers, despite some indications of increased emphasis and interest in interactive teaching over that period.

Although the traditional method of teaching can be delivered in a manner that can motivate, stimulate, and entertain students through the use of cartoons, videos, newspaper clips, and power point animations, or short collaborative exercises within the lectures (Freiberg & Driscoll, 2005; Johnston et al., 2001) surveys by Becker and Watts (1996; 2001) claim that those techniques to engage students in learning were not often used in teaching economics, and that the vast majority of time teachers spent using "chalk and talk" that characterised the 20th century style of economics teaching (Becker & Watts, 2001; Benzing & Christ, 1997; Siegfried et al., 1996). The findings of this study did not suggest that teachers were using even these techniques to facilitate interactive learning in their classes during the pre-intervention phase.

One key reason why teachers adhered to the traditional method of 'chalk and talk' appeared to be the degree of control it provided them over the students (Freiberg & Driscoll, 2005). The findings suggest that teachers controlled the lesson, the flow of lesson content, and the type of questions asked of the students. One of the comments made by a teacher that shared the views of all nine teachers before the intervention indicated that, "being at the chalkboard just in front of the students gives me the total control of the class … So I prefer to go with the explanation method" [PRETI9]. It was their belief that teaching was effective and worked best when teachers were able to control the classroom tasks. It did not appear necessary to engage students in learning, nor did they have to be overly concerned with encouraging students to build relationships with them or with each other. However, building relationships with students has become increasingly acknowledged as important, as research reveals that if teachers and students build relationships in classrooms then it helps students to learn (Soloway, 1996) and students see teachers as approachable human beings and not as aloof authority

figures. The distance teachers traditionally maintain from students appears to be part of the cultural nature of teaching practices at the Maldivian schools. Traditionally teachers believe that student discipline problems are likely to occur if interactive classroom activities are implemented or small group based discussions are introduced. Yet the research shows that "appropriate use of cooperative learning will reduce inappropriate, nonresponsive, and obstructive behaviour on the part of students" (Johnson & Johnson, 1991, p. 174). Also the belief that a "zero level of classroom noise" is a requirement for lesson implementation is a further dominant feature of such traditional teaching.

My classroom observations confirmed that teachers expected students to be obedient, sit passively, and receive the lesson content without making any noise, even though current research suggests that students often expect to be engaged in the learning process and can be unwilling to sit passively through lectures (Becker, 2000). Moreover, it is difficult for students to remain on-task listening and taking notes from the chalkboard for an entire class period. The findings reflect Becker's view that students are not eager to sit passively throughout the class-period, and many of them indicate alienation from their teachers due to a lack of classroom interaction between them and their teachers. With regard to this one of the students stated that "the problem is we don't get chances to share ideas and ask questions, so many of us prefer to stay quietly without asking questions" [PRESI5]. The lack of participation was looked upon by the students as a negative aspect of traditional teaching. This finding supports Johnstone and Percival's (1976) who examined 100 observations of chemistry lectures and concluded that students had a noticeable behaviour change (a lapse in attention) about 10 to 18 minutes into a lecture, with lapses becoming more frequent as time passes. Teachers, therefore, need to vary activities and limit lecture time to maximise student interest and motivation (Good & Brophy, 2001). They also need to vary their teaching methods and classroom activities so students do not become bored with the material (Good & Brophy, 2001; Slavin, 1987).

Another reason for the lack of variety in teaching is the strong emphasis that is given to examinations based on rote memorisation in the Maldivian school system. Cannella and Reiff (1994) labelled such teaching based on traditional

methods as didactic and memory-oriented transmission models, where the teacher transfers the knowledge and cognitive skills to the students (Salomon & Perkins, 1989) when they work alone. In this method, one student's achievements does not affect another's (Berry, 2003). As a result, the main focus of the students is on self-interest and personal success, and they agreed that the success and failure of others are irrelevant and extraneous (Johnson & Johnson, 1989). My findings revealed that the teachers used such examination-oriented approaches to teach economics in which students were encouraged to rote memorise.

The critics of such models argue that information acquired from traditional teaching is usually not well integrated with other knowledge held by the students and as a result new knowledge is often only brought forth for school-like activities such as examinations, and therefore cannot be used in different contexts (Richardson, 1997) such as in real life situations. Although there has been strong criticism of teachers who concentrate too intensely on examinations, the findings before the intervention suggest that the teachers were either directly or indirectly influenced by the MoE or the school authorities to focus on the examinations in order to improve the school results on the Cambridge and Secondary School Certificate examinations. One could argue that the nature of such influence on teachers may lead to unhealthy competition within the school system itself that ultimately has an adverse impact on their teaching as well as their student learning.

My data suggests a fairly widespread competition exists between the schools in order to get higher rankings from the MoE, who ranks all secondary schools every year purely based on their examination results. Another interesting point needs to be highlighted about their perception of good teaching before the intervention. Although the teachers' view of good teaching varied, they claimed that school authorities and the MoE's perception of good teaching was getting high marks from the examinations. One of the teacher's comments before the intervention indicated that "good teaching for the department or the MoE is good results in the examinations ... If any teacher brings better results in the exam then that teacher becomes the school hero" [PRETI9].

It appeared that being a "hero" is important for those who do not get many incentives or recognition from the system for their work. Hence, one could expect such competition between the teachers naturally follows in order to achieve recognition as a "hero" as that would help them to improve their image in small societies like the Maldives. However, teachers are already well respected in the Maldives where many have high regard for those who have such a distinctive image in the society, because culturally many Maldivians believe in teachers as a primary source of knowledge.

It is expected that teachers at any level (i.e., preschool, primary, secondary, etc.) would know about various teaching methods and their strengths and limits for fostering student learning. However, like any other profession, teachers have their own preference for teaching methods that most suit their classroom situations and their personality. Nevertheless, it is my view that although teachers have specific preferences for particular teaching methods, they should also consider the various ways of student learning, interests, and needs of students when choosing a particular teaching method, because students learn in different ways and at different rates. These ways of learning cannot be accommodated effectively unless teachers change their teaching methods and provide a variety of learning activities. If teachers are willing to match their teaching strategies with their students' various learning preferences then students will have at least some classroom activities that may appeal to them and students are more likely to be successful in activities that engage them. Consequently, students may be much more committed to a learning activity that has value for them and they may actually witness teachers meeting their needs in the classroom. This can be very encouraging and motivating for students.

For those reasons, I agree with Joyce et al., (2004) that teachers must be committed to the use of alternative teaching methods appropriate to the diverse learning needs of students. It is believed that having alternative teaching methods would increase the probability of holding students' interest and attention and accommodating students' needs (Wilen et al., 2004). Similarly, Becker and Watts (1995), and Becker et al., (2006) argued the importance of utilising alternative teaching methods to teach economics, indicating that some of the students are

natural-born listeners while others are great talkers and discussion leaders. According to Siegfried and Fels (1979) "Different students learn economics in different ways" (p. 953).

As has been discussed in Chapters Two and Three, cooperative learning is one such alternative method that has been advocated for greater student involvement (Polloway et al., 2001), enhancing student motivation and interest in learning (Johnson & Johnson, 2002), encouraging social relationships among students (Slavin, 1995), and increasing higher student achievement than competitive or individualistic learning (Johnson & Johnson, 1985, 1991; Johnson et al., 1994; Kagan, 1985; Sharan & Sharan, 1976; Slavin, 1983).

My post-intervention findings suggest that all participants in the study had a similar perception towards the implementation of cooperative learning methods. It appeared that the implementation of cooperative learning to teach economics has encouraged the participants to seek out ways of planning and developing classroom activities that promote student-centred learning as opposed to the traditional methods that encouraged passive learning and rote memorisation. Although the traditional methods of teaching were their preferred method of teaching economics before the intervention the findings indicated that their perception of teacher-centred direct explanation of content to transfer knowledge from teachers to students evolved during the post-intervention with more student involvement in the classroom. One of the teachers revealed that her "past way of teaching has changed because of the training during the workshop on cooperative learning" [POSTTI5]. Another teacher indicated that it "made me to think about the way I teach economics and now I prefer to involve students in teaching and learning" [POSTTI4].

My classroom observations also confirmed the teachers' responses and indicated that their attitudes or behaviours changed during the implementation of cooperative learning. It appeared that they were more willing to create favourable classroom environments for students including the fostering of positive relationships between teachers and students and between students themselves. As a result a more relaxed mood in the classrooms was observed during the

implementation of cooperative learning. Of note was the teachers' willingness to try it out even though their knowledge of cooperative learning appeared to be limited. The data suggest that they were not familiar with cooperative learning before the intervention. As has been mentioned the cooperative learning knowledge that has been provided for teachers through the workshops to plan and implement cooperative learning lessons would only be described as a basic level of cooperative learning knowledge. However, their responses showed their optimism about the implementation of cooperative learning and how it affected their perception of current teaching and classroom behaviour as one of the teachers expressed that "it will bring positive changes to the way we teach economics" [POSTTI9].

6.2.3 Summary

The purpose of this section was to discuss the teachers' and students' perceptions of current teaching methods and to see if cooperative learning can be used as an alternative method to teach economics.

As has been mentioned classroom teaching is complex, and its nature depends on how these issues are integrated in one's own teaching. Planning for classes was one such issue discussed in this section. It appears that in order to improve classroom teaching, teachers must have a clear plan for lessons on what they really want to accomplish, and know how to determine whether their plans are working to achieve specific learning outcomes, but at the same time to be responsive to the unexpected and fruitful teachable moment.

Keeping in mind the importance of planning, I believe teaching activities and their interactions are most critical for students' varied opportunities to learn economics. It was observed during the post-intervention that teachers' plans and the implementation of lessons were consistent and shared similar patterns across the schools. However, the extent and nature of such patterns depended on teachers' experience and their level of knowledge base. As has been discussed, teachers require a certain level of knowledge to prepare teaching materials and implement them according to cooperative learning techniques.

The section also outlined evidence supporting the teachers' and students' view of current teaching issues and how they perceived cooperative learning as an alternative method of teaching economics at secondary school level in the Maldives. As has been discussed the findings of this study were consistent with the research on teaching issues such as planning for classes and methods of teaching. While it has been recognised that issues such as the duration of classroom periods and the availability of limited teaching resources may affect the implementation of alternative teaching methods, the findings from this study did not suggest that these impediments had any impact on teachers' and students' perception of cooperative learning as an alternative method of teaching economics. In fact, the findings suggest that all participants in the study had a positive perception of cooperative learning methods. Their perception of cooperative learning did not deviate from current research on the effectiveness of cooperative learning. It appeared that their changed perception of teaching methods influenced their classroom behaviours that encouraged student involvement in learning during the implementation of cooperative learning.

6.3 LEARNING ISSUES

The previous section of this chapter discussed the significance of the findings of teaching issues, current teaching methods and how cooperative learning influenced teachers' and students' perception of teaching methods.

The present section of the chapter discusses the second of the four research themes presented in Chapter 5. This second theme, *Learning Issues* identified that there was:

- Lack of motivation and interest among students to learn economics due to the absence of student involvement in learning through small group discussions; and
- A history of rote memorization that focused on the examination leading to a lack of understanding of economics concepts among the students and thus, difficulty in applying those concepts in real life situations.

The significance of this apparent lack of student motivation and interest in learning economics will be discussed next. The issues of student understanding of

concepts and how cooperative learning helped students' greater involvement in learning that encouraged them to learn economics will be discussed in the following subsections in the light of studies of similar phenomena reported in the literature.

6.3.1 Motivation and Interest

In general terms, motivation may be referred to as an internal state or condition that energises, directs, and sustains behaviour toward a goal (Baron, 1992; Pintrich & Schunk, 1996). In educational contexts, it can be viewed as students' desire or willingness to participate in the learning process (Bomia et al., 1997; Lumsden, 1994), and tendency to find academic activities meaningful when deriving the intended benefits of those activities (Brophy, 1988). In addition, Ames (1990) characterised student motivation to learn as long-term quality involvement in learning and commitment to the process of learning.

Student motivation can be influenced by both intrinsic and extrinsic factors that can start, sustain, intensify, or discourage behaviour. For example, intrinsic factors that appear to influence student motivation include the individual characteristics or dispositions that students bring to their learning, such as their interests, responsibility for learning, effort, values and perceived ability (Ainley, 2004; Lepper 1988). On the other hand certain types of schooling practices that promote or hinder student motivation can be viewed as extrinsic factors that include features of the classrooms, peer groups, classroom tasks, and teaching practices (Ainley, 2004; Lepper 1988). Hence, one could say that students who do not have powerful intrinsic motivation to learn can be helped by extrinsic motivators in the form of rewards.

As has been mentioned earlier schooling practices such as the nature of teaching methods can and do affect students' levels of motivation to learn (Lumsden, 1994). The traditional method of teaching is one such method that has been criticised by several researchers (e.g., Eccles, Midgeley, & Adler, 1984; Stipek, 1988) for hindering the development of student motivation to learn. The findings of this study suggest that similar patterns of teaching across the three schools appeared to have influenced students' motivation to learn economics. My

classroom observations indicated that generally students were well behaved in the classroom as directed by their teachers but the lessons did not necessarily require them to engage in the learning process. It is my view that one of the keys to student motivation is the active involvement of students in the learning process. Although there are myriad reasons why students become less engaged in the learning process, in this study the nature of teaching practices that encouraged student alienation seemed to be the main contributor for their lack of motivation to learn economics.

As presented in Chapter Five, many students were not able to become engaged, and few of them managed to complete some of the required tasks. Those who did, did so without interest or enthusiasm. One of the students indicated that "… she [teacher] does not often give us chances to engage in the class activities. It is boring to sit in the class to listen the teacher all the time" [PRESI2]. Seven out of the nine students made such unsolicited statements that they did not do their best work when lacking motivation and argued that current teaching practices at those schools are to blame for their lack of interest and motivation. Similarly, another two students reflected on the nature of their roles in the class and how that effected their motivation to learn, as they were not allowed to share their ideas and take part in the learning process [PRESI1]. It appeared that students experienced negative feelings such as anger and rebellion when they were unmotivated. This finding supports Skinner and Belmont (1991) who described less motivated or disengaged students as passive and who "do not try hard, and give up easily in the face of challenges" (p. 4).

As indicated earlier, many intrinsic and extrinsic factors may contribute to students' motivation to learn. It is believed that teachers have little control over many of those factors that contribute students' motivation (Lumsden, 1994). Nevertheless, research has shown that teachers can influence students' motivation (Anderman & Midgley, 1998; Hancock, 2004; Skinner & Belmont, 1991), and increase their interest and curiosity to learn (Johnson et al., 1998; Slavin, 1990) because students expect to learn when their teachers expect them to learn (Stipek, 1988). With regard to the teacher's role in student motivation Brophy (1988) stated that motivation to learn is a competence acquired through general

experience but stimulated most directly through modelling, communication of expectations, and direct instruction or socialization by parents and teachers. In addition, students' motivation and their desire to engage in learning are influenced not only by teachers but also the school administrators, the school environment and their peers (Lumsden, 1994). The pre-intervention evidence suggests that the traditional schooling practices did not facilitate and encourage student motivation beyond learning what was required to pass exams.

Hence, it is my view that students' motivation to learn economics at those schools could have been increased if students were given greater opportunities to engage in learning, interact with each other, and gain control over their lives. Moreover, peer interaction is central to the success of cooperative learning as it can develop to cognitive understanding and have a strong effect on motivation (Biehler & Snowman, 1997). As reviewed in Chapters Two and Three, socio-cultural constructivist and motivational theories provide theoretical perspectives on how students encourage, learn and benefit from one another as they work cooperatively in small groups based on the belief that knowledge is constructed and that knowledge is acquired through interactions with the environment (Perret-Clermont et al., 1991; Vygotsky, 1978).

The findings of this study related to students' motivation and interest to learn economics, suggesting that they were more positive about learning economics during the implementation of cooperative learning. The perception of all nine teachers about cooperative learning suggests that the nature of the cooperative learning process has the potential to enhance students' motivation to learn economics, and has positive effects on students' behaviour in the classrooms. The findings also suggest that students were more engaged in learning economics, and in classroom interactions between them and their teachers. Teachers facilitated opportunities for students to become involved by contributing ideas which helped them to become engaged in classroom activities after initially lacking motivation before the intervention. Cooperative learning can promote a personal relationship between the teachers and students, thus creating greater motivation in the students to learn (Holmberg, 1983).

The actual amount of time students spent working on classroom activities during cooperative learning, perhaps, could be the strong indication of their motivation to learn economics, as one of the teacher's observations with regard to changed students' behaviour indicated that "... they [students] are performing better now, and they are doing the activities now and they are very keen and interested in taking part in the group activities based on this cooperative learning [POSTTI9]. This can be related to past research that often found students spent significantly more time on-task than students in whole class situations (Johnson & Johnson, 1995; Slavin, 1995). This involvement in learning and interaction within their classrooms during cooperative learning has been shown to have a positive effect on motivation inducing attributions.

This finding supports Slavin (1995) who examined several studies and concluded that students in cooperative learning groups felt more strongly towards their group members' learning than students who learnt through traditional methods. This may be because by listening to their group-mates they are motivated to support and show interest in one another's work, remain on task and develop alternative perspectives during cooperative learning (Slavin, 1996). In other words, cooperative learning provided opportunities for students to interact and speak directly to one another in ways such that they can be understood easily. It is also believed that they are "often more receptive to their peers' ideas than to those of their teachers, because peers' ideas are seen as more personal and less threatening" (Gillies & Ashman, 2003, p. 11).

Research has shown that positive relationships among students are a critical element in the development and socialisation of students (Hartup, Glazer, & Charlesworth, 1967; Johnson, 1980) and is viewed as important for student learning. It is argued that interactions based on small group learning have a strong influence on student performance in classroom situations (Johnson & Johnson, 1991). Reciprocally, through participation in group interaction, each student constructs a sense of self as active learner within the culture of each particular group. These constructions may lead to students' development of motivation for economics learning because a social constructivist understanding of motivation for learning encompasses not only the cultural domain of the classroom, but

includes also intrapersonal elements of students' constructions about learning processes.

In addition to being more engaged during cooperative learning, students perceived that their classroom learning activities during cooperative learning were more effective and important than those during traditional methods of teaching and learning. One possible reason would be that cooperative learning offered them opportunities for team-building experiences, seeking consensus, and encouraging communication. Moreover, students shared skills and expertise among team members which seemed to build confidence, skills, knowledge and creativity through cooperative learning. In addition, the various elements of cooperative learning, particularly positive interdependence, seemed to enhance motivation to learn economics because it encouraged and helped students realise that personal efforts can contribute to group as well as individual goals. Learning became an obligatory and a valued activity so the group's success was their main focus when working in small groups. According to Slavin (1995) students working in cooperative learning situations are more likely to attribute success to hard work and ability than to luck.

My classroom observations suggest that students were more active in classroom discussions and keen to promote and work together to achieve the group goals. The findings provide insight into students' motivation to participate in cooperative learning. The social nature of small group discussions has benefits for both high and low achieving students. High achieving students can improve their social and communication skills for working with others, while low achieving students can improve their self-esteem and motivation which enables greater participation in learning. One of the student's quotes can be used to conclude this subsection on motivation as he indicated that "Many of my friends have shown their interest in the subject … In the past most of us feel sleepy during the lesson because our Miss talks all the time" [POSTSI2].

The above discussion highlighted the positive effects of cooperative learning that led to increased student on-task behaviour. This was supported by classroom observations of the cooperative behaviours of the students when working in

groups. The findings also revealed that students showed a positive attitude towards working in groups. In general, teachers' and students' perception of motivation and interest to learn economics in this study accord well with the positive outcomes of previous research (Johnson & Johnson, 2002; Polloway et al., 2001; Slavin, 1995). According to Johnson and Johnson (1991) the "research clearly demonstrates that cooperation is much more facilitative of motivated effort and achievement than is competition" (p. 178).

6.3.2 Understanding

The second category which led to the development of the research theme Learning Issues dealt with student understanding of knowledge and skills, and the impact of teaching methods on their understanding.

As has been mentioned in Chapter Two, the critics of public education in the Maldives and concerned parents have raised their voices about the lack of knowledge and skills among the graduands of secondary schools. Especially, they are concerned about students' inability to apply school knowledge and skills to real-life problems in workplace situations. The students' failure to meet such expectations should not be surprising since the traditional teaching practices in Maldivian secondary schools have not required the application of knowledge in new settings. As mentioned earlier, teaching and learning practices in the Maldives are based on the tradition where students rote memorise for school examinations, which leads to little long-term retention of what was learnt.

The critics of such traditional school practices argue that students can acquire information and skills without understanding their basis for application, but the acquired information is not well integrated with current knowledge held by students (Richardson, 1997). Hence, knowledge and skills that are not understood do students little good (Perkins, 1993) and cannot be used in different contexts (Richardson, 1997). According to Perkins (1993) information acquired through rote memorisation generally defies active use and routine skills often serve poorly because students do not understand when to use them. Hence, it is important for teachers to bring real life situations to the class through cases and examples, and

to assist students with the skills required to apply school knowledge and concepts in their lives after they leave school.

The findings suggest a similar passive learning practice existed across the three schools before the intervention. This was a concern for many students who sought regular help from private tutors to learn and understand the knowledge and skills that were taught by their school teachers. All nine students who were interviewed attended tuition classes to get help and assistance with their learning. The findings suggest that these students used private tuition as a medium to clarify the knowledge that they didn't understand at school. The tradition of learning help through tuition is believed to be very common in the Maldives as one of the students stated that "Most students in my class go to private tuition. So if we don't understand something in the school we ask our tutor at night" [PRESI7].

The dependency of students on private tuition in the Maldives has a long history. It appears that a large majority of parents still send their children to those tuition centres believing that their children's performance in the examinations would not have been improved if their children didn't get learning help from the tuition centres. The parents' preference for private tuition can be viewed in two ways. First, a majority of these parents themselves may have gone through the cycles of private tuition when they were in school. So they may want to send their children based on their experiences in both public schools and private tuition centres. Second, the lack of confidence could exist among the parents in the teaching and learning practices in the public education system and or a societal belief that students do better in the exam when they get learning help from more than one source during a school day. Whatever the reason all students who were interviewed before the intervention preferred the methods used by their private tutors to learn economics which involved small group discussion and peer help. Five out of the nine students indicated that they sought their tutor's help if they didn't understand something at school and the remaining four students either sought help from their teachers after class or sought help from their peers after school.

As has been indicated previously, students appear to learn best when they are actively involved in the process of learning. The review of literature on cooperative learning suggests that students working in small groups tend to learn more of what is taught and retain it longer than when the same content is presented through competitive or individualistic learning methods (Brown & Thomson, 2000; Johnson & Johnson, 1991; Johnson, Johnson, & Holubec, 1994; Kagan, 1985; Sharan & Sharan, 1976; Slavin 1983). The findings revealed that both teachers and students who worked together during the implementation of cooperative learning appeared pleased with their new approach to learning economics. It was observed that there were changes in classroom behaviour such as improved student involvement in learning and greater opportunities for them to interact and discuss amongst individual group members. Eight of the nine teachers expressed their appreciation for cooperative learning and believed that this new method of learning would help their students to understand economic concepts more easily, develop social skills and improve their communication more than the previous methods that they used to teach economics. One of the teachers stated that "… cooperative learning helps students to understand the economic concepts more meaningfully than the traditional method of teaching … [and] it will [also] help students to develop more social skills and better communication among themselves in the class and outside the class" [POSTTI4]. This statement indicates how their perceptions of teaching and learning of economics have changed during the implementation of cooperative learning. Students also acknowledged the benefits of cooperative learning and how it helped them to more meaningfully learn economics and understand the concepts. All nine students shared this view, stating that "…. our way of thinking about economics has changed, and our understanding of the concepts has improved greatly since the group work being implemented [POSTSI7].

These findings support the view of constructivism that suggests knowledge is constructed and made meaningful through an individual's interactions and analysis of the environment. Therefore, it is fair to say that learning is an active construction of knowledge that involves making sense out of new material by connecting it to what is already known (Alfassi, 2004). Active learning occurs when students and teachers are engaged in learning processes through discussion

that creates situations where students learn new concepts more easily (Siegel, 2005) because what a student carries out jointly with another could be incorporated into his or her individual repertoire (Jacob, 1999).

The above discussion has outlined evidence supporting the impact of teaching methods on student understanding of knowledge and skills. The lack of student understanding of knowledge and skills, and their inability to apply that after school is an important finding. In addition, the implementation of cooperative learning has helped students to learn and understand economic concepts more easily. Hence, it is my view that within the context of formal education, students should be given opportunities to learn by engaging actively in teaching and learning processes because cognitive science, educational psychology, and practical experience with teachers and students put us in a position to teach for understanding (Perkins, 1993). Cooperative learning appears to be helpful in creating and developing such active learning situations through small group discussions and peer help.

6.3.3 Summary

This section has discussed the major learning issues that have been presented through data analysis. Such issues involved students' motivation and interest in learning, and the degree of student understanding of economics in both traditional and cooperative learning methods.

From the discussions presented in this section, it appears that students' motivation and interest in the learning of economics can be achieved. The use of cooperative learning to foster student interaction and discuss classroom activities through small groups has been helpful in increasing students' motivation for and interest in economics.

The process of engagement in learning and peer help supported those who were undergoing motivational struggles as well as those who were engaged in learning. Second, the constructivist ideas about knowledge and learning discussed in this section offer insight for teachers who teach economics for understanding. Cooperative learning based on small group interaction and discussion appears to

be one of the commonest implementations of the constructivist approach. As has been mentioned, through cooperative learning knowledge can be constructed by generating ideas and building upon these ideas through discussion. It is, therefore, important that teachers include such cooperative learning classroom activities to learn and understand economics more meaningfully and perhaps to help retain the learnt knowledge for longer periods of time, enabling students to apply the school knowledge and skills when they graduate from school. In addition, relationship and communication between the teachers and students appears to be improved as a result of cooperative learning. Positive relationships and communication are believed to be needed to facilitate a healthy learning environment that promotes student motivation and interest in learning (Abrami et al., 1993; Hancock, 2004). The changed classroom behaviour indicates the positive effects of cooperative learning on students' learning and teachers' pedagogy.

In the next section, cooperative learning implementation issues and the implications of cooperative learning for classroom life will be discussed.

6.4 COOPERATIVE LEARNING IMPLEMENTATION ISSUES

This section discusses the third theme, *Cooperative Learning Implementation Issues* that was presented in Chapter Five. The major issues identified with regard to the implementation of the cooperative learning model at the three secondary schools in the Maldives were:

- Lack of professional development and training programmes for teachers on current teaching and learning methods and issues affected their ability to grasp cooperative learning approaches and implement them accordingly;
- Mismatch between the school and home cultures;
- Teaching loads and the duration of classes; and
- Some participants' resistance to change.

6.4.1 Professional Development and Training

Professional development and training for teachers is the first of the key issues underpinning the Cooperative Learning Implementation Issues theme. As identified in Chapter Five, this study identified that there was an apparent limited

knowledge among the teachers about current teaching methods and learning issues due to the absence of professional development and training programmes for teachers. As has been indicated, many of the teachers have been teaching for more than eight or nine years without any further training since they were employed by their schools. Although continuous training and professional development for teachers are essential for school improvement (Brown & Thomson, 2000) the findings suggest there were no such programmes organised in a manner that could help and improve teaching practices neither by the schools nor the MoE who has the ultimate responsibility for school quality improvement in the Maldives. It was found that all nine teachers and their students were unaware of cooperative learning methods and how these could be implemented to learn economics before the intervention. For example, none of the participants were able to define the concept of cooperative learning when they were asked to. This indicates their limited knowledge of various teaching and learning methods as well as current teaching practices outside their realm of traditional methods of teaching. However, the nature of teaching requires continuous learning throughout a teacher's career (Becker & Riel, 1999).

With the training of cooperative learning during the workshops teachers and students were able to understand the principles of the Learning Together Model and how to implement lessons based on the basic elements of cooperative learning. The training sessions provided multiple and convergent means of introducing and reinforcing the cooperative learning strategies based on the belief that when teachers are trained to use cooperative learning, their understanding is influenced by their existing knowledge of teaching methods and practices as well as their previous knowledge of current teaching contexts (Siegel, 2005). The assimilation mechanism helps teachers to recognise the information that they received from the workshops to fit their existing schema of teaching (Siegel, 2005) that later may be included in cooperative learning. Consequently, the new method of teaching was used in their classrooms and the resulting classroom experiences contributed to their understanding of cooperative learning approaches. Nevertheless, the effective use of cooperative learning methods is dependent on teachers' willingness to examine their own practices in light of teaching and learning theories, and to modify their approaches using the best ideas

from these theories (Taplin, Fuang, & Ping, 2005) with regard to the implementation of cooperative learning.

As has been mentioned earlier, given typical conditions and time the training provided to teachers seemed reasonable to fulfil the purpose of this study, but the amount provided seems to have been too basic and limited to give a comprehensive knowledge of cooperative learning. Findings revealed that proper training and continuous professional development are essential for teachers to improve their ability to conduct cooperative lessons and enhance schooling for all students. Continuous professional development and training programmes can help teachers and provide opportunities for them to make complex decisions; to identify and solve problems, and to connect theory, practice and student learning outcomes (Ancess, 2001; Little, 1993). It can also enhance teachers' ability to plan and conduct learning opportunities for their students to learn and apply school knowledge in real life situations.

The findings indicated the positive effects of training on teachers' practice and how it changed their perception of classroom practice. All nine teachers positively acknowledged the training that they received indicating that "This [cooperative learning] training made me to think positively and now I prefer to have more cooperative learning strategies …" [POSTTI5]. These findings support the researchers (e.g., Johnson & Johnson, 1989; Kagan, 1992; Slavin, 1990) who advocate continuous training and professional development programmes for teachers to be successful in cooperative learning because teaching and its learning outcomes are not automatically guaranteed. The acquisition of such necessary skills of cooperative learning and confidence to conduct it is an ongoing process of development for teachers (Taplin et al., 2005) because various methods and theories of teaching and learning demand extensive intellectual preparation and continual learning on the part of teachers (Wiske, 1998). In addition, gaining expertise in the use of cooperative learning is a cooperative process that requires a team effort and collegial support (Johnson & Johnson, 1994).

6.4.2 Culture

The second issue of the Cooperative Learning Implementation Issues theme discusses the mismatch between school and home cultures in the Maldives and its likely effects on student learning.

The findings of this study revealed the mismatch between the school and home culture in the Maldives, where the schools appears to practice competitive and individualist cultural values in classroom teaching and learning, in contrast to the Islamic cooperative values predominantly practiced at homes and in the society at large. One could say that the nature of competitive and individualistic culture in Maldivian secondary schools may have been imported from overseas as part of the school curriculum since the adoption of the English medium curriculum in the 1960s. This finding corroborates Kagan (1994) who stated that if a school chooses a culture that contradicts with a home culture then there is a mismatch between the two systems. Although many of the past research studies on school and home culture (e.g. Gay, 2000; Kagan, 1994; Ladson-Billings, 1994) were conducted predominantly in multicultural societies to explore ways to help minorities in classroom learning, the findings of those studies suggest some helpful implications for a study like this. However, further research may be needed to understand the complete picture of the mismatch between school and home culture and its effect on student learning in small island societies like the Maldives, where tradition demands that the group is more important than the individual. As has been indicated, Maldivian society is built on the cooperative values of Islamic culture that encourage people to be socially responsible and help each other in everyday life like an extended family. Hence it is argued that cooperative learning is culturally congruent with Maldivian culture.

The mismatch between school and home cultures appears to affect students' learning and their social behaviour. Heath (1983), and Moll and Dias (1987) argued that students' experiences outside the classroom greatly effect their success at school because teaching is believed to be a two way relationship between students and their teachers and external forces such as cultural values shape what takes place in the classroom (Becker & Riel, 1999). As has been

mentioned earlier, students require a variety of teaching approaches to connect with their various learning needs, which in turn are influenced by their cultural backgrounds. If teachers were unaware of the students' home culture or ignore this then they can reduce or overlook important learning opportunities for students. In addition, a meaningful link between home and school experiences as well as between academic abstractions and students' socio-cultural realities (Gay, 2000) would be difficult for teachers to establish if the mismatch exists between the two value systems. Further, the difference between the two value systems may cause confusion for students about teaching and learning, and some students may end up alienated to some extent from both school and home cultural values (Kagan, 1994).

Therefore, it is argued that teachers need to be able to include aspects of the students' cultural values in classroom teaching. Teaching methods that incorporate cultural aspects have been described as culturally responsive or relevant pedagogy (Ladson-Billings, 1994). In this regard, many researchers have identified culturally responsive pedagogy as an effective means of meeting the academic and social needs of culturally diverse students (Gay, 2000; Hollins, 1996; Ladson-Billings, 1994). Ladson-Billings (1994) described the culturally responsive teaching method as a pedagogy that empowers students intellectually, socially and emotionally by "using cultural referents to impart knowledge, skills and attitudes" (p. 382). In addition, Gay (2000) asserts that culturally responsive pedagogy uses the cultural knowledge, prior experiences, and performance styles of diverse students to make learning more appropriate and effective for them. Hollins (1996) also adds the importance of incorporating "culturally mediated cognition, culturally appropriate social situations for learning, and culturally valued knowledge in curriculum content" (p. 13). Furthermore, Gay (2000) argued that culturally responsive teachers realize not only the importance of academic achievement, but also the maintaining of cultural identity and heritage.

Research has shown the benefits of culturally responsive teaching on student learning. For example, Ladson-Billings (1994) studied some culturally responsive teaching in selected primary classrooms in the US and observed that students working in those classrooms behaved like members of an extended family. She

reported that cooperative behaviours of that extended family of students were helping, supporting and encouraging one another to work as a group responsible for everyone's task to make certain that each member of the group was successful. This cooperative behaviour of students as a result of culturally responsive pedagogy indicates the appropriateness of such teaching methods in the Maldivian schools where the societal culture values groups as more important than individuals. Likewise, Kagan (1995) stated the social value of working for groups in certain cultures is more important and motivates individual members to work hard for their group work if the work benefits the group more than the individuals. Therefore, understanding the students' home culture is vital for understanding basic aspects of their behaviour both in and out of the classroom, because cultural differences between school and home may create conflicts and misunderstandings. Culturally responsive teaching appears to minimise conflicts and promote academic communities of learners, enabling them to be better human beings and more successful learners (Gay, 2000).

Hence, one could say that culture plays a role not only in communicating and receiving information, but also in shaping the thinking process of groups and individuals as demonstrated in the social constructivist studies building on the work of Vygotsky (1978). As has been mentioned, group learning that promotes socially structured exchange of information between students (Olsen & Kagan, 1992) has been a part of educational practice and its effectiveness has been documented through hundreds of research studies (Johnson & Johnson, 1986; Kagan, 1985; Slavin, 1988).

6.4.3 Language

The issue of language also arose in the Cooperative Learning Implementation Issues theme. This issue of language involves the use of the Dhivehi language in cooperative learning groups in the Maldivian secondary schools. The findings related to language suggest that although English is the official language of instruction in secondary schools the students used Dhivehi as a medium to communicate in groups during the implementation of the Learning Together Model of cooperative learning.

As has been reported, many students appeared to have some type of English language difficulties in communicating effectively in the classroom, so that is likely to impact on their ability to communicate and understand economics in groups. Since the nature of this research did not require the investigation of English language proficiency and its effects on student learning, further research may be needed to find out the reasons behind the lack of English proficiency among the many Maldivian students.

The problem of English language proficiency was a concern for both teachers and students. All nine students acknowledged the difficulty of communication in English and understanding of the subject content. Students' limited English was confirmed by some of their teachers during the post-interviews although the degree of their lack of English knowledge was not clear, nor what aspects of the language they lacked proficiency in. Hence, students argued that if they use the Dhivehi language to explain in groups the weaker students would have better opportunities to learn and understand the content more easily from their peers. One of the students commented on the issue of using Dhivehi in group discussions indicating that "there are some of our friends who need help because their English is not very good so they need someone to explain the material in Dhivehi. Group learning provides this opportunity for us to help each other" [POSTSI7].

The issue of language can be regarded as a cultural issue because it is believed that each group's culture is reflected through the group's language (Bowman, 1993). In addition, cultural behaviour and psychological processes provide perspectives from which different groups view the world and share meaning (Kimberly, 1999). For example, Maldivian students who have learned meaning and values in a language other than Dhivehi may need to recreate meaning before they can use the language to learn in the classroom. This is because the former experiences of children may influence the adaptation into the classroom where the teaching instruction is in another language. Kimberly (1999) stated that adaptation problems may arise when learning a second language because educational practices may conflict with students' already learnt perceptions and values in their native language.

Since the Maldivian culture is rooted within the cooperative values of Islam the cooperative interactions among the students in classrooms may be helpful for them to adapt their cultural perception of learning into the cooperative learning situations. As has been mentioned, cooperative learning increases the interaction among the learners as they restate, expand, and elaborate their ideas in order to convey and or clarify intended meaning (Kagan, 1992). It is an excellent means of involving students with limited English proficiency (Cochran, 1989). In addition, researchers (e.g. S. Kagan, 1992; Kessler, 1992; McGroarty, 1993) claimed that cooperative learning can promote the cognitive and linguistic development for students who have English as a second language.

Furthermore, it is believed that cooperative learning can integrate language and content learning because cooperative learning approaches are in harmony with the pedagogical implications of the input, socialisation, and interactive theories of second language acquisition (Ghaith, 2003). Holt (1993) also asserted the successful implementation of cooperative learning techniques in culturally and linguistically divers classrooms. In addition, Ovando, Collier, and Combs (2003) argued that amalgamation of language and content and the integration of linguistically diverse students can be engineered in such a cooperative learning environment.

Hence, it is my view that through cooperative learning groups, students with lower levels of English proficiency can get opportunities to interact with students with higher levels in order to negotiate the meaning of content. This in turn ultimately creates an environment for all students to maximise their opportunities to practice English more frequently than in the current traditional teaching practices.

The issue of improving their English language for effective learning is important as student's bilingualism can be considered a 'resource' that can be developed for personal and national benefit (Baker, 2001). It is also equally important to use learning material in Dhivehi, their first and most fluent mother tongue. This is because when students are schooled solely in their second language, the academic progress appears to slow as the academic and cognitive demands of the

curriculum increase rapidly (Baker, 2006). In contrast to the second language, the use of one's first language in classrooms seems to help smooth process of students' conceptual understanding, and benefits them socially and culturally in terms of self-esteem and academic development (Smith, 2006). Hence, it is essential for students to develop the language proficiency because there is a strong development through the first language of academic-cognitive thinking skills (Baker, 2006). According to Baker (2006) students' thinking abilities, literacy development, concept formation, subject knowledge and learning strategies developed in their first language can transfer to the second language.

6.4.4 Resistance

Perhaps the most significant source of resistance is the school culture that impedes innovative teaching and learning practices. Such schools typically have traditions or norms that ironically inhibit student learning and professional growth of teachers. Teachers' beliefs and practices about the importance of professional development and participation and involvement in curriculum implementation also play a role in their resistance to change. As has been reported, the findings related to teaching practices at the Maldivian schools appear to have had a tradition that promoted teacher centred classroom practices in which rare opportunities were sought for teachers to upgrade their professional skills, since they have been employed by those schools. It also revealed that teachers' awareness of the various teaching methods and learning theories appeared to be limited. As a result one could predict that Maldivian teachers would resist changes in the classroom practices that have been part of their career for a long period of time.

Teachers require engagement in professional growth, the implementation of various teaching approaches, and the use of alternative activities to improve their classroom practice and enhance their students' learning. However, it is argued that teachers' professional growth is dependent on their willingness to take part in professional development programmes organised for them as well as their readiness to examine their teaching practices in light of developing theories about teaching and learning. It is also dependent on their willingness to grasp those

teaching approaches and modify their current teaching practices using the best ideas from theories of teaching and learning.

Despite the assumption that teachers may resist new methods of teaching, the findings of this study suggest there was no significant resistance to the implementation of cooperative learning at those secondary schools in the Maldives. As has been presented in the previous chapter, the participants were quite keen and eager to learn more about cooperative learning although a couple of students initially had some concerns about it at the beginning of the implementation process. Both classroom observations and interviews with teachers and students confirmed that there was no major resistance during the implementation process. All nine teachers showed their interest in this new method of teaching, their willingness to adopt it, and to modify their current teaching practices according to the principles of the Learning Together Model. Teachers also commented on their students' changed behaviour and their willingness to work in this new classroom setting, indicating that "… they [students] are very happy now because many of them came to me later and told me that they now prefer this new method of learning and they want to continue with this method throughout the year" [POSTTI4]. However, the lack of resistance to adapt to cooperative learning during the intervention does not indicate that the participants of this study would continue the cooperative learning in their respective schools beyond the completion of this research project. The success depends on teachers' ability to try cooperative learning in their classrooms and their commitment to use it in the long run. So, further research may be needed to follow-up the progress of the implementation of cooperative learning and to see the legacy of cooperative learning on their classroom practice.

In contrast to the findings of this study with regard to teachers and students, research shows that many teachers are not willing to change their classroom practice as they learn and develop new theories of teaching and learning (Taplin et al., 2005). Research evidence has suggested lack of skills or confidence among teachers as the main factors for their reluctance to change classroom practice (Gregg, 1995). As has been discussed, lack of pedagogical knowledge and current teaching and learning theoretical knowledge among the Maldivian teachers

contributed to their traditional methods of teaching before the intervention. It was an issue of concern noted in an earlier section of this chapter because it is argued that teachers who do not adapt successfully to change are likely to produce students who can "follow the rules and procedures and conventions specified in the textbooks" (Gregg, 1995, p. 462), rather than being equipped to meet the changing demands of society (Taplin et al., 2005).

Although the participants of the present study reported feeling reasonably prepared for the implementation of cooperative learning, gaining expertise in the use of cooperative learning is a process that requires team effort and time (Johnson & Johnson, 1994). Teachers need to use it for some time before they gain real expertise. The findings also suggest the need for gradual implementation of cooperative learning in order to gain expert skills from the experience as commented on by eight out of the nine teachers. One of the comments with regard to this involved:

> *… initial stages you may see some difficulties or resistance. I think the cooperative learning culture can be developed in our classrooms if we have more practice to try it with students [POSTTI1].*

Since collegial support is required for the success of cooperative learning, economics teachers in respective schools need to learn and change together. Otherwise changed classroom practices would not be more than a passing episode because the change may not be adopted as part of the respective economics department's pedagogical policy. It is believed that individual teachers cannot sustain a teaching method over an extended period of time that clashes with those practiced by their colleagues (Sarason, 1990; Smylie, 1994).

6.4.5 The Duration of Class Periods

Like many other developing countries the Maldives appears to face the problems of lack of natural resources and shortage of capital and human resources needed for socioeconomic development of the country. The shortage of such resources appears to have a great impact on the expansion of school infrastructure to accommodate the fast growing school population. For example, the problem of school congestion in Male' where the present study was conducted seems to be more difficult and intractable than on many of the outer islands due to the

continued influx of people looking for better education, healthcare, employment and other social services in Male'. As a result, the schools in Male' are being forced to run in two sessions with shorter class periods to defuse the overcrowding. As has been reported in the previous chapter a 35 minute class period appears to be a constraint for teachers when it comes to the implementation of cooperative learning. This was clear from one of the teacher's comments with regard to the difficulties of the implementation process, stating that "the main obstacle that I see for implementing cooperative learning here is the time limitation. We have only 35-minute periods" [POSTTI4].

When searching through the existing literature for an ideal class period for cooperative lesson implementation it appears that neither specific class duration nor ideal class time is agreed upon. Yet it appears that the class period duration varies in western countries where most cooperative learning studies are being conducted and implemented. Class periods do vary between countries with the average class duration for secondary schools in western countries ranging from 50 to 60 minute periods depending on the subject. None of the countries that I searched appeared to have less class time in secondary schools, like the Maldives. This finding suggests that some adjustments may be required for the Maldivian teachers when implementing cooperative learning to accommodate it according to the local constraints. For example, the size of cooperative groups can be minimised to adapt to local constraints. Johnson et al., (1991) suggested that the shorter the amount of time available for teaching and learning the smaller the group should be.

6.4.6 Summary

The issues of cooperative learning implementation discussed in this section suggest some aspects of interest. First, for effective implementation of cooperative learning in Maldivian secondary schools teachers need to be involved and engaged in professional development programmes and remain current on changing subject content and pedagogical knowledge. As has been discussed, the implementation of such new teaching methods is most successfully accomplished when a practitioner culture emerges that recognises the need for change, takes responsibility for that change (Darling-Hammond, 1997; Little & McLaughlin,

1993; McLaughlin, 1991) and provides opportunities for teachers to play a central role in developing the rationale for the change by constructing the strategies for implementation, and choosing the resources to be used (Becker & Riel, 1999).

Second, cooperative learning principles and learning approaches appear more relevant to the Maldivian culture which promotes cooperation, help and mutual assistance in society. Therefore, seeking a culturally relevant pedagogy appears to be important for teaching and learning economics in the Maldivian secondary schools. Present classroom practices do not match with the societal values that promote cooperation, but rather promote individualistic and competitive values. As has been discussed, the absence of the match between the cultural values of both school and home has adverse effects on students' ability to learn because the present classroom practices do not recognise cultural differences and values. In addition, the frequent use of Dhivehi language in group discussions instead of English language illuminates the need for further research on how the use of Dhivehi affects student learning.

Finally, although the findings suggest the shorter duration of class periods may impact on the implementation of cooperative learning principles, using the dynamics of the Learning Together Model in the economics classroom appears to have positive effects on student learning, as has been discussed earlier.

The reactions of teachers and students to cooperative learning and how they perceived it as a teaching and learning method will be discussed in the following section.

6.5 STUDENTS' AND TEACHERS' REACTIONS TO COOPERATIVE LEARNING

Students' and teachers' reactions to cooperative learning is the fourth and final theme of this research. This section, therefore, discusses both teachers' and students' reactions to teaching and learning of economics through cooperative learning. It also discusses the effectiveness of cooperative learning as an alternative method for teaching and learning economics in the Maldivian secondary schools.

6.5.1 Teaching and Learning

The implementation of the cooperative learning model appeared to have effected or changed the classroom behaviour of both teachers and students. Findings that have been discussed show that cooperative learning had positive effects on teachers' pedagogy and students' learning of economics. The changes found between pre and post-intervention in terms of teachers' and students' attitudes and behaviours towards teaching and learning through the implementation of cooperative learning revealed some interesting insights.

First, observation of classroom teaching suggests that teachers learnt a new pattern of behaviour that has influenced them, and therefore resulted in a new form of classroom practice. This changed classroom behaviour may have taken place over a series of stages. These stages include: teachers' exposure to the new concept of cooperative learning; the acquisition of new skills from the workshops; the unlearning of traditional concepts and ways of thinking about teaching and learning; and internalisation of new behavioural patterns that comprise the method of teaching being learned (Sarason, 1982).

As has been discussed, all teachers were comfortable using cooperative learning and showed a noticeable interest in the implementation of the Learning Together Model. Teachers gradually adapted and implemented the lessons and gained confidence, although they initially had some concerns about possible student disruptive behaviours or discipline problems that may occur if students were allowed to work in small groups. For example, they reported experiencing some fairly serious discipline problems with student behaviour management before the cooperative learning was implemented. However, the results suggest that after the intervention teachers demonstrated fairly positive attitudes about their students' behaviour as well as towards the model. Teachers' attitudes became more positive once they recognised that they were free to adapt the model to fit class needs. Findings of this study suggest that teachers were highly enthused throughout the implementation of the model.

My classroom observation of 18 lessons during the post-intervention confirmed the teachers' motivation and willingness to prepare learning activities and implement them to provide opportunities for students to share and discuss ideas among themselves. This changed classroom practice appeared to have influenced their perception of traditional teaching and learning methods that have been part of their classroom practice for many years. Regardless of their personal attitudes toward group discussion before the intervention, teachers believed that the cooperative learning experiences had a positive impact on their students. They indicated that students were more motivated toward learning economics when using cooperative learning than when using traditional methods of teaching and learning. My classroom observations and the video clips also confirmed students using their time more efficiently when involved in a cooperative activity. The following quote clearly shows their reactions to the implementation of cooperative learning and how it changed their perceptions about teaching and learning of economics, indicating that:

> *I believe my perception about teaching economics has changed. Now I realise that there is a room for students and I work together and develop positive relationships among us in order to maximise the learning [POSTTI5].*

This finding supports Fogarty and Bellanca (1992) who implemented a cooperative learning model and found teachers reacted positively towards the new method of teaching and learning. They stated that:

> Surprisingly and almost unfailingly, once the philosophical shift begins, once teachers begin implementing cooperative interactions, the evidence of student motivation becomes so overwhelmingly visible that teachers are encouraged to try more. The momentum builds for both teachers and students, and before long the "new school lecture" becomes the norm in the classroom. By then, the novelty of the models is no longer the challenge. The challenge becomes choosing the most appropriate interactive designs for the target lesson; it is choosing a design in which the final focus rests on the learner, not on the lecturer". (p. 84)

The pioneers of cooperative learning, Johnson and Johnson (1983) and Slavin (1990) also found the positive impacts of cooperative learning on attitudes and academic achievement. These research findings seem to substantiate the significance and derived substantial social and academic benefits when involved in cooperative learning (e.g., Johnson & Johnson, 1983; Kagan, 1992; Sharan & Sharan, 1992; Slavin, 1990).

The findings provided by the students in this study would support the findings of existing research. The changed classroom behaviour and attitudes of both teachers and students toward cooperative learning were supported by the students when they were asked whether they have seen any changes in the way the lessons were taught. About 90 out of the 96 students who completed the post-questionnaires indicated the changes and commented on the changed classroom practices after the intervention:

> *… in the past the teacher uses examples very rarely when teaching. But now because of this new method [cooperative learning] that provided more discussions and examples we can remember things and understand the issues more easily [POSTSQ2].*

It appeared that the changed classroom practice had a great impact on students and the way they approached learning. Findings suggest that nearly all students greatly enjoyed working in groups, and looked forward to cooperative learning. It was apparent that they generally were eager to work in their groups and assume their roles, and were careful to make sure all group members had input. They also voiced strong feelings for group work and it appeared that this was more desirable than working individually. Further, classroom observations suggest that students liked the opportunity to work and socialise with others in groups, and felt that learning was more interesting when they were in groups and "less boring" than sitting and listening to their teachers for the whole 35-minute period. The overwhelming majority, 90 of the 96 students reacted positively to cooperative learning, clearly indicating the effects of the Learning Together Model on their attitudes toward learning economics. The following is one of the comments they made with regard to their preferred method of learning after the intervention:

> *I prefer the method that we had in economic growth lessons [cooperative learning] because I believe that we can put more effort and it provided more opportunities for us to bring out good ideas and help each other in this way. Usually I get really bored in the class but I now believe that economics is really interesting after the lessons that we had recently, and the class is also more live this way [POSTSQ40].*

The above discussion strongly suggests that cooperative learning had positive effects on the attitudes, behaviours and perceptions of both teachers and students toward the Learning Together Model as an alternative teaching method in

economics. However, I believe if teachers and students had more exposure and practice using the Learning Together Model, the reactions would have been more significant. As has been discussed, culturally Maldivian students socialise with their family members and friends at home which requires team work and group involvement. Thus, the Learning Together Model could provide an environment in which they can practice building social skills, help each other and learn beneficial group behaviours. It is my view therefore, that it is the responsibility of teachers to be aware of the cultural values that may shape various learning preferences that students bring to the classroom and to try to take full advantage of them when planning and implementing learning activities for their students.

6.5.2 The Effectiveness of Cooperative Learning

As has been indicated the implementation of cooperative learning is not an easy task despite the claims by Slavin (1987) who stated that "Cooperative learning methods are inexpensive, relatively easy to implement, and consistently effective" (p. 78). It appears to be more difficult to implement, especially in environments like the Maldives, where cooperative learning methods have not been implemented before, and teachers and students had a very limited knowledge about cooperative learning before the intervention.

However, the benefits or effectiveness of cooperative learning methods on student learning counter difficulties that hinder the implementation of cooperative learning. As has been indicated, cooperative learning appears to improve student achievement (Johnson & Johnson, 1985; 1991; Johnson, Johnson & Holubec, 1994; Kagan, 1985; Sharan & Sharan, 1976; Slavin, 1983), enhance their social skills and peer relations (Slavin, 1995), and increase motivation to learn (Johnson & Johnson, 2002). The findings of this study supports many of the benefits of cooperative learning that have been validated, and suggest that the Learning Together Model has had positive effects on student learning of economics. It was evident that students in this study were enthusiastic about working in groups, and helping one another to learn economics. One of the comments made by a student with regard to the effectiveness of cooperative learning clearly highlights that by stating "… we can share our ideas and help those students who need help in

completing the work. The other thing is the social skills that we learn by working with others" [POSTSI7].

In addition, when teachers were asked about the effectiveness of the Learning Together Model, they mentioned the opportunities provided for students to work in groups has helped them to improve their interest and motivation to learn economics, develop social skills and gain confidence to work in small groups. Despite the teachers' faith in the effectiveness of cooperative learning and its benefits to their students' learning, one of the teacher's concerns in respect of the effectiveness of the method to teach all economics topics was raised. It was argued that the nature of economics topics in the school syllabus requires varied techniques to deliver, so perhaps cooperative learning would be more effective with those topics that require statistics and data analysis. However, it was evident from the data that all teachers were in favour of cooperative learning and believed in the effectiveness of the method with their students, indicating that "it is more effective because students are interacting in the lesson. They are helping each other, and explaining things in their own language, which is great. They understand things more easily" [POSTTI2].

A two-year extended research study illustrating the effectiveness of cooperative learning by Stevens and Slavin (1995) examined the impact of cooperative learning on students' academic performance and the social relations of sixth Grade students of five US elementary schools. Two schools implemented cooperative learning and the remaining three schools continued with the traditional teaching. The study demonstrated that students in cooperative learning schools gained significantly higher academic achievement than the students in traditional learning schools in the areas of reading, language, and mathematics calculation. Numerous other researchers including Johnson, Johnson and Smith (1998) and Johnson et al. (2000) also found cooperative learning to be more effective in promoting academic achievement than competitive and individualistic learning. For example, a meta analysis of 375 studies by Johnson et al. (1998) that compared student achievement levels in cooperative learning and competitive or individualistic learning showed that "the average student cooperating performed at about two-thirds a standard deviation above the average student learning within a

competitive environment or individualistic situation" (p. 22). A similar analysis done by Johnson et al. (2000) supported the results of the above analysis.

In addition to higher academic achievement, cooperative learning has been advocated for developing social skills and promoting greater social relations among the students. As has been indicated earlier the findings of Stevens and Slavin's (1995) extended two-year study also suggests the positive effects of cooperative learning on promoting social relations, and concluded that students in cooperative learning schools reported having significantly more friends than students from the schools under traditional methods.

Further, it has been agreed that cooperative learning is more effective for students of colour than for white students in terms of their academic achievement (Slavin & Oickle, 1981). Some have proposed that students of colour in the United States perform at a higher level in cooperative groups than competitive or in individual learning because they prefer group learning situations (Banks, 2001; Nieto, 2000). This may have implications for this study. First, the overwhelming majority of students in this study reported their preference for working in groups to learn economics. Second, from the earlier discussion on culture it was clear that students' home culture has some impact on the way they attempt to learn at school. Hence, one could argue that because the Maldivian culture is based on the cooperative values of Islam, cooperative learning at school would provide some cultural congruence, helping to enhance greater academic achievement, promote positive social skills and relations among the students. It is my belief as one of the teachers indicated that "… definitely this cooperative learning will contribute a lot towards self-learning … it will serve as a very useful learning method" [POSTTI7].

Based on the above discussions, it seems reasonable to hypothesise that the effectiveness of the cooperative learning method increased students' interest and motivation to learn economics from before to after intervention. It is also reasonable to hypothesise that students' and teachers' perceptions of traditional methods of teaching and learning of economics tended to change, and that

influenced teachers' teaching methods and students' learning of economics. The findings of the present study discussed above support these hypotheses.

As has been indicated the success of cooperative learning is dependent on how well the basic elements are being conducted and achieved. The basic elements of cooperative learning were observed during the implementation of the model (see Figure 3.1 & Chapter Four). This included positive interdependence, face-to-face interaction, individual accountability, interpersonal and small group skills and group processing (Johnson et al., 1993).

First, positive interdependence was achieved through mutual goals, shared resources, and group communication. Mutual goals for group members were specified during the implementation of each lesson in respective classes at the three schools.

The resources such as economics statistics, graphs, papers, and other materials were shared by all students during the group activities. As has been indicated, communication amongst group members played an important role in achieving group goals effectively. Communication was encouraged as group members tried diverse ways to improve their team effort and to understand what they were doing well. Communication was essential for various types of interactions and different patterns of interdependence. In this regard Abrami et al. (1993) stated that "communication networks in cooperative learning are usually based on group members having equal opportunity to interact with one another" (p. 121).

Second, face-to-face interaction was difficult to facilitate in some classes as Maldivian classrooms are normally small in size due to the scarcity of land and lack of capital. However, teachers managed to provide face-to-face interaction because it was necessary for students to sit face-to-face when engaging in group tasks (Johnson & Johnson, 1989). Although teachers provided specific instructions at the outset regarding classroom arrangements at the beginning of cooperative learning implementation, students themselves assumed their positions in groups after one or two lessons without any specific instruction from their teachers.

Third, various methods were used to assess students' individual accountability including peer reflection forms, constant monitoring and interactions by teachers throughout the intervention.

The most effective form of accountability was through the peer reflection forms that highlighted individual members' roles. According to Johnson et al., (1993a) individual members of the group are accountable for contributing his or her fair share to the group's efforts to achieve the group goals (Jacob, 1999; Johnson & Johnson, 1991).

Teachers' engagement in the group discussions and their constant monitoring and feedback also helped to achieve the accountability.

Fourth, as has been indicated, interpersonal and small group skills were taught including effective communication, leadership, decision making and encouragement to students and they were reminded to utilise them in each lesson during the course of intervention. These skills were utilised through class activities and it was evident from their interviews that peer help, encouragement, team work, effective communication, etc. were important skills gained from the cooperative learning.

Finally, students in this study achieved group processing through class activities. The reinforcement strategies during the group activities and peer reflection after each lesson appeared helpful in achieving the group processing. Peer reflection after each lesson served as an opportunity for them to give feedback on the lesson's events and, therefore, also served as a means of accountability.

Although the above basic elements are necessary to implement cooperative learning successfully, the findings of Maldivian cultural aspects that have been discussed earlier added to the importance of cultural aspects for enhancing the teaching and learning of economics in the Maldives. As has been indicated, the cultural norms and values in Maldivian society match the principles of cooperative learning, therefore, it was argued that culturally appropriate pedagogy such as cooperative learning appears appropriate for learning economics at

secondary school level in the Maldives. In addition, lack of English language proficiency among the majority of the Maldivian students affected their ability to communicate in cooperative groups. Thus the findings revealed that Dhivehi language was their medium of communication, even though English was the language of instruction in the Maldivian schools. Use of the students' first language enables greater depth of understanding (Baker, 2006).

The effectiveness of cooperative learning in the Maldivian secondary schools, therefore, depends on the teachers' recognition of the societal cultural values and how well those values are being adapted to the school pedagogical culture that was predominantly based on individualistic and competitive values. Furthermore, a proficiency in the language of school instruction is an important factor for effective communication that appears to play a vital role in students' ability to understand the content. As has been discussed the lack of English proficiency among the students affected the group communication, so the use of their native language instead of English for group communication appeared inevitable.

Hence, the conceptual framework for cooperative learning presented in Chapter Three requires revision to fit the local conditions to maximise the effectiveness of cooperative learning in the Maldivian secondary schools. The above discussion suggests the importance of the aspects of Maldivian culture to be included in the revised conceptual framework of cooperative learning. This helps to minimise the cultural differences between home and school, and promote culturally appropriate teaching and learning in the Maldives, because the cultural aspects that determine the context are believed to have great impact on the success or failure of cooperative learning. The redrawn model in Figure 6.1 provides an overview of the new conceptual framework for culturally appropriate teaching and learning of economics through cooperative learning at the secondary school level in the Maldives.

As has been indicated, the main objective of developing a cooperative learning model was to enhance the teaching and learning of economics in the Maldives. Hence, the revised model of cooperative learning provides means to strengthen the linkage between training and the process of implementation in order to

facilitate culturally congruent learning environments for Maldivian schools. The highlighted arrows in the model help to understand the relationships between the areas of training, implementation and cultural aspects.

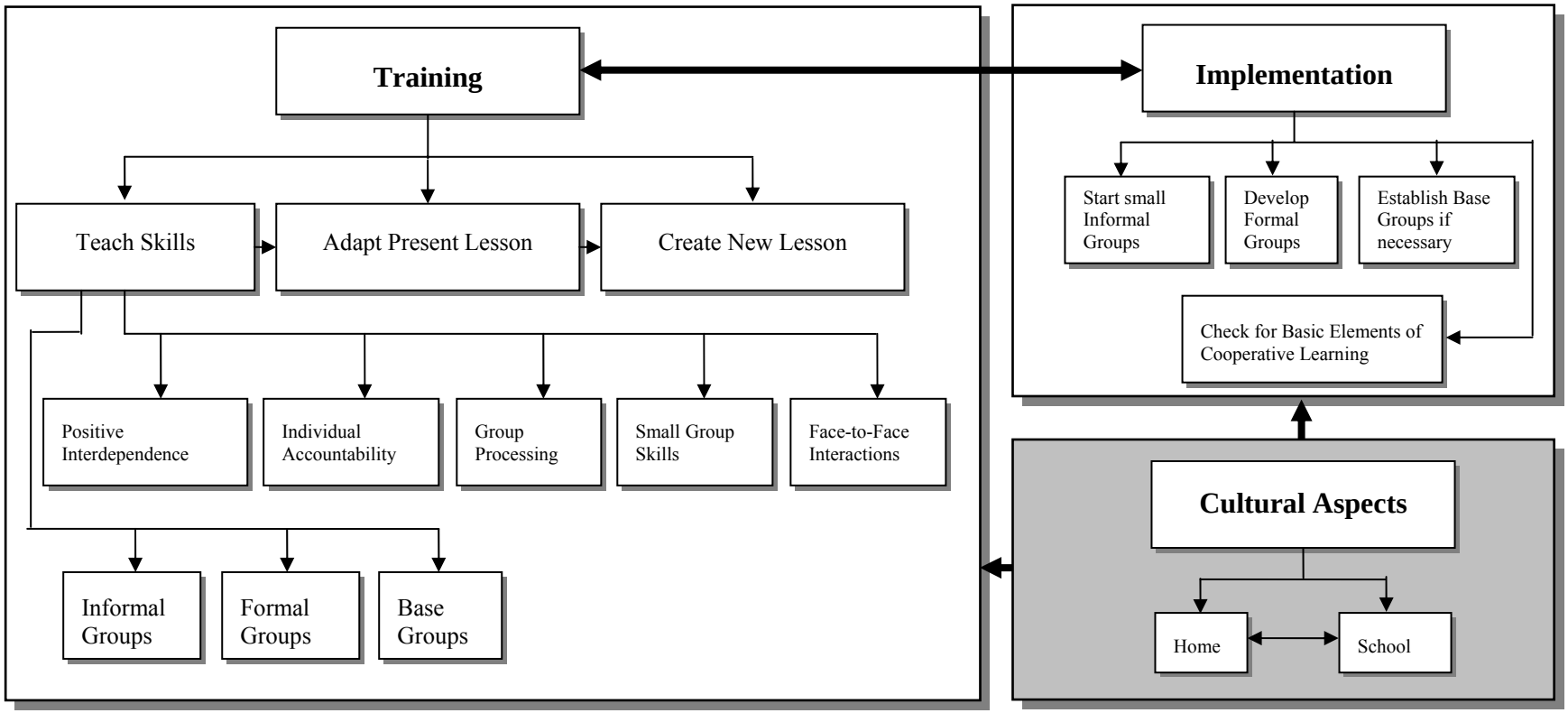
The revised model in Figure 6.1 promotes cooperative learning in secondary schools through culturally appropriate teaching in order to close the gap between home and school culture in the Maldives for effective and meaningful teaching and learning of economics. Therefore, one could say the emphasis of this model is different from other cooperative learning models (see Chapter Three) that generally focus on the basic elements of cooperative learning only to determine the success or failure of cooperative learning in schools.

There are implications of studies such as this, therefore, for school environments with similar characteristics to the Maldives, where societal culture promotes the norms and values of collectivism. The extension of cooperative learning to the overall school structure is a promising area for future research.

The four themes discussed above have been derived from the data analysis outlined in Chapter Four of this thesis. It is these four themes that have been identified as being significant to the research questions "What are the teachers' and students' perceptions about current teaching methods in economics at secondary school level in the Maldives? How do teachers and students perceive cooperative learning as an alternative method to teach and learn economics? What influence does the learning of cooperative methods have on teachers' pedagogy and students' learning?"

As has been indicated the participants of the three secondary schools in the Maldives themselves have contributed to the above discussed research themes. These research themes and the significance of their associated findings of the present study have been identified and discussed with reference to existing literature and studies undertaken in related fields.

Figure 6.1: A Revised Conceptual Framework for Cooperative Learning



6.5.3 Summary

The discussion in this section highlighted the effectiveness of cooperative learning and its effect on student learning. Although there is no single definition to define the effectiveness of teaching, the evidence in this study highlighted the importance of a teacher as a professional who can make a difference by providing opportunities for students to work in an environment where they can discuss and share their ideas to maximise their learning.

As has been discussed, the findings of the study along with the past research showed the positive effects of the Learning Together Model on students learning economics. It appeared that cooperative learning has many positive effects on student learning including improved social skills, interest and enthusiasm in helping others, and improved skills in working with low-achieving students.

6.6 CONCLUSION

This chapter discussed the four research themes that were identified from the processes of data analysis and presented in Chapter Five. The discussions of the findings shared in this chapter include teaching and learning issues, cooperative learning implementation issues, and teachers' and students' reactions to cooperative learning.

The discussions of the four research themes provided insights to the research questions put forward in this study. It also helped to answer those research questions with reference to existing literature and research studies undertaken in related areas of present study. The research questions were "What are the teachers' and students' perceptions about current teaching methods in economics at secondary school level in the Maldives? How do teachers and students perceive cooperative learning as an alternative method to teach and learn economics? What influence does the learning of cooperative methods have on teachers' pedagogy and students' learning?"

In addition, a revised and redrawn model of cooperative learning based on the discussion of the above four research themes has been presented in this chapter. A

revision was needed for the model due to the findings of the mismatch between the home and school culture in the Maldives. The new model included cultural aspects along with the training and the process of implementation in order to facilitate culturally appropriate teaching and learning of economics at secondary school level in the Maldives.

The final chapter will provide an overview of the research presented in this thesis, research implications, limitations and recommendations, and introduce areas for future investigation.

CHAPTER SEVEN

CONCLUSION

7.1 INTRODUCTION

As Becker (1997) indicated, the field of economics appeared to have placed too little value on the importance of teaching and learning in recent decades. First, the amount of research on teaching and learning at post-secondary level has declined considerably (Becker et al., 1991). Second, very limited attempts have been made to conduct research on teaching and learning in real classrooms at the secondary schools during the same period (Walstad, 1990). Nevertheless, the review of literature revealed concerns about the need to improve student understanding of economics through the use of teaching methods designed to have students actively and cooperatively involved in the learning process (Becker, 1998; 2001; Johnston, McDonald & Williams, 2001). As has been discussed, alternative teaching methods provide opportunities for students to construct their own understanding through interactions both inside and outside the classroom. Moreover, social constructivist theories of learning provided a theoretical framework for understanding how students' conceptual understandings construct, shape, and develop through experiences and interactions with other people (Jadallah, 2000). As a result, it was argued that effective teaching and learning of economics at secondary school level could be achieved through the use of methods based on the social constructivist tradition.

Thus, the aim of this study was to enhance the teaching and learning of economics by investigating current teaching and learning at lower secondary schools in the Maldives, and trial a cooperative learning model to help students learn economics. The research questions which this study sought to address were:

- What are the teachers' and students' perceptions about current teaching methods in economics at secondary school level in the Maldives?
- How do teachers and students perceive cooperative learning as an alternative method to teach and learn economics?
- What influence does the learning of cooperative methods have on teachers' pedagogy and students' learning?

This study employed a qualitative research methodology to answer the above research questions. As has been mentioned both elements of ethnographic and grounded theory were used to collect and analyse data that included the methods of workshops, classroom observations, interviews, video tapes and student questionnaires.

This study was conducted in three stages over a period of three months involved nine teachers and 232 students from three secondary schools in the Maldives (see Chapter Four).

As has been indicated, four research themes were derived from the analysed data that included teaching issues, learning issues, cooperative learning implementation issues, and students' and teachers' reactions to cooperative learning.

The following sections of this final chapter review the research findings of the present study, outlining and examining the research implications and contributions. The suggestions for further research are outlined and the chapter concludes with some final thoughts about this study.

7.2 SUMMARY OF RESEARCH FINDINGS

The previous chapter has discussed the research findings in relation to the existing literature and the research questions that were central to this study. Through a three-month engagement with the teachers and students of the three selected secondary schools, during which I regularly observed and repeatedly interviewed participating teachers and students, this study revealed four primary findings that were consistent across data sources and confirmed by the participants. The results

of this discussion and analysis have been presented in Chapter 6. From the discussion the following issues were identified with respect to the implementation of the cooperative learning model at lower secondary schools in the Maldives. These issues are summarised in the following subsections.

7.2.1 Teaching Issues

A number of teaching issues were identified as contributing factors to teachers' ability to design, plan, and implement effective teaching economics. It was found that teachers' lack of pedagogical knowledge and limited exposure to continuous professional development programmes may have had a great impact on their ability to plan and implement economics lessons that motivate students to learn. This lack of ability to conduct effective teaching appeared to have adverse effects on both students' learning and teachers' professional growth. A tradition of teacher centred methods based on direct explanations was found across the three schools and this type of teaching appeared to have a long history in the Maldives.

The implementation of cooperative learning appeared to have influenced teachers' perceptions and classroom practices, thus challenging their traditional teacher-centred methods. The findings suggested that teachers' had positive attitudes towards the cooperative learning model and they perceived cooperative learning as an effective way to teach and learn economics. Even so, it needs to be pointed out that these teachers had much more to learn about cooperative learning.

Therefore, the implication for other projects designed to facilitate innovative teaching in environments similar to the Maldives, is that such programmes could be easily implemented but require training of both teachers and students, and carefully planned classroom implementation.

7.2.2 Learning Issues

The discussion of learning issues prior to the intervention exhibited lack of interest and motivation among the students to learn economics due to the traditional teaching that appeared to have affected their ability to understand the content, and apply the school knowledge to real life situations.

One potential explanation for this apparent lack of interest and motivation in learning economics is lack of student involvement in learning and limited interactions between the students and their teachers in classrooms. Whatever the reasons behind their lack of motivation to learn, it appeared that student participation in classroom activities and their interest and motivation to learn economics improved after the implementation of cooperative learning. The changed classroom behaviours of students toward the learning of economics were evident and reported by both students and teachers in this study.

7.2.3 Cooperative Learning Implementation Issues

Professional growth of the teachers, cultural mismatch between the school and home, the duration of classroom time, and possible participants' resistance to adapt to the new method were identified as cooperative learning implementation issues. The research indicated that lack of professional development and training programmes for teachers at the secondary school level in the Maldives may have had an impact on their ability to grasp the principles of cooperative learning and implement them accordingly. Nevertheless, the provision of training through the workshops made it easier for them to activate cooperative learning. Hence, no major problems were identified regarding the implementation; but rather the participants were quite keen and eager to implement cooperative learning in their classrooms.

Although the issue of culture was not originally a concern of this study the existence of cultural mismatch between the school and home was found and appeared to have a direct impact on students.

In addition, lack of time for teachers and shorter duration of class periods in the Maldivian schools were identified as impediments to the implementation of the cooperative learning model.

7.2.4 Students' and Teachers' Reactions to Cooperative Learning

As has been indicated in the previous chapter, the participants of this study reacted positively towards the implementation of cooperative learning at secondary schools in the Maldives. The research suggested that the

implementation of cooperative learning changed the teaching and learning of economics at those selected schools in the Maldives.

The findings suggested that the implementation of cooperative learning lead students to greater involvement, higher levels of motivation, including higher engagement, and greater perceived importance of the class tasks. Certainly, students' ability to work with others within a group and to develop interpersonal skills were developed through cooperative learning in economics. In addition, students and teachers attitudes toward cooperative learning were positively reported.

The changes found between pre and post-intervention in terms of teachers' and students' attitudes and behaviours towards teaching and learning through the implementation of cooperative learning revealed that cooperative learning had positive effects on teachers' pedagogy and students' learning of economics.

7.3 RESEARCH IMPLICATIONS AND CONTRIBUTIONS

The findings of this study may provide some guidance to researchers and practitioners engaged in the research and process of implementing cooperative learning methods in classrooms. The following two subsections outline and examine both the theoretical and practical implications and contributions of the research findings of this study discussed in the previous chapter.

7.3.1 Implications and Contributions for Research

The implications and contributions of the research can be summarised as follows. First, there has been no research study undertaken before in the Maldives to enhance the teaching and learning of economics. Hence, the present study adds to the existing literature as the findings suggested the appropriateness of cooperative learning to teach economics in the Maldivian secondary schools where the societal cultural values appear to be compatible with the principles of cooperative learning. Although aspects of culture such as a mismatch between the home and school culture were not the main focus of the present study, the need for culturally relevant pedagogy in the Maldivian secondary schools was an outcome of the implementation of the cooperative learning model. It appears that the previous

studies of culturally relevant pedagogy were researched and conducted in western countries where societies are more multicultural. Hence, the findings of this study based on a homogeneous cultural society that promotes collectivism as more important than individualism, may have some implications for existing research.

Second, unlike the previous cooperative learning investigations in which the majority of the studies have been characterised by teacher adherence to researcher-designed interventions using experimental methods, this study employed qualitative methods to explore the issues of teaching and learning of economics and trialed a cooperative learning model to see how it would influence teachers' pedagogy and students' learning of economics in the school.

The application of qualitative research methods facilitated the contributions of the present study to the existing literature of both economic education and cooperative learning. Hence, this research brings together two fields of study—economic education in secondary schools and qualitative research in cooperative learning—a combination which has received limited attention in the past, in order to develop further insight into the classroom experience. As this study employed both elements of ethnographic inquiry and grounded theory as opposed to an experimental design, attention shifted from generalisation of findings to rich context-specific descriptions of cooperative learning in natural settings. In addition, the use of qualitative research methods provided a comprehensive illustration of teacher conducted intervention in a small developing island nation that previously has not featured in either economic education or the cooperative learning literature.

Hence, it is believed that the findings of this study provide a unique contribution to the existing literature on cooperative learning by identifying the compatibility of both values of cooperative learning and the Maldivian culture and the appropriateness of cooperative learning as a teaching and learning method for teaching economics in the Maldivian secondary schools. In addition, this study is the very first such cooperative learning research study ever conducted at the lower secondary school level in the Maldives. Therefore, the findings of the present study have the potential to inform classroom teachers and researchers

investigating the implementation of evidence-based educational interventions in unique environments like the Maldives.

7.3.2 Implications and Contributions for Practice

As discussed previously, cooperative learning is emerging as an increasingly important method for schools to facilitate student centred interactive learning. From a practical standpoint, this research has identified issues which can be addressed in order to raise the awareness of those parties wishing to promote the implementation of cooperative learning to teaching and learning economics in secondary schools. Given that this study has focused on exploring issues in the teaching and learning of economics, and how the implementation of cooperative learning influenced teachers' pedagogy and students' learning in the Maldivian secondary schools, therefore, it is useful to identify how this research can provide benefits to the Maldivian school system. The following benefits can be regarded as practical implications or contributions of this research.

First, this research has identified the cultural mismatch between the school and home, and its adverse effects on students' learning. Therefore, meaningful learning of economics requires putting economics in the context of real life experiences of students' lives outside school. As Ladson-Billings (1995) suggested, a culturally responsive pedagogy is necessary to make schooling more relevant and to promote a better overall quality of education. It was argued that cooperative learning in lower secondary schools in the Maldives can facilitate such context-based teaching and learning for students. In arguing for contextual economics teaching and learning, I am not advocating a replacement of current teaching and learning methods by cooperative learning that shares the Maldivian cultural norms, but rather an integration of the two, ensuring that student centred teaching and learning is pivotal for the meaningfulness of learning economics.

Second, language is a medium that plays a vital role as a carrier of meaning in any classroom learning situation. As has been indicated learning economics in English as a second language is a problem for the Maldivian students because it is not their first language and is not reinforced outside the school. The findings of this study suggested that students preferred *Dhivehi* language to communicate in their

learning groups because of lack of English proficiency. My past classroom experience with the Maldivian students also suggested that many of them experience English language difficulty and feel inferior because of their inability to speak and interact in the language. In addition, lack of English proficiency among the students and their inability to communicate effectively in English perhaps plays a role in much of the rote memorisation of economics in the Maldives. The implication to be drawn from this study is that *Dhivehi* language should play a much greater part in school learning, allowing more cooperative learning to promote the cognitive and linguistic development of students of English as a second language (Kagan, 1994; Kessler, 1992; McGroarty, 1993).

Third, findings of this study appear to have implications for those involved in professional development programmes for classroom teachers and the MoE in particular. The findings suggest that significant teacher professional development gaps exist in the Maldivian school system that appear to affect teachers' ability to conduct alternative teaching methods to teach economics in their classrooms.

For teacher professional development personnel, the findings of this study suggest that participation in cooperative learning workshops was positively associated with the use of cooperative learning as an alternative method of teaching economics. As has been indicated the limited knowledge that has been provided in cooperative learning suggested that greater emphasis might need to be placed on the elements of cooperative learning (individual accountability, positive interdependence, face-to-face interaction and group process) during teacher development programmes. Greater attention to the basic elements of cooperative learning seems warranted as empirical research supports the integration of these elements into each cooperative activity for positive and effective cooperative learning situations (Thousand, Villa & Nevin, 1994) because simply placing students in groups and expecting them to work together does not produce a cooperative effort (Johnson & Johnson, 1998; Kagan, 1994; Slavin, 1996).

Finally, the researcher is a lecturer in economics at the Faculty of Education of the Maldives College of Higher Education and this study also has important implications for teacher education in the Maldives. Given the significance of

cooperative learning and its positive effects on student learning (Johnson & Johnson, 1998; Kagan, 1994; Slavin, 1996) it is vital that pre-service teachers understand how to structure and monitor meaningful learning experiences for students. The benefits of cooperative learning in this study may perhaps have resulted because of the training through the workshops that helped teachers to carefully craft and monitor learning activities for their students.

The findings of this study have provided some insights for teacher educators to understand how students experience cooperative learning in contrast to transmissive teacher-centred methods, so that they can prepare teachers who can design various teaching contexts to maximise learning and motivation. By facilitating cooperative learning teachers may more effectively manage student behaviour, enhance motivation and raise interest in learning.

7.4 SUGGESTIONS FOR FURTHER RESEARCH

The finidings of the present study provided a unique description of implementation of a cooperative learning model that was specific to the participants of some selected schools in the Maldivian context. As has been outlined, this study provided a justification for student centred teaching and a case for cooperative learning as an alternative method of teaching economics.

Although the outcome of this study demonstrated some insights for effective teaching and learning of economics at secondary school level more research is needed to determine how students of various abilities and developmental levels experience different teaching situations. Given the nature of students' motivation and interest to engage in small group learning, further research may be needed to examine a number of meaningful questions by comparing cooperative learning with other methods of teaching economics at this level. This may provide some valuable insights into teaching and learning processes.

Additional research may be required at the secondary school level in the Maldives to increase the generalisability of the present findings to both cooperative learning and economics education. This calls for further semester or year long cooperative learning research studies in order to determine whether the students' motivation

and interest to learn economics is increased with additional experience in using cooperative learning. In addition, there is also a need for further research that would describe and document the conditions under which cooperative learning improves academic achievement and promotes gains in the cognitive and non-cognitive domains of learning economics. Of particular interest in this regard would be a comparative study of various cooperative learning models, as well as comparisons with competitive or individualistic learning methods in order to determine if other cooperative learning models are equally effective in producing desired student outcomes, and under what conditions these models are likely to be effective in achieving the cognitive as well as affective outcomes of teaching and learning economics in the Maldives. In addition, a line of investigation in cooperative learning could also be examined on student achievement differences between traditional and cooperative classes and gender differences. Furthermore, as has been indicated too little is known about how students learn or the depth of their understanding of particular economic concepts in a particular learning environment. It also appears that no specific group assessment strategies are available yet for teachers in the Maldives to measure the depth of their students understandings of economic concepts in a constructive way. Therefore, it appears that such assessment approaches in economics are needed to validate the claims that cooperative learning promotes deeper understanding or to determine whether some of these cooperative learning methods are better than others.

Finally, as the issue of language arose in this study further research also needs to be done in the language of instruction in the Maldivian schools. As has been indicated, lack of English language proficiency among the Maldivian students appeared to have adverse effects on their ability to communicate in classrooms and learn economics effectively. Therefore, there is a need a need for further investigations in order to determine if English as a second language or Dhivehi as a native language would be more effective to use as a language of instruction to teach economics in the Maldives or alternatively, how both could be most effectively combined.

7.5 CONCLUDING THOUGHTS

This study sought solutions to some problems in teaching and learning economics at secondary school in the Maldives. It has revealed some evidence to support the effectiveness of cooperative learning in economics classrooms, It also provided some insights to suggest that cooperative learning methods can be more relevant and applicable in countries where the societal cultural values or norms share the principles of cooperative learning.

As has been discussed, the findings of this study suggest that Maldivian students preferred cooperative learning methods over the traditional methods of teaching economics. Significant differences in the participants' attitudes, behaviours and perceptions were found between the pre and post-intervention in all sources of research data. This suggests that the implementation of cooperative learning at lower secondary school level in the Maldives has a positive impact on teachers' pedagogy and students' learning of economics.

As has been mentioned the previous studies in cooperative learning were conducted in western countries, but the findings of the present study are based on a small developing island nation. This adds a new dimension to the existing literature and should also interest those researchers and practitioners who advocate cooperative learning as a preference for students of colour in western multicultural societies.

Although cooperative learning methods appear to have a strong record of success in increasing student motivation to learn (Johnson & Johnson, 2003), providing positive relationships among students (Slavin, 1995) and enhancing higher academic achievement (Brown & Thomson, 2000; Johnson & Johnson, 1985; 1991; Johnson, Johnson & Holubec, 1994; Kagan, 1985; Sharan & Sharan, 1976; Slavin, 1983), it has been argued that training and systematic instruction in various techniques as well as consistent practice and effort (Brown & Thomson, 2000) are the keys of success or failure in cooperative learning because the success of cooperative learning strategies is not automatically guaranteed (Johnson & Johnson, 1989; Kagan, 1992; Slavin, 1990).

The implications of a study such as this for the teaching and learning of economics must be assessed in context. Since Maldivian students live in a society where tradition asserts that the group is more important than individuals; teachers, administrators, practitioners, policymakers, and teacher educators in the Maldives will have to acknowledge the importance of culturally appropriate teaching pedagogies along with the competitive and individualistic learning practices that are believed to be imported as part of the school curriculum package from overseas.

A meaningful link between home and school experiences appears necessary for effective classroom learning, because societal culture is believed to have a potential impact on what takes place in the classroom. The participants' preference for the cooperative learning method to learn economics at secondary schools in the Maldives may suggest the nature of this link between their cultural roots, and the norms and values of cooperative learning.

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APPENDICES

APPENDIX A: Classroom Observation Schedule	
Title of Study	Teaching Economics at Secondary School Level in the Maldives: A Cooperative Learning Model
Date	April - July 2004

The researcher observed teachers by focusing on some of the parameters outlined below:

Content organisation

- Made clear statement of the purpose of the lesson.
- Define relationship of this lesson to previous lesson.
- Presented overview of the lesson.
- Presented topics with a logical sequence.
- Paced lesson appropriately.
- Summarised major points of the lesson.
- Responded to problems raised during lesson.
- Related today's lesson to future lessons.

Use of resources and Learning environment

- Maintained adequate classroom facilities.
- Prepared students for the lesson with appropriate assigned readings.
- Supported lesson with useful classroom discussions and exercises.
- Presented helpful audio-visuals to support lesson organisation and major points.
- Provided relevant written assignments.

Teaching method/skills

- Used intonation to vary emphasis.
- Explained ideas/concepts with clarity.
- Listened to student questions and comments.
- Defined unfamiliar terms, concepts, and principles.
- Presented examples to clarify points.
- Related new ideas to familiar concepts.
- Varied explanations for complex and difficult material.

Teacher-student interactions

- Encouraged student questions.
- Encouraged student discussions.
- Maintained student attention.
- Ask questions to monitor student's progress.
- Gave satisfactory answers to student questions.
- Responded to nonverbal cues of confusion, boredom, and curiosity.
- Encouraged students to answer difficult questions.
- Asked probing questions when student answer was incomplete.
- Restated questions and answers when necessary.

APPENDIX B: Pre-intervention Student Questionnaire	
Title of Study	Teaching Economics at Secondary School Level in the Maldives: A Cooperative Learning Model
Date	April - July 2004

Students were asked to answer the following questionnaire before the workshops and after the teachers had implemented the lessons on cooperative learning. The two versions of the questionnaire are given below

QUESTIONNAIRE A: BEFORE THE WORKSHOP

Name:…… Date:……..

I am interested in finding out how you feel about how you are taught and how you learn in economics.

I would like you to carefully think about some questions or statements. They do not have right or wrong answers. Please answer all questions.

No one at the school will see your answers.

Instructions:

For each statement, circle the response that best describes what you think or feel about it.
SD – strongly disagree D – disagree U – undecided A – agree SA – strongly agree.

For each question, answer in the space provided.

THANK YOU FOR YOUR COOPERATION!!

A. CONCEPTIONS ABOUT ECONOMICS

1.	Economics is about theory	SD	D	U	A	SA
2.	Economics is about calculations	SD	D	U	A	SA
3.	Economics is about problem analysis	SD	D	U	A	SA
4.	Economics is mainly an abstract subject	SD	D	U	A	SA
5.	Economics is an application of statistical methods to the analysis of economic phenomena	SD	D	U	A	SA
6.	Economics is a universal language which allows people to communicate and understand the real world	SD	D	U	A	SA
7.	Economics is models, which have been devised over years to help explain, answer and investigate economic matters in the world.	SD	D	U	A	SA
8.	Economics helps develop people's minds and teaches them to think.	SD	D	U	A	SA
9.	In your opinion, what is economics?					

B. CONCEPTIONS ABOUT THE LEARNING OF ECONOMICS

10.	Economics should be learned as a set of theories and rules	SD	D	U	A	SA
11.	To be good in economics it is important to remember theories and formulae	SD	D	U	A	SA
12.	To be good in economics it is important to practice calculations and skills.	SD	D	U	A	SA
13.	To be good in economics it is important to understand the use of economics in the real world	SD	D	U	A	SA
14.	To be good in economics it is important to understand economic concepts.	SD	D	U	A	SA
15.	To be good in economics it is important to think creatively	SD	D	U	A	SA
16.	To be good in economics it is important to be good problem solvers	SD	D	U	A	SA

17. To be good in economics it is important to be able to provide reasons to support answers and solutions.	SD	D	U	A	SA
18. To be able to understand economics, students should analyse the problem using the economic way of thinking.	SD	D	U	A	SA
19. In your opinion, what is the best way to learn economics?					

C. CONCEPTIONS ABOUT THE TEACHING OF ECONOMICS

20. Students should practice their analytical skills in economics.	SD	D	U	A	SA
21. Students should be asked to use economics to represent real life problems	SD	D	U	A	SA
22. If students have difficulty with economics, they should be given more practice for themselves	SD	D	U	A	SA
23. Most of the teaching time should be based on the textbook.	SD	D	U	A	SA
24. Economics should be taught as a 'one-way' subject where the knowledge is given to students by the teacher.	SD	D	U	A	SA
25. Economics should be taught as a 'debatable' subject where knowledge is discussed in small groups and developed among pupils and teachers.	SD	D	U	A	SA
26. More than one example should be used in teaching an economic topic	SD	D	U	A	SA
27. Students should work in small groups often	SD	D	U	A	SA
28. Students should be given the chances to help themselves when solving problems in classrooms.	SD	D	U	A	SA
29. Economics problems should be connected to real world applications	SD	D	U	A	SA
30. In your opinion, what is the best way to teach economics?					

D. What do you think cooperative learning might mean?

THANK YOU AGAIN FOR YOUR COOPERATION!!

APPENDIX C: Post-intervention Student Questionnaire	
Title of Study	Teaching Economics at Secondary School Level in the Maldives: A Cooperative Learning Model
Date	April - July 2004

QUESTIONNAIRE B: AFTER THE IMPLEMENTATION OF THE COOPERATIVE LESSONS

Name:…… Date:……..

I am interested in finding out how you feel about how you are taught and how you learn in economics.

I would like you to carefully think about some questions or statements. They do not have right or wrong answers. Please answer all questions.

No one at the school will see your answers.

Instructions:

For each statement, circle the response that best describes what you think or feel about it.
SD – strongly disagree D – disagree U – undecided A – agree SA – strongly agree.

For each question, answer in the space provided.

THANK YOU FOR YOUR COOPERATION!!

A. CONCEPTIONS ABOUT ECONOMICS

1.	Economics is about theory	SD	D	U	A	SA
2.	Economics is about calculations	SD	D	U	A	SA
3.	Economics is about problem analysis	SD	D	U	A	SA
4.	Economics is mainly an abstract subject	SD	D	U	A	SA
5.	Economics is an application of statistical methods to the analysis of economic phenomena	SD	D	U	A	SA
6.	Economics is a universal language which allows people to communicate and understand the real world	SD	D	U	A	SA
7.	Economics is models, which have been devised over years to help explain, answer and investigate economic matters in the world.	SD	D	U	A	SA
8.	Economics helps develop people's minds and teaches them to think.	SD	D	U	A	SA
9.	In your opinion, what is economics?					

B. CONCEPTIONS ABOUT THE LEARNING OF ECONOMICS

10.	Economics should be learned as a set of theories and rules	SD	D	U	A	SA
11.	To be good in economics it is important to remember theories and formulae	SD	D	U	A	SA
12.	To be good in economics it is important to practice on calculations and skills.	SD	D	U	A	SA
13.	To be good in economics it is important to understand the use of economics in the real world	SD	D	U	A	SA
14.	To be good in economics it is important to understand economic concepts.	SD	D	U	A	SA
15.	To be good in economics it is important to think creatively	SD	D	U	A	SA
16.	To be good in economics it is important to be good problem solvers	SD	D	U	A	SA

17. To be good in economics it is important to be able to provide reasons to support answers and solutions.	SD	D	U	A	SA
18. To be able to understand economics, students should analyse the problem using appropriate procedures and by reasoning out economically	SD	D	U	A	SA
19. In your opinion, what is the best way to learn economics?					

C. CONCEPTIONS ABOUT THE TEACHING OF ECONOMICS

20. Students should practice their analytical skills	SD	D	U	A	SA
21. Students should be asked to use economics to represent real life problems	SD	D	U	A	SA
22. If students have difficulty with economics, they should be given more practice for themselves	SD	D	U	A	SA
23. Most of the teaching time should be based on the textbook.	SD	D	U	A	SA
24. Economics should be taught as a "one-way" subject where the knowledge is transmitted from teacher to pupils	SD	D	U	A	SA
25. Economics should be taught as a 'debatable' subject where knowledge is discussed in small groups and developed among pupils and teachers.	SD	D	U	A	SA
26. More than one representation should be used in teaching an economic topic	SD	D	U	A	SA
27. Students should work in small groups often	SD	D	U	A	SA
28. Students should be given the chance to help themselves when solving problems in classrooms.	SD	D	U	A	SA
29. Economics problems should be connected to real world applications	SD	D	U	A	SA
30. In your opinion, what is the best way to teach economics?					

D. THOUGHTS ON THE PROPOSED COOPERATIVE LEARNING MODEL

In your opinion, what are the benefits and disadvantages of implementing a cooperative learning of economics in terms of

a). economics learning

b). economics teaching

Did you notice anything different in the way the lesson was taught? What are the differences?

How do you prefer to learn economics? The method you have been following always or the way that you learnt the last topic? Why?

THANK YOU AGAIN FOR YOUR COOPERATION!!

APPENDIX D: Interviewing Questions for Teachers and Students	
Title of Study	Teaching Economics at Secondary School Level in the Maldives:
Date	April - July 2004

TEACHERS: Questions asked before the workshop

- How long have you been teaching economics?
- What is good teaching?
- How do you explain new topics to students?
- What teaching methods do you normally use to teach economics? Why?
- What happens when a student does not understand something?
- What kind of interactions do you expect from your students?

  a). with you, the teacher. b) between students?
- Have you heard of cooperative learning?
- If yes, what does it mean to you?
- Do your students ever work in small groups?
- If so, what are the limitations/difficulties that you have in implementing cooperative learning methods?

TEACHERS: Questions asked after the workshop

- How do you define cooperative learning?
- What are the advantages and disadvantages that you foresee in implementing a cooperative learning to teach economics, giving reasons.
- Do you think cooperative learning is an effective method to teach economics? Why?
- Do you believe training teachers in cooperative learning would result in changed teaching? How?
- Have you noticed any changes in student involvement in the classroom?
- What happens in the classroom when there is a change in teaching methods/strategies?

STUDENTS: Questions asked before the workshop

- In your opinion what is good teaching?
- How does your teacher explain new topics?
- What happens when you don't understand something during the lesson?

  What kind of interactions do you have between you and the teacher, and between you and your friends?
- Do you ever work in small groups?

STUDENTS: Questions asked after the workshop

- Do you like this new method of cooperative learning?
- What are the advantages and disadvantages that you foresee in implementing cooperative learning to teach economics, giving reasons.
- Do you think cooperative learning is an effective method to learn economics? Why?
- Have you noticed any changes in student involvement in the classroom?

APPENDIX E: Participant Consent Form	
Title of Study	Teaching Economics at Secondary School Level in the Maldives:
Date	April - July 2004

I have read an explanation of the purpose of the research project and Mr. Abdulla Nazeer answered all of my questions. I have been told of the risks or discomforts and possible benefits of the study.

I understand that I do not have to take part in this study, and my refusal to participate will involve no penalty or loss of rights to which I am entitled. I may withdraw from this study at any time without penalty.

I understand my rights as a research subject, and I voluntarily consent to participate in this study. I also give my consent for any information I provide in connection with this study to be used for the research purpose which involve the use of data in future publications or conference presentations, reports and journal articles, and my records will not be disclosed without my permission unless required by law. I understand what the study is about and how and why it is being done. I will receive a signed copy of this consent form.

Subject's Name	Subject's Signature	Date

If you have any concerns about the ethics of this research (i.e. because you think you have not been treated fairly or think you have been hurt by joining the study, or you have any other questions about the study) you should contact Professor Clive McGee (+0064-7-8384500, mcgee@waikato.ac.nz) Director, Wilf Malcolm Institute of Educational Research, University of Waikato.

APPENDIX F: Participant Information Sheet	
Title of Study	Teaching Economics at Secondary School Level in the Maldives:
Date	April - July 2004

My name is Abdulla Nazeer of M. Amazon, Male'. I work for the Faculty of Education of the Maldives College of Higher Education as a lecturer in economics. I am currently enrolled as a doctorate student at the University of Waikato, New Zealand.

This letter is to request your participation in a research project investigating the current teaching methods at secondary school level in the Maldives, and to offer you workshops to develop a co-operative learning model, which could be used to enhance the quality of teaching and learning of economics. More specifically, the study seeks to answer the following questions:

- What are the teachers' and students' perceptions about current teaching methods in economics at secondary school level in the Maldives?
- How do teachers and students perceive cooperative learning as an alternative method to teach and learn economics?
- What influence does the learning of cooperative methods have on teachers' pedagogy and students' learning?

It is expected that the data gathered may be used in conference presentations, reports and journal articles. Upon completion of my study, a copy of the completed thesis will be lodged in the University of Waikato library.

I would like to observe your class twice during the intervention. The initial observation will be done before conducting the workshops on co-operative learning, to understand the existing teaching practices employed by teachers of economics.

The second observation will be done during the implementation of a lesson plan which you will develop on co-operative teaching methods during the workshops.

The purpose of this post-observation is to find out whether changes occurred in teaching methods, and to study the impact of any changes upon students. In particular, the focus will be upon how students engage with learning.

I would also like to interview you to get feedback about the potential use of co-operative teaching strategies to teach economics and to find out your views abouty current teaching practices in schools.

The interviews will be taped and take up to 60 minutes in duration. I will give you a copy of the questions prior to it beginning. The audiotape and the raw data will be retained in a secure place by me and then destroyed on completion of the thesis. I hope you will agree to take part in a project that should help your teaching.

You are in no way obliged to participate and your refusal to participate will involve no penalty or loss of rights to which you are entitled. You may withdraw from this study at any time without penalty. All data gathered in the research process will be confidential. Your records will not be disclosed without your permission unless required by law. If you agree in to participate I would ask you to sign the attached consent form and return it to me at M. Amazon, Fareedhee Goalhi.

I would like to thank-you for considering my request. If you have any queries, please contact me by phone on 326335 or by email at an24@waikato.ac.nz