NOTE TO USERS

The original manuscript received by UMI contains pages with slanted print. Pages were microfilmed as received.

This reproduction is the best copy available

UMI
STUDY GROUPS IN FIRST-YEAR UNIVERSITY CLASSES:
PROGRAM DEVELOPMENT AND EVALUATION

by

Jo-Anne Helen Willment

A thesis submitted in conformity with the requirements for the degree of Doctor of Education
Department of Adult Education, Community Psychology and Counselling Psychology
Ontario Institute for Studies in Education of the University of Toronto

© Copyright by Jo-Anne Helen Willment 1998
The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author’s permission.

L’auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L’auteur conserve la propriété du droit d’auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.
Study Groups in First-year University Classes: Program Development and Evaluation
by
Jo-Anne Helen Willment

Doctor of Education
Department of Adult Education, Community Psychology
and Counselling Psychology
Ontario Institute for Studies in Education of the
University of Toronto
1998

Dissertation Abstract

Research was undertaken in Economics 101 offered in the Faculty of Arts, University of Waterloo exploring the feasibility of establishing a study program to respond to the transitional challenges faced by first-year university students. A pilot project was conducted in Fall, 1993, with results indicating the most positive ways the program could be offered to students.

In the Fall, 1994, the first-year study group program was offered with the pilot project enhancements incorporated into Economics 101. A total of 86 participants came from two sections of the Economics 101 course. Phase One offered an overview of the characteristics, benefits and recommendations from the study group program; while Phase Two used a case study methodology to examine one study group's meetings over the term.

Phase One revealed eighteen groups met at varying times across the term. Size of the groups ranged from 3-5 members. Meetings focused primarily on academic issues including explaining concepts to each other, studying together for midterms, and previewing lecture material for future meetings. Personal discussions centered on ways
of adjusting to university life while social conversations focused on topics of interest to university students.

Respondents in voluntary telephone interviews said the program was useful in providing academic assistance, support and friendship to students in their first-year. The instructor felt the program offered a way for students to deal with challenges and diversity when beginning their university studies. Recommendations received from all participants – study group members, instructor and non-participants – suggested the program be expanded to other first-year courses.

Phase Two analyzed the meeting transcripts from one study group providing detailed information on the content discussed over the term. Based on the analysis, seven topics were discussed over eight meetings. The academic category was the largest, composed of preparation for meetings, content, working together and evaluation topics. The opportunity to work in a group was a positive experience for the members and their personal challenges, fears, expectations and worries were discussed over the term.

Cluster analysis provided three indicators- support, cohesion and risk-taking with different types of characteristics noted within each cluster. The process of working together helped students adjust to university in a way they could not have done without each other. Suggestions are provided for Canadian universities to use study group programs to help support students in adjusting to the academic, personal and social transitional challenges within new educational settings.
Table of Contents

Abstract ........................................................................................................ viii
Acknowledgments ........................................................................................ xi

Chapter One
Context of the Research ........................................................................... 1
Reflections on Transition ........................................................................... 1
Personal Reflections ..................................................................................... 1
University Reflections .................................................................................. 3
Focus Group Study ..................................................................................... 5
Study Groups for First-term Students ......................................................... 7
Potential Benefits of First-term Study Groups ............................................. 8
The Research Process ................................................................................. 10
Intention Statement ..................................................................................... 10
Research Plan ............................................................................................... 10

Chapter Two
Review of Literature:
Transitions in First-year University ........................................................... 12
The First-year Transitional Experience ......................................................... 14
Types of Transitions .................................................................................... 15
Personal Transitions ................................................................................... 15
Social Transitions ....................................................................................... 17
Academic Transitions ............................................................................... 18
Strategies for Adjusting to the Transition .................................................. 23
Self-help Groups .......................................................................................... 23
Learning Organizations and Communities ................................................ 24
Study Groups ............................................................................................... 26
Study Groups as Group Processes ............................................................... 28
Study Groups in First-year University ......................................................... 31
Study Groups in Upper-year University ..................................................... 34
Perspectives on Study ................................................................................ 35
Study Groups as Small Groups ................................................................. 37
Study Groups as Adjustment Strategies ...................................................... 39
Personal Adjustment ................................................................................. 39
Social Adjustment ..................................................................................... 39
Academic Adjustment .............................................................................. 40
Study Groups as Self-help Groups ............................................................. 40

Chapter Three
Methodology ............................................................................................... 42
Preparation for the Research ..................................................................... 42
Negotiation for the Pilot Study ................................................................. 43
Results of the Pilot Study .......................................................................... 43
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to the Methodology</td>
<td>44</td>
</tr>
<tr>
<td>Phase One: Descriptive Overview of the Study Group Program</td>
<td>45</td>
</tr>
<tr>
<td>Procedure for Establishing the Program</td>
<td>46</td>
</tr>
<tr>
<td>Negotiating with the Instructor</td>
<td>46</td>
</tr>
<tr>
<td>In-class Introduction to Study Groups</td>
<td>46</td>
</tr>
<tr>
<td>Formation of Groups</td>
<td>46</td>
</tr>
<tr>
<td>Study Group Questionnaire</td>
<td>46</td>
</tr>
<tr>
<td>From Questionnaires to Groups</td>
<td>47</td>
</tr>
<tr>
<td>Organization Meeting</td>
<td>50</td>
</tr>
<tr>
<td>Scheduled Meetings</td>
<td>52</td>
</tr>
<tr>
<td>Summary</td>
<td>54</td>
</tr>
<tr>
<td>Obtaining Information about Study Group Process</td>
<td>54</td>
</tr>
<tr>
<td>Questions for Study Group Contact Person</td>
<td>54</td>
</tr>
<tr>
<td>Telephone Interviews</td>
<td>55</td>
</tr>
<tr>
<td>Obtaining Information from Non-participants</td>
<td>55</td>
</tr>
<tr>
<td>Questions for Non-participants</td>
<td>55</td>
</tr>
<tr>
<td>Telephone Interviews</td>
<td>55</td>
</tr>
<tr>
<td>Instructor's Feedback</td>
<td>55</td>
</tr>
<tr>
<td>Interview with the Instructor</td>
<td>55</td>
</tr>
<tr>
<td>Final Grade Reports</td>
<td>56</td>
</tr>
<tr>
<td>Analysis of Telephone Interviews</td>
<td>56</td>
</tr>
<tr>
<td>Study Group Participants</td>
<td>56</td>
</tr>
<tr>
<td>Study Group Non-meeters</td>
<td>57</td>
</tr>
<tr>
<td>Study Group Non-participants</td>
<td>57</td>
</tr>
<tr>
<td>Summary</td>
<td>57</td>
</tr>
<tr>
<td>Phase Two: Case Study and Analysis of a Study Group</td>
<td>57</td>
</tr>
<tr>
<td>Procedure for Selecting the Study Group</td>
<td>58</td>
</tr>
<tr>
<td>Negotiation with the Study Group</td>
<td>59</td>
</tr>
<tr>
<td>Portrait of the Study Group Members</td>
<td>60</td>
</tr>
<tr>
<td>Data Collection</td>
<td>60</td>
</tr>
<tr>
<td>Analysis of the Case Study Data</td>
<td>60</td>
</tr>
<tr>
<td>Development of the Coding System</td>
<td>60</td>
</tr>
<tr>
<td>Discussion Categories</td>
<td>62</td>
</tr>
<tr>
<td>Summary</td>
<td>62</td>
</tr>
</tbody>
</table>

Chapter Four

Phase One: Overview of the Study Group Program                           | 63   |
Characteristics of Study Groups                                           | 63   |
Categories of Study Groups                                                | 63   |
Study Groups That Met                                                     | 63   |
Study Groups That Did Not Meet                                            | 66   |
Frequency of Meetings                                                     | 66   |
Regular Meeters                                                          | 66   |
Periodic Meeters                                                         | 66   |
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam Meeters</td>
<td>67</td>
</tr>
<tr>
<td>Occasional Meeters</td>
<td>67</td>
</tr>
<tr>
<td>Size of Group Membership</td>
<td>67</td>
</tr>
<tr>
<td>Place of Meetings</td>
<td>69</td>
</tr>
<tr>
<td>Time of Meetings</td>
<td>69</td>
</tr>
<tr>
<td>Purposes of the Meetings</td>
<td>69</td>
</tr>
<tr>
<td>Academic Purposes</td>
<td>71</td>
</tr>
<tr>
<td>Personal Purposes</td>
<td>72</td>
</tr>
<tr>
<td>Social Purposes</td>
<td>73</td>
</tr>
<tr>
<td>Benefits from the Study Group Program</td>
<td>74</td>
</tr>
<tr>
<td>Academic Benefits</td>
<td>76</td>
</tr>
<tr>
<td>Personal Benefits</td>
<td>76</td>
</tr>
<tr>
<td>Social Benefits</td>
<td>77</td>
</tr>
<tr>
<td>Study Group Non-meeters</td>
<td>78</td>
</tr>
<tr>
<td>Study Group Non-participants</td>
<td>79</td>
</tr>
<tr>
<td>Academic Performance and Study Group Participation</td>
<td>80</td>
</tr>
<tr>
<td>Instructor's Perceptions of Study Groups</td>
<td>81</td>
</tr>
<tr>
<td>Theme #1: Transition to University</td>
<td>81</td>
</tr>
<tr>
<td>Theme #2: Student Inquiries</td>
<td>81</td>
</tr>
<tr>
<td>Theme #3: Diversity of Experience</td>
<td>82</td>
</tr>
<tr>
<td>Theme #4: Working with Others</td>
<td>83</td>
</tr>
<tr>
<td>Other Suggestions</td>
<td>84</td>
</tr>
<tr>
<td>Student Suggestions for Future Study Group Programs</td>
<td>84</td>
</tr>
<tr>
<td>Expansion to Additional First-year Courses</td>
<td>85</td>
</tr>
<tr>
<td>Strategies for Working with Others</td>
<td>85</td>
</tr>
<tr>
<td>Summary</td>
<td>86</td>
</tr>
<tr>
<td>Chapter Five</td>
<td></td>
</tr>
<tr>
<td>Phase Two: Case Study of a First-year Study Group</td>
<td>87</td>
</tr>
<tr>
<td>The Study Group</td>
<td>87</td>
</tr>
<tr>
<td>Characteristics of Group Members</td>
<td>87</td>
</tr>
<tr>
<td>Previous Experience with Groups</td>
<td>89</td>
</tr>
<tr>
<td>Time and Place of Meetings</td>
<td>90</td>
</tr>
<tr>
<td>Coding System</td>
<td>90</td>
</tr>
<tr>
<td>Development of the Content Categories</td>
<td>90</td>
</tr>
<tr>
<td>Packages of Content Categories</td>
<td>90</td>
</tr>
<tr>
<td>Selection of Content Names</td>
<td>91</td>
</tr>
<tr>
<td>Application of the Coding System</td>
<td>91</td>
</tr>
<tr>
<td>Distribution by Category</td>
<td>91</td>
</tr>
<tr>
<td>Academic Category</td>
<td>94</td>
</tr>
<tr>
<td>Personal Category</td>
<td>96</td>
</tr>
<tr>
<td>Social Category</td>
<td>97</td>
</tr>
<tr>
<td>Cluster Analysis</td>
<td>98</td>
</tr>
<tr>
<td>Support</td>
<td>98</td>
</tr>
</tbody>
</table>
Cohesiveness ........................................ 99
Risk-taking ........................................ 99
Implications from this Work ...................... 102

Study Group Benefits .............................. 102
Academic Benefits ................................ 102
Personal Benefits .................................. 104
Social Benefits ...................................... 105

Chapter 6
Summary and Implications .......................... 107
Summary of the Study ............................... 107
Establishing a Foundation ......................... 107
Initiating the Study Group Program ............... 108
First and Upper-year Representation ............. 109
Gender Representation .............................. 109
Characterizing Study Groups ....................... 112
Overview of the Study Group Program .......... 112
Study Group Response Rates ...................... 112
Frequency of Meetings ............................. 113
Size of Groups ...................................... 113
Purposes of Meetings ............................... 113
Academic Achievement ............................. 114
Non-study Group Participants ..................... 114
Benefits of the Study Group Program .......... 114
Instructor Benefits .................................. 115

Case Study Summary ............................... 115
Student and Instructor Suggestions ............... 117
Implications .......................................... 118
Building a Foundation ............................. 118
Initiating the Program .............................. 119
Student Leadership ................................. 120
Learning and Study Skills ......................... 120
Research Implications ............................. 120
Follow-up Studies ................................. 120
Learning Strategy Research ....................... 121
Transitional Focus of the Research .............. 121

References .......................................... 123

Appendix A - Summary of Study Group Planning Activities .......................... 130
Appendix B - Study Group Brochure .................. 132
Appendix C - First-class Announcement .............. 137
Appendix D - Study Group Questionnaire .......................... 140
Appendix E - Study Group Membership Form ....................... 142
Appendix F - Things You Might Consider Doing in a Study Group .... 144
Appendix G - Telephone Questions Asked of Study Group Participants 146
Appendix H - Telephone Questions Asked of Non-participants ....... 149
Appendix I - Interview Questions Asked of the Instructor ............ 151
Appendix J - Phase One: Documentation Summary .................... 153
Appendix K - Phase Two: Documentation Summary ................. 156
Appendix L - Categories in the Coding Systems ....................... 158
Appendix M - Study Group Presentations .............................. 162
Appendix N - Initiating a First-year Study Group Program
   At the University of Western Ontario: a Planning Document ....... 164
Tables

Table 2-1: Characteristics of Study Groups ......................................................... 27
Table 3-1: Study Group Questionnaire Responses ................................................. 48
Table 3-2: Respondents by Department ................................................................. 49
Table 3-3: Formation of Study Groups ................................................................. 53
Table 3-4: Summary of Case Study Meetings ......................................................... 61
Table 4-1: Study Groups: Beginning Versus End of Term ..................................... 64
Table 4-2: Frequency of Study Group Meetings ..................................................... 65
Table 4-3: Size of Memberships ............................................................................. 68
Table 4-4: Purposes For Study Group Meetings ..................................................... 70
Table 4-5: Benefits Indicated by Contact Members ............................................... 75
Table 5-1: Categories in the Coding System ......................................................... 92
Table 5-2: Categories by Meetings ....................................................................... 93
Table 5-3: Cluster #1: Indicators of Support ....................................................... 100
Table 5-4: Cluster #2: Indicators of Cohesiveness .............................................. 101
Table 5-5: Cluster #3: Indicators of Risk-taking .................................................. 103
Table 6-1: First and Upper-year Student Responses ............................................ 110
Table 6-2: Gender Representation ....................................................................... 111
Abstract

Research literature on transitional adjustment to university reveals first-year students can be helped in their academic, personal and social changes to university life. To address this, a pilot project was undertaken in Economics 101 offered by the Faculty of Arts, University of Waterloo, to explore the feasibility of establishing a study program to respond to the transitional challenges faced by first-year university students. The pilot project was conducted in Fall, 1993, with results indicating the most positive ways the program could be offered to students.

In the Fall, 1994, the first-year study group program was offered with the pilot project enhancements incorporated into Economics 101. A total of 86 participants came from two sections of the Economics 101 course. Complimentary research strategies were employed; Phase One offered an overview of the characteristics, benefits and recommendations from the study group program; while Phase Two used a case study methodology to examine one study group's meetings over the term. All student participation was voluntary with feedback and analysis completed at the end of term.

Phase One revealed eighteen groups met at varying times across the term. Size of the groups ranged from 3-5 members. Meetings focused primarily on academic issues including explaining concepts to each other, studying together for midterms, and previewing lecture material for future
meetings. Personal discussions centered on ways of adjusting to university life while social conversations focused on topics of interest to university students.

Respondents in telephone interviews said the program was useful in providing academic assistance, support and friendship to students in their first-year course work. The instructor felt the program offered a way for students to deal with challenges and diversity when beginning their university studies. Recommendations received from all participants — study group members, instructor and non-participants — suggested the program be expanded to other first-year courses.

Phase Two analyzed the meeting transcripts from one study group providing detailed information on the content discussed over the term. Based on the analysis, seven topics were discussed over eight meetings. The academic category was the largest, composed of preparation for meetings, content, working together and evaluation topics. As the group became more comfortable working together, the conversation evolved to include more in-depth discussions of the course. The opportunity to work in a group was a positive experience for the members and their personal challenges, fears, expectations and worries were discussed over the term.

Cluster analysis provided three indicators—support, cohesion and risk-taking—with different types of characteristics noted within each cluster. An awareness of study group benefits provided further benefits to the study
The process of working together helped students adjust to university in a way they could not have done without each other.

The thesis concludes with suggestions for further research and ways in which other Canadian universities and colleges might use a study group program to help support students in adjusting to the academic, personal and social transitional challenges within new educational settings.
Acknowledgments

My appreciation is extended to all who gave their generous support to this project. My thesis advisor, Dr. David Hunt, was a constructive, caring and steady force as he guided me through the journey. Thank you, David, for your patience, advice and invaluable assistance. Dr. Ardra Cole, a Faculty and Committee Member, was consistently insightful in her understanding of the research and the experiential challenges of undertaking a significant and increasingly complex thesis path. My appreciation is extended to Dr. Bud Hall, Department Chair, for the importance he assigned to the work, and to Dr. Patricia Rogers, as the External Examiner, York University, and as the President, Society of Teaching and Learning in Higher Education, for her strong support of the work throughout the research.

The co-operation of the University of Waterloo staff and faculty was very significant to the on-going progress of the work. Betsy Zanna, First-year Arts Counsellor, was helpful in organizing focus groups that lead to the concept of first-year study groups. The question of the idea of first-year study groups evolving from concept into practice was born. Many thanks are extended to Dr. Christopher Knapper, Past Director, TRACE Office, who went on to establish the Instructional Development Centre at Queen's University, for his unfailing and continuing encouragement of the thesis. His expertise in identifying research focusing on the transition to university by first-year students was invaluable. Dr. William Shalinsky, Senior Associate, TRACE,
provided research experience on small group work and his effective advice and encouragement throughout the process was truly appreciated. Dr. Gary Griffin, current TRACE Director, was always available for support as the thesis proceeded.

The project developed into a thesis thanks to the tremendous help and assistance given to the project by Larry Smith, Economics, Faculty of Arts, University of Waterloo. His willingness to invite the program into his large classes in the Fall, 1993 and 1994, provided the opportunity to progressively refine the process. The study group participants, and particularly the students contributing in the case study of one first-year study group, led me to a deeper understanding of how first-year study groups can work together over time. While their names remain anonymous, they were the essential ingredient that enabled a case study to be developed for the thesis. Their regular meetings demonstrated an innovative approach for students to work together collaboratively outside of class.

In November, 1996, I was requested by Dr. Colin Baird, Past Director, and Dr. Debra Dawson, Current Director, Educational Development Office, University of Western Ontario, to modify a limited research study and to develop and implement a large-scale first-year study group program across four non-professional Faculties. There are currently more than 800 first-year students involved in these study groups. It has been exceptionally gratifying and confirming, personally, for a large university to use the concept of first-year study groups to develop an applied, cost-effective program model with
hundreds of first-year students. Many of the suggestions mentioned in
Chapter Six, including the use of upper-year students, have been put into
place. This has led to plans for further program expansion in the future, and
the development of supplemental materials, including Study Group Manuals
developed by graduate students and workshop training modules for faculty
and upper-year students. I wish to express appreciation to both Dr. Baird and
Dr. Dawson for their cooperation, foresight and belief in the work that began
with the thesis.

Currently, a pilot project is underway with Dr. Mary Leigh Morbey,
Brock University, for a first-year graduate distance education study group for
students. This format promotes the use of educational technology for learners
to collaborate and study together.

The thesis has taken on a life of its own that I could not have
predicted when I began to think about the concept in the early 1990's. It
continues to be a rewarding and enriching experience. My deepest
appreciation to my family for their undying patience, humour, music and
countless cups of tea as the thesis progressed and the program became a
reality. I thank them from the bottom of my heart.
Dedicated
to
Dr. Nora E. McCandell
Friend, Mentor and Colleague
Chapter One

Context of the Research

The purpose of this study is to reflect upon and characterize the experiences of students entering their first-year and to initiate a study group program as an attempt to enhance transitional adjustment of students. Adapting and responding to this experience are key challenges meeting all first-year students. In this chapter (1) the first-year transitional experience is explored; (2) the results of a focus group on university transition is examined; and (3) a first-year study group program is conceived to respond to the transitional challenges faced by incoming students.

Reflections on Transition

Personal Reflections

Hunt (1987) suggests that we must "begin with ourselves" in order to gain the "accumulated understanding of human affairs which resides in our hearts, heads and actions" (p.7). When reflecting back on the "experienced knowledge" (Hunt, 1992) of first-year university at the University of Waterloo twenty years earlier, my social support networks were used to adapt to the new residential and learning environment. For example, a cluster of musical friends became the outlet for creative processes, close personal friendships provided mutual support and peer nurturing, while a love of adventure and fun
was the basis of other friendships. Relationships with significant others were especially meaningful in developing a sense of confidence, security and commitment to personal, social and academic goals.

The importance of small groups of friends has been discussed by others (Romeder, 1990; Hill, 1987; Powell, 1987) as a method of building personal and constructive strength with peers. Romeder (1990) identifies this as "self-help" with members offering each other an opportunity for strength and personal growth. Through the group, individuals "feel they belong — that they are part of a community, a family, a friendly group of people they can count on" (Romeder, 1990, p.3). The bonding between individuals is a very positive strategy, especially when independence and autonomy are challenged by other systems, which may include bureaucracies and social institutions — including universities.

Conversations in university classrooms and/or residence, participating in social events or taking part in recreational or other events is a chance to engage, exchange and share stories that build support systems amongst students. Through informal discussions in class, students often discover they are enrolled in common introductory courses. This informal support structure can be used by first-term students to help one another in their academic work. However, students must have the initiative, self-confidence and interpersonal skills to share themselves with peers.
Some academic departments try to help by creating opportunities for their students to meet one another in the first-term of university. Longstanding traditions of welcoming new students, retreats and field experiences are used to encourage students to develop friendships with others in their program. Students with memberships in student societies may participate in special events that build communication and teamwork and are encouraged to work together in course assignments, small group assignments, projects and activities. The commitment, friendliness and feeling of "we are in this together, and we will survive" develop close bonds between students which can last long after university is finished.

Other faculties have more complex and diverse program structures that make it virtually impossible to schedule large groups of students together across courses. With different sections of courses offered at various times and locations, students often do not have the opportunity to develop friendships with others in class. These factors make it difficult to form class friendships or to build social support networks during the first-year transitional period.

University Reflections

The University of Waterloo has enjoyed consistent patterns of large numbers of admissions, low drop-out rates at the conclusion of the first-year, and advisory services to help students select and timetable academic courses in their first-year. Because a highly successful co-operative education
program offers students the opportunity of paid work-terms across the six Faculties at the university, many are also eager to participate in this program in combination with their academic term work.

Of 3,883 first-year students, 911 or 23.5% of first-year students are registered in the Faculty of Arts (Student Statistical Information, University of Waterloo, 1996-97). This Faculty (1) accepts the most number of first-year students making it the largest Faculty on campus; (2) provides a diversity of social science and humanities academic programs; (3) delivers large introductory classes (e.g. Psychology 101, Economics 101, Sociology 101); and (4) allows many first-year students the opportunity to explore and to make their decision to major in disciplines after completing introductory courses in that subject.

An interview with a veteran first-year Faculty of Arts counsellor (Personal Interview, 11/20/1992), indicated a range of student responses in adjusting to university life. While some students were able to make this adjustment quickly and effectively in the first-term of university, not all did so successfully.

By the end of the first-term, the counsellor continued, up to a third of first-year students experienced a disparity between their academic expectations at the beginning of term and their results on formal academic performance examinations at the end of term. Not meeting the grades necessary to qualify for entrance into future programs in year two of university
was a reality for these students. Time was short and future course decisions had to be made quickly. With no alternative program plan, many distressed students sought academic advisement.

Subsequently and at the request of the author, a small group of first-year students agreed to meet and discuss their first-term at the university. Students were asked what, if anything, could be done to offer future students a more supportive experience in their first-term of university. Both these exploratory questions suggested a focus group study would be useful in identifying future suggestions.

Focus Group Study

Focus groups are a qualitative research tool designed to generate group discussions and interaction in response to open-ended questions beginning with the researcher (Morgan, 1993). A focus group can be used as an informal, semi-structured meeting in which participants are able to talk about their experience, with ownership remaining with the participants. They reveal only what they feel comfortable with at the session (Morgan, 1988).

For the purposes of this study, a focus group was organized through the Faculty of Arts. Three sessions with first-year students in late February and early March 1993 were organized. The participants were identified to reflect several first-year experiences and letters of invitation were sent to students selected by the first-year office. All participants were volunteers,
confidentiality was guaranteed and the project was approved through the University of Waterloo, Office of Human Research.

A group of nine students met on three occasions for sixty minutes in a familiar room in close proximity to the Faculty of Arts office. A telephone call was made to each student before each meeting to remind him/her of the date, time and location of the session.

The results garnered from the focus group discussions proved extremely useful and enlightening. Students produced a list of common challenges they faced as they completed their first-term of university. They offered suggestions for future first-year students. The most complex and challenging of these is highlighted below.

The group discussed the possibility of arranging "student study groups" especially for students in large introductory classes each Fall. The purpose of such a program would be to build proactive academic learning strategies amongst first term students. Such participation would be voluntary, and could be limited to one course per student for a specified trial period.

Students suggested that study groups would be more effective if based on academic course participation. While they realized they should be making efforts to form friendships in class, they were anxious about taking first steps in large introductory classes. Students could see the advantage of belonging to a small group, but without knowing their peers, they were reluctant to initiate the formation of groups.
Study Groups for First-Term Students

There was little formal documentation on which to reflect about how student study groups might be organized in large introductory classes where undergraduate students are likely to be strangers to each other. While study groups were presumed to be a variation of small groups, there was no information on how groups were formed, the content discussed in a study group, or the processes by which study groups functioned.

At this point, questions arose about (1) criteria used to select the introductory courses; (2) how to create the study groups; (3) the composition of the groups; and (4) the methods and evaluation techniques used to explore the group's usefulness to the students.

While the specific details required further study and reflection, study groups imply they share the characteristics found in other small groups. For example, participants develop a purpose for their meetings; they identify tasks for the group; and they form methods of engaging or withdrawing from the group if their needs are not being met.

Study groups seem to share three common characteristics with self-help groups earlier identified by Remeder (1990). These are:

(1) all members share a common experience;

(2) participation is voluntary and members may contact each other at other times.
outside planned meetings to ask for help;

and

(3) there is a willingness of self-helpers to
accept one another as equals.

The literature on small groups is extensive. It is, however, limited in references about how study groups could assist first-term university students in adjusting to the types of transitional adjustments in a new learning environment.

Potential Benefits of First-term Study Groups

There are several potential benefits of study groups as effective coping strategies for first-year students. First, as in other forms of collaborative learning, study groups are an opportunity to establish friendships and to build informal support systems between first-term students in a course environment (Johnson, Johnson & Smith, 1991). When students get along well together, they have the opportunity to talk things out and to share information with each other — whether it is course strategies, strategies for problem solving, exchanging stories about university life or other issues which have personal, academic, social or other meanings for them.

Second, study groups enable students to manage their first-term learning process more effectively — through grade enhancement, greater self-confidence, enhanced organization or additional strategies. They are taking more responsibility and control over their own learning process as they
discuss what they feel is important in their course with their peers. Moreover, study groups are informal discussions in which content and process are determined by students and different learning opportunities may develop across study groups (McCowan, Driscoll, Roop et al, 1996).

Third, study groups provide students with an organizational framework which can help them in their course work. As the term progresses, first-term students often feel an acute pressure from readings, lectures, assignments, midterms and final exams. Students who are interested in forming a study group at the beginning of term are setting the stage for an organized plan of work. By marking off a regular weekly time commitment for study group attendance on the weekly calendar, students are taking an important step to become more organized and structured in their demands at university (Light, 1992). It is a way for students to exercise control and decision-making in their new and busy university lives.

Fourth, successful study groups emphasize teamwork, interdependence and collaborative learning amongst students. Through discussion, students feel they are not alone. They begin to develop ways to handle issues confronting them as they progress through first-term university. This group work experience can be an excellent training base for the personal and career development needed by students as they enter the world of work (Smith & MacGregor, 1992).
The Research Process

Intention Statement

The purpose was to attempt to initiate a study group program and to characterize student experiences and benefits in study groups. It presents a detailed overview into the way in which students apply this learning technique to their academic course work.

Research Plan

Five initial research-related questions are identified and the issues they evoke are as follows:

(1) How are study groups formed?

(2) What are the distinguishing features of students who volunteer to participate and meet regularly in the study groups versus those who do not meet or choose not to participate in the program?

(3) What are the purposes, benefits and limitations of study groups for the students and instructor?

(4) What academic performance outcomes are associated with study groups?

A two-tier research approach was used. The first-tier provides the reader a general description of the study group program. This included
descriptions of the formation of the groups, the number of students who participated, and the evaluative results as revealed through the participants, academic performance from the groups, and the instructor's feedback at the conclusion of the research.

The second-tier of the study involved using a case study method to explore the ways one study group used this technique in an introductory course. This was done through observation of four students' experiences working in a study group over the term.
Chapter Two

Review of Literature:

Transitions In First-year University

For students entering the first-year of university, it is a time of excitement, challenge, questioning and new experiences. What will their university be like for them? Will they like it? Will they get along with their roommates? Can they achieve their academic goals? How will they cope with the daily trials and tribulations of "being" a university student?

Levine (1977) refers to this period in a young adult's life as a "developmental transition" in which the transition is a "turning point or boundary between two periods of greater stability" (p.57). In describing the causes and consequences of the transitional period, Spierer (1977) explains this in the following way:

"... transitions may be due to biological, sociological, environmental, historical, or to other phenomena. They may have consequences that are evident now or are manifested at some future date (and thus have "sleeper effects"). They may be evident to friends and to society (going bald, becoming rich, losing a job) or remain unnoticed, although still dramatic such as losing one's career aspirations. They may be sudden or, more likely, cumulative, as is true, for example of some diseases. (p.6)"

Transitions may offer the possibility of psychological growth combined with the potential danger of psychological damage (Moos & Tsu, 1976).
Going to university for the first time, developing new friendships, and building larger social networks are potential growth incentives. However, taking advantage of these benefits may require trade-offs, including a move from home, leaving loved ones to live in a strange city, creating degrees of anxiety or reservation in students.

Some students will handle their transitions by adapting with little difficulty, while others have greater adjustments over a longer time period. How quickly an individual adapts to the transitional experience varies from person to person. The amount of stress involved in the experience, the type of change accruing from the experience or controllable versus uncontrollable factors are important indicators in transitional change and adjustment. Collectively, these life events can affect the severity and duration of the transition period.

The trauma associated with transitional adjustment is less when adequate preparation time is provided for the change (Schlossberg, 1981). Researchers have examined various transition studies including the transition of the grieving person who loses a spouse, (Lindemann, 1965); the transition process of adjusting to the birth of a premature infant (Kaplan & Mason, 1965); and the transition stages in the lives of American draft dodgers (Levine, 1976). These studies identify and describe patterns of transitional adjustments and coping strategies over time.
Entering university is also an event that alters an individual's perception of self. One may experience personal growth or a sense of disorientation while trying to adapt to complex and conflicting demands. First-year students must integrate new and existing strengths to realize an effective adjustment to the transitional experiences over time. For these reasons, first-year students also appear to exhibit adjustments to the transitional experience.

The following review initially examines transitional issues of first-year students from the personal, social and academic perspectives. Adjustment strategies used by students to respond to these issues are explored, including a review of the literature on study groups. A framework for study group research is provided at the end of this chapter.

The First-year Transitional Experience

Like students going through the transitional years in elementary and secondary school (Hargreaves & Earl, 1990; Cole, 1993), learners are faced with transitional issues when entering university. Riegel (1975) suggests this process of adjusting to university — being accountable for outcomes, building and displaying self-confidence and autonomy, and accepting increased independence and resourcefulness — are major adjustments experienced by all first-year university students. These changes have been noted in the
dimensions of personal, social and academic research involving first-year students.

Types of Transitions

Personal transitions. Simons, Parlett & Jaspan (1976) showed that students are confronted with new experiences in the first-term of university. Many students are living away from home for the first time; all have administrative tasks they must complete including registering for courses and finding their way around campus; and each student must adapt to a milieu of new peers while coping with the intellectual demands of a full academic workload. The pace of adjusting to these rapid changes also adds pressures.

While some adapt to these new demands, others have more difficulty coping with their new environment. It is difficult to predict in advance how a student will adapt to this change, and Williams (1975) cautions there are problems for some students.

Many of them feel threatened by this experience and so they lose any sense of personal worth or importance in the "institution" in which they find themselves. In their increasing loneliness, they begin to feel that nobody really cares about their existence. (p.2)

Field, Gilchrist and Gray (1989) had students write short vignettes about their experiences in first-year university. One quotation from a student portrays the change, stress and rewards students often feel in the first few weeks of university.
I must say it is a difficult adjustment to make: a new home, new friends, new professors, new location—a whole new environment! I found it almost to be a culture shock! I have learned so much in these past few weeks at university. I have learned to be independent, how to manage my study time efficiently. University involves more than the pursuit of academic courses. It also involves confidence in one’s abilities, development of self-esteem, and personal growth. But I still miss my poodle. (p.4)

Recently, Chickering & Reissner (1993) developed a more comprehensive framework to examine the relationship between education and identity in university students. The authors suggest that first-year students need to begin to make progress across seven distinct psychological areas in first-year university. Each of these areas is represented by an vector that gauges the progress of the seven areas.

Four of these vectors are crucial to students’ well being in first-year. The first vector, representing student identity, focuses on the development of an enhanced sense of self-competence. The second vector is an indicator of student autonomy as represented by the ability to manage emotions. Expressing the desire to explore endeavours with a greater independence of self is the third vector. Each of these vectors represents major personal challenges in the way students are progressing through their transitional change. Because first-year students are continually faced with new experiences, these vectors will vary over time and situation.
Social transitions. Leaving parents, siblings, significant others and friends for university is a major life changing event for many students. Chickering & Reissner (1993) suggest by building friendships, students indicate an interest and openness to share with each other. They argue that this approach is critical for student success in new university communities. As a result, Chickering & Reissner (1993) designate this as the fourth vector in student development. Students hope to find security in the new setting they previously experienced with former significant others and with high school friends (Lokitz & Sprandel, 1976).

Benjamin (1990) cited interpersonal relations with friends, romantic partners and family members as important components in the student's ability to adjust and adapt to university life. In a study of first-year students' adjustment patterns, Benjamin (1990) reported that connecting with new friends and building personal support systems were critical to students' adjustments in their first-term at university. These offered support, recognition and assistance to the new student coping with university life (Benjamin, 1990).

In a study of coping strategies used by first-year students, Coelho, Hamburg and Murphy (1963) identified six ways in which students use friendships to explore and manage interpersonal relationships: (1) clarifying new self-definitions; (2) stimulating intellectual growth through informal discussions; (3) pooling information and coping strategies through informal exchanges; (4) helping each other in respective areas of strength and
weakness; (5) providing support in times of crisis; and (6) serving as a sounding board for diverse points of view. Using these strategies supports the student in clarifying, developing and becoming more self-confident over time. This sharing and openness can help students with adjustment to their new environment.

Consistent with Benjamin (1990) and Coelho, Hamburg and Murphy (1963), Baxter Magolda (1992) suggests structured attempts can help students work together. She argues it is imperative to encourage students less likely to establish these connections on their own.

Academic transitions. The opportunity to begin university leads to excitement, uncertainty and fear as students begin to form their own academic goals. One student wrote:

...this is university, not high school. It's up to you to show up for class, and on time. It's up to you to do your homework, and hand in assignments, also on time. There is no-one (sic) watching over you now. There is no-one (sic) checking your work but you. There are no detentions to serve or penalties to pay if you don't do these things. Until the end of the year. It's up to you, and you only. In that respect, you are quite alone at university. (Field, Gilchrist & Gray, 1989, p.5)

New strains and pressures often require adjustments for first-year students. For example, Benjamin (1990) suggests the "static" pressures of adjusting to large classes, juggling introductory courses, managing diverse academic demands create high expectations and demands: Further, students
face "dynamic" pressures — including midterm tests, assignments and essays — which become more critical for students as the term progresses. Because students want to do well for themselves, their parents and significant others, they may try to respond to these demands in unique ways.

Last week no assignments were due, but this week I had three tests and two assignments due. In order to prepare for the test, I had to sacrifice not reading something, and now after doing all that all this week I am behind in my readings — I know what I'll be doing this weekend. I have been working every night until about 1:00 or 2:00 in the morning and getting up early in the morning; now, at the end of the week, the lack of sleep has taken its toll. (Field, Gilchrist & Gray, 1989, p.26)

Frequently, students rely on marks and grades as the standard to judge their performance in academic course work. While marks may not reflect their academic potential, students realize that grades can make or break their university experience. As one student commented:

I'm feeling rather down about the marks I got on my mid-terms. I knew I didn't do well when I wrote them, but the realization still hurts. Going from straight A's all through high school to 2 C's, 2 B's and only 1 A hurts. The philosophy mark really bothered me too. I didn't expect to do so poorly (67%). (Field, Gilchrist & Gray, 1989, p.20)

This objective measure can be a barrier for students working to attain grade point averages for acceptance to upper-year programs. In this regard, Benjamin (1990) reported how difficult it can be to increase averages in
subsequent terms once a student has achieved a grade point average at the conclusion of the first semester.

In a four-year longitudinal study of student learning, Perry (1970) noted that male first-year students were found to display a dualist structure to their academic world. They viewed knowledge as right or wrong. Their task was to learn and recall the "right" information given to them by their professors. By conforming, being obedient and obliging, first-year students had the expectation they would adapt to their student role.

Baxter Magolda (1992) has also found similar results for both genders. First-year is a time of "absolute knowledge" in which students perceived instructors as authority figures on knowledge. Students felt communication of this knowledge from the instructor to the student was a key objective of instructors in first-year classes. By attending classes, keeping up with class work, completing readings and asking for help when required, students felt their work had been completed. By second year, however, students began to acknowledge the value of peers and worked with them to help them clarify, discuss and learn academic concepts. This finding was reaffirmed by Perry's (1970) results.

Belenky, Clinchy, Goldberger and Tarule (1986) examined women's learning and coping styles at university. Women were found more likely to learn effectively when professors offered courses with clearly defined learning objectives and tasks (Belenky, Clinchy, Goldberger & Tarule, 1986). Students
also felt better about the learning when opportunities about their academic and course choices were consistent with their own interests and priorities. A humane, supportive, stimulating and collaborative educational process helped women to feel secure, confident and willing to voice new ideas; guiding, coaching and discussion were important skills for female students. Women learners felt valued, respected and confirmed were positive about themselves and their institutions. These factors were important in giving students strength to cope with their first-year of academic transition to the university.

Baxter Magolda (1992) found that different approaches to learning can contribute to the way students perform in class. For example, first-year students are "mastery learners" (p.38) who often use instructors and peers to solve problems by questioning others. This approach helps because "they help you in areas you are weak in and vice versa" (Baxter Magolda, 1992, p.99). As one student said:

In math and physics courses, we get together to do homework problems. We put our minds together and get the problem. I also have somebody in the class ask me questions. They may ask questions I didn't think to review myself. Then I do the same for them. (Baxter Magolda, 1992, p.99)

Students in first-year may use a "receiving-pattern" (p.38) to learning which focuses intensively upon interaction between peers rather than with instructors. One student cited this example of how peers can be helpful:

If you don't understand something, it's easier to have a student explain it to you than a teacher.
Not that the teacher can't explain it, but a teacher doesn't always understand what you don't understand. And it's hard to explain what you don't understand. A student might be on the same level as you, may have just understood that same problem himself. So I like that. (Baxter Magolda, 1992, p.78)

Peers become an integral part of the learning process as students become more confident, form friendships and are more comfortable with each other. This shift from mastery learning to a receiving-pattern of learning often occurs at the beginning of second-year. A female student explains:

This year, I study more with other people that I know from last year or that are in my sorority and my classes. More people are doing things together and our homework like doing our projects together and our homework assignments together and studying together, sharing notes with each other. I get more of another side of an opinion or more clarification on something, or maybe they take better notes than I do. And I learn more about them and how they feel about things. (Baxter Magolda, 1992, p.302)

The academic transition is a significant event in first-year as students attempt to adjust to their university journey. Successful students are able to adapt to these situations, manage expectations, respond to academic realities and learn from their experiences.
Strategies for Adjusting to the Transition

Each student must come to terms with his or her own transitional adjustment experiences. What works for one may not necessarily work for another. Schlossberg (1981) concludes the adjustment to transition may depend on the availability of resources; the environment in which the transition is occurring; and the sense of competency, confidence, well being and health of the individual. Research literature also documents the impact self-help support groups can have on transitional periods.

Self-help Groups

The development of the Alcoholics Anonymous program in 1935 (Lieberman & Borman, 1979) was the first self-help group in North America. Using the twelve-step approach founded by this group, self-help groups have expanded over the years (Powell, 1987; Romeder, 1990). Romeder (1990) characterizes self-help groups in the following way:

Self-help groups are small, autonomous and open groups that meet regularly. As a result of a personal crisis or chronic problem, members share common experiences of suffering and meet each other as equals. The primary activity of these groups is personal mutual aid, a form of social support system that focuses on the sharing of experiences, information and ways of coping. In addition to personal change, members often engage in activities directed to social change. Group activities are voluntary, and are essentially free of charge. (p.33)
Self-help groups share common characteristics with other peer support groups. They meet (1) on an informal basis; (2) in small groups; (3) at prescribed time periods; (4) for specific purposes; and (5) with a level of structure appropriate to the task and objectives. Shaffer & Anundsen (1993) suggest these groups often meet in a non-threatening, relaxed environment.

Ask them [participants] why they are interested in the group, what they expect to gain from it and what they feel every member should contribute. Listen carefully to their answers and notice how well they listen to you. If you hold your meeting in a restaurant or other public place, you will probably feel safer, and you can observe who meshes with whom. (p.88)

This setting provides the opportunity to meet others, to exchange experiences and other material, and for each member to decide if they wish to meet again in future. As with any small group undertaking, it also offers the element of personal security within which women and men feel safety in their own environment.

**Learning Organizations and Communities**

Senge (1990) argues developing a culture of shared vision, promoting team building, and working together provide new opportunities for business. Through cooperation, collaboration and collective energies -- "learning organizations" (Senge, 1990) -- offer new and positive challenges in the way managers and employees work together.

Universities and their students can benefit from opportunities such as learning organizations which occur in business and industry and the self-help
movement found in communities. By gathering together small groups of students facing common experiences, opportunities are provided for student friendship, support and empowerment. In discussing peer groups, Tinto (1993) describes "learning communities" as clusters or groups of students brought together in facing the personal, academic and social transitions in first-year university. By joining the learning community program, students build social support systems, exchange information, and coping skills to respond to complex academic environments.

The First-Year Interest Group (FIG) Program at the University of Washington, which Tinto (1994) describes, modeled after the program at the University of Oregon, enrolls clusters of students in common courses. Meetings with peer group members provide the opportunity to share and discuss the personal, social and academic transitions which students face in university. Non-residence and commuter-based groups have also been shown to benefit from this program. The "University Connections" project introduced at the University of Guelph is founded on programs such as the FIG Program developed in the United States.

Learning communities are a proactive strategy to encourage students through the complex world of first-term of university life (Smith, 1993). By building the "sorts of educational settings and pedagogies in which all students, not just some, will want to become involved" (Tinto, 1994, p.13),
students can develop a self-supporting strategy to help them cope with their new academic community.

Unfortunately, many universities fail to offer such opportunities to first-year students. Perhaps unaware or working from a "survival of the fittest" perspective, students are provided with minimal support in their adjustment to the first-year university. As parents and students contemplate future university decisions, universities should recognize that enrolment prospers when students become involved with these supportive activities.

**Study Groups**

Because published literature usually follows current practice, the term "study group" is found inconsistently in research studies. The concept is often attached to other nomenclature. For example, Tang (1993) refers to study groups as "spontaneous collaborative learning" groups, Northledge (1990) uses the term "self-help groups", Hartley & Bahra (1992) cites the term "study networks" in their research, while Light (1992) and Johnson & Johnson (1994) refer to "study groups". Table 2-1 lists the common characteristics frequently mentioned in study group research literature.

Unlike the more formalized learning communities model described by Tinto (1994), study groups are informal, flexible and controlled exclusively by and for students. Learners form the group, schedule meetings and determine the functions of the study group. While academic course work is the focus for most, personal and social aspects may also be discussed by some groups.
Table 2-1

Characteristics of Study Groups *

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Students meet together in groups independent from instructors, tutors or other teaching personnel</td>
</tr>
<tr>
<td>(2)</td>
<td>Students meet outside of class at the convenience of group members</td>
</tr>
<tr>
<td>(3)</td>
<td>Students must be registered in the same course and preferably in the same section of the course</td>
</tr>
<tr>
<td>(4)</td>
<td>Membership is open to male and female students who live on or off-campus</td>
</tr>
<tr>
<td>(5)</td>
<td>Students decide the date, time, duration and function of the study group meetings</td>
</tr>
<tr>
<td>(6)</td>
<td>Student groups are small and often are limited to 3 members</td>
</tr>
<tr>
<td>(7)</td>
<td>Students do not receive course credit in any way from participating in study groups.</td>
</tr>
<tr>
<td>(8)</td>
<td>Students are responsible to their instructor for all course work.</td>
</tr>
</tbody>
</table>

* Note: Based on a selected review of the literature.
Study groups provide students with opportunities to discuss and review lecture notes, study for tests and/or work on assignments. Tang (1993) describes one study group in this way:

.... these group interactions enable students to view the problems from new perspectives, to develop relationships between new and previously learned information, to internalize ideas and criticisms, and also to enhance perceptions of positive support from the other group members. (p.116)

Often first-year students are unfamiliar with others in large introductory classes. For this reason, an initial informal meeting to help identify other students potentially interested in forming study groups might be done by class members.

Study groups as group processes. According to traditional literature focusing on small groups, study groups share many of the same characteristics. Research indicates authors have applied psychological or sociological principles to the research of small groups (Napier & Gershenfeld, 1993; Ellis & Fisher, 1994; Zander, 1989; Baker, Wahlers, Watson & Kibler, 1991; Baron, Kerr & Miller, 1992; Worcel, Wood & Simpson, 1992; Cathcart & Samovar, 1984). Any limitations of this "tried and true" perspective may reduce fuller development of new information, knowledge or new processes from small group research.

Other authors (Corey & Corey, 1992; Dimock, 1987; Bliesner & Adam, 1992) have addressed the stages of growth in small group formation. For example, using a five stage approach to the small group process, Corey &
Corey (1992) have identified the process of forming a group; initial stage of the group; transitional stage of a group; working stage of a group; and ending a group as different and unique stages of group development. Dimock (1970) examines changes that often occur at the beginning, middle and concluding stages of group development. Blieszner & Adams (1992) have explored the way in which specific groups change over time.

Schein (1988) suggests how a group develops its own identity is critical for group success. Each member within the group must ask the question of "Who am I and what is my role within the group?" and "What is the role of the group?". These are important issues when thinking about meeting in a group format.

Questions of control and influence are also addressed by Schein (1988). For example, do groups deal with these issues and, if so, in what ways? What strategies do groups use to respond to these or other issues? Participants may continue or discontinue their membership within the group if they feel these or other issues have not been resolved.

Schein (1988) also considers the purposes for joining groups. Members should be clear about their purposes and reasons for participating in a group. Do groups have a purpose(s) in meeting as a group? What happens when groups lack a purpose for their meetings? How is this managed by the group?
A final consideration is how participants of any group achieve acceptance and respect within the group (Schein, 1988). Working together, groups can develop trusts, expectations and norms bringing members closer together. How do study groups deal with respect and cooperation within groups? These questions are enlightening but have received sparse attention in the literature.

Using transcripts taken from small group meetings, Hackman (1990) offers a case study approach to small group study. He describes it in the following way:

...this seeks to provide insights into how work groups function, insights that will be helpful to those who design such groups, lead them or conduct research on them. Transcripts are detailed descriptive accounts of specific work groups with theoretical concepts to generate action implications for research and practice.

Hackman (1990) gathered transcripts from top management groups, task forces, performing groups, human service teams, customer service teams, and production team meetings. On the basis of case analysis, authors wrote about the dynamics of each group, the ways in which the group deals or does not deal with group issues and the progress made by each group across time.

This form of active applied research provides plentiful examples of an approach to small group research that is refreshing and insightful. The research is descriptive, qualitative and informative, with emphasis placed on
the meaning, process and content of the research. For example, Gersick (1990) provides transcript excerpts that detail the dilemmas, roadblocks, progress and resolution of the groups performance and describes the changing communication between group members over time. This case study approach is holistic, active, clear and tells a story in a way that is lacking in much other small group research.

Study groups in first-year university. While research on first-year study groups is limited, two studies are noteworthy, the first by Tang, the second by Hartley and Bahra. Tang (1993) found 34 out of 39 Chinese students at the Hong Kong Polytechnic spontaneously formed collaborative study groups in a first-year physiotherapy course. This was done outside of class and without the knowledge of the instructor. Later, Tang (1993) interviewed students to ask them why they had made these arrangements. Three rationales emerged. First, students decided to form their own study groups to ensure they had an opportunity to discuss material presented in lectures and readings. The study group, secondly, decided when to get together, where the groups would meet and what issues would be discussed then. Third, the students reported they felt this activity would lead to positive outcomes for learning. As one student reported:

There is a welcome challenge for the thinking process during discussion. You will start to think and query when others give their opinions. When you are studying on your own, this wouldn't happen and you are more easily convinced by yourself....During discussion, your ideas are
subjected to other people's scrutiny, criticism and suggestion for improvement, and these could be more helpful for learning. The thinking process is deeper including analyzing, relating and applications. I would think how the points brought up by others differed from my own; why should there be any differences; were they wrong or was I wrong; or were both of us wrong. When I study on my own, I still think but may stick to the books more and tend not to have my own judgement and analysis. (p.121)

This comment is very similar to Biggs' (1982) reflection on surface and deep student learning. Surface learning may occur with others but the emphasis is on rote memorization and factual recall, while a deep approach to learning involves working with peers. The purpose of deep learning is to think, discuss and articulate issues with the goal of increasing understanding. By deciding to work with others in study groups, these students were transforming their surface knowledge into deeper levels of learning.

In Tang's (1993) study, English was used as the language of instruction, but the students' first language was Chinese. These students may have believed that informal study groups conducted in Chinese was a way to ensure that difficulties with language did not limit their understanding of the lecture material. Studies in which the language of instruction matches the primary language of students need to be conducted to see if a similar pattern of study groups emerges beyond the Chinese-English cultures. This would be most useful in second language research including English as a second language.
The second study referred to earlier, by Hartley & Bahra (1992), involved first-year, mature students enrolled in part-time study in Britain. The students were often faced with work, family, personal well being and social demands, which competed with and reduced the time allocated to their academic demands. The authors felt the introduction of informal "study networks" (p. 131), modeled after self-help groups, could provide a positive emotional and motivational learning climate that would enhance learning opportunities for students. Students were encouraged to support each other by meeting in small, autonomous student groups throughout the term. A meeting was held at the beginning of term to outline the concept of study networks, and if interested, small clusters of students joined together in study networks. They could exchange names, telephone numbers and addresses if they wished.

At the first small group meeting, students shared experiences and feelings about the ways they had coped with studying in the past. A simulation exercise was developed and completed to explore how groups might exchange information. A plan was then developed by the group to organize how they would help each other with the course throughout the term. When an evaluation was conducted to ascertain whether the authors should continue to promote study networks as an integral component in the course, the results were clear.

Ninety-two per cent of the students questioned were still members of a study network after one
academic year. Ninety-four percent of students thought that study networks should be encouraged for the course, and only 5 percent thought that study networks were not a useful aspect to their studies. Most students appear to participate in a single study network. The size of the groups varies from two to eight participants – the norm is around five people. (Hartley & Bahra, 1992, p.134)

The authors (1992) also gained information useful for them in the event they wished to improve upon their efforts in future:

Seventy-five percent of students surveyed said that their network had changed from the original group at the beginning of the course. This was to some extent inevitable as we found out afterwards that our original geographic division had already broken up established groups from work. (p.134)

Variation in activities was reported by students in the roles they conducted in the groups over the term. These included information exchange, lecture note reviews, offering mutual support for the course and serving as a source for motivation in completing the course. One student commented that study networks "gave members the opportunity to discuss their problems with others and to discover they are not the only one to experience doubts" (Hartley & Bahra, 1992, p. 135). From their experience, the authors recommended study networks for both full and part-time students.

Study groups in upper-year university. In the Harvard Assessment Seminars, completed by Light (1992) at Harvard University, upper-year students used informal "study groups" to review their course work with a small
group of peers each week. One student described study groups in the following way:

The typical size of such groups is four to six students. They meet for an hour and a half to two hours. They nearly always include both men and women. They are really designed to be study groups. Those who participate in such groups take them very seriously. (Light, 1992, p.20)

Although half the Harvard students preferred to study independently, nearly every senior who was a member of a study group considered this activity crucial to their academic progress. It was essential that readings, problems or assignments be done before the meeting to ensure each brought their questions to the study group meeting. Further study needs to be done to explore if first-year students could benefit from an informal study group program in their introductory academic courses.

Other authors have also suggested that study groups are effective with students (Johnson, Johnson & Smith, 1991; Johnson & Johnson, 1994). This form of active, student-centred activity is an excellent way to enhance learning beyond traditional lecture formats.

Perspectives on Study Groups

The review of study group literature suggests that study groups can be studied from three unique perspectives. They can be considered in terms of (1) study groups as small groups in the ways in which they are formed; (2)
study groups as adjustment strategies in the way in which they communicate; and (3) study groups as self-help groups and the techniques used in study group meetings. By using a student study group descriptive context, a program focus was designed for purposes of this study. This focus influenced the steps necessary for information-gathering procedures and data analysis for the study.

The literature on study groups identified the qualities that would be important for the study group research. Because the presence of students was crucial to the development of study groups, information would have to be gathered about the personal, social, academic and feedback issues discussed in study groups. This suggested an interview format combined with transcriptions should be selected as the primary method of inquiry. From this, the data would focus on the content of the study group meetings and the feedback given on the purposes, advantages and limitations of the study group experiences as reported by the students. This information would have to be presented in a reporting style that would be clear and understandable to the reader.

Finally, the review of literature on study groups as self-help groups was a central component to the research study. Potentially, it offered lessons in how students can function together and may enhance their learning through group discussion. Because each experience is unique to the student in his/her study group, personal meaning varies across students. For this
reason, a case study approach was undertaken. Both process and results of the study were developed to accompany this research focus.

Case studies involve the preparation and analysis of large volumes of data that serve as the case record. Patton (1980) described it in this way:

The case record pulls together and organizes the voluminous case data into a comprehensive primary resource package. The case record includes all the major information that will be used in doing the case analysis and case study. Information is edited, redundancies are sorted out, parts are fitted together, and the case record is organized for ready access either chronologically or topically. The case record must be complete and manageable. (p.313)

This "study within a study" needed careful analysis to eventually portray a picture that is descriptive, detailed and offers a lens focused on the essence of the study group experience.

With this framework in place, these three perspectives were reviewed to further outline the guidelines necessary for the design of the study group program as it was to apply to students in two sections of Economics 101 in the Fall of 1994 at the University of Waterloo.

**Study Groups as Small Groups**

Because students frequently had no previous experience with study groups in high school, it was important to explain to students how study groups could help them in first-year university. A brief discussion of the strengths and limitations of study groups was given, a list of suggestions handed out to study groups, and an identified plan of action was included in
the introduction of the study group project to large, first-year courses. As Light (1992) suggested, study groups should be small with the typical size being four to six students meeting once every week or two. An organization meeting outside of class time was helpful to learn more about joining a study group and to meet other students who may have been unfamiliar with other first-year students.

When students form study groups outside class, time must be given to meet and exchange information with group members. At the first meeting, conversation topics might include the students' hometown, prior experiences before university and personal goals and expectations about the future. It is also important to discuss why each member decided to join a study group. It is important that personally oriented goals are addressed within the group-oriented objectives for the study group. The study group begins to develop as a whole that is greater than the sum of its parts.

Consistent with small group literature, study groups appear to function most efficiently when members are able to plan their needs before pressures arise from other demands. Discussion about meeting dates, times and place, and a clear agenda can provide students with an informal but semi-structured process for their study group meetings. It would be important to periodically review this process to reinforce constructive patterns. Using the course outline given by the instructor at the first class may be helpful in planning meetings in anticipation of work, tests or assignments for a course.
Each study group will have to decide how decision-making, consensus and problem-solving processes will be handled by the group. For example, members may deal with these issues by remaining silent to avoid conflict, talking to group members by addressing concerns, identifying strategies beforehand and thus preventing problems later on, or by employing other strategies. This is a potential problem for students working together for the first time.

These guidelines were used to respond to the issues raised in the questions raised in the Intention Statement in Chapter One (p.10).

Study Groups as Adjustment Strategies

**Personal adjustment.** Each first-year university student is affected by some of the personal, social and academic transitional issues discussed earlier. For example, Chickering & Reissner (1993) suggest the opportunity of establishing and building identity, of establishing self-confidence and exploring new endeavours are each important to the personal adjustment of first-year students. Study groups offer an opportunity to continue to grow and develop in a non-threatening, secure and informal manner. Through informal collaboration and peer support, first-year students are able to establish and build a personal networking strategy that offers a proactive strategy to respond to the issues identified by Chickering & Reissner (1993).

**Social adjustment.** In reviewing the literature on social adjustment in first-year university, the openness to share with others is a central issue in the
students' ability to build and establish interpersonal relationships with others (Chickering & Reissner, 1993). As a form of small group, study groups are an excellent way for students to establish effective strategies with peers to meet the demands of courses, professors or other university personnel. Similarly, students may use their friendships in different ways within the study group to realize an outcome for themselves. Coelho, Hamburg and Murphy (1963) describe several ways that friendships could be useful in helping students cope effectively with issues in a peer study group environment.

**Academic adjustment.** Study groups also respond to many of the issues raised in the academic transitional literature on first-year students. Certainly, the static and dynamic pressures expressed by Benjamin (1990) are felt by every student. The ability to work with peers in a study group setting might provide students with the opportunity to talk, discuss and plan their workload in a way that relieves some of the pressures of academic life. In addition, the ability to work with peers sharing similar tasks, the opportunity to exchange studying strategies with other students, and to become empowered and responsible in the complex learning environment are implicit strengths in the study group process.

**Study Groups as Self-help Groups**

While some students respond to transitional adjustments within reasonable time frames, other students are confronted with a "personal crisis or chronic problem" (Romender, 1990, p. 33) requiring time, strategies and
supportive structures of friends and significant others. Often, first-term students have not had the time necessary, or an opportunity to establish a personal network of supportive friendships at university to help them through this adjustment period.

By being open to these situations and experiences, the application of a case study approach needs to be flexible, adaptive and non-obtrusive. To maintain confidentiality and privacy, the names of participants would be altered. Readers would be given a brief introduction to the study group participants to paint a thumbnail sketch of each participant in the case study.

The case study would follow the study group through the term to observe how the group deals with issues about themselves, about each other and about the group. Tapes would be gathered from each meeting with these transcriptions forming the primary method of analysis used in the study.

Study groups may help students adjust and cope with the personal, social and/or academic changes in their lives. The formation of study groups in large first-term introductory classes is a structured attempt to help students meet and interact with each other in ways that are less likely to occur if this were not to be done.
In preparation for the formal study, a pilot project was administered. On the basis of the results from this, the study was initiated composed of two complementary phases: (1) overview of the study group program (Phase One); (2) case study of a first-year study group (Phase Two).

Preparation for the Research

In the Spring, 1993 a committee met to discuss the planning and organization of the study group program at the University of Waterloo. Two interested faculty members attended from the Arts faculty and representatives were invited from the Faculty of Arts Office and the Teaching Resources and Continuing Education (T.R.A.C.E.) Office. From this meeting decisions were made (1) to offer a study group pilot program in two large sections of one Arts introductory course; (2) to establish the pilot project in September, 1993; (3) to prepare a brief explanation of the benefits of study groups that could be distributed to students at class; and, (4) to write a report on the outcomes of the pilot study.

Each of the two faculty members had been recognized as excellent instructors and had won the Distinguished Teacher Award from the university.
Since students often reported difficulties with multiple-choice exams, both faculty felt study groups could be helpful with this specific method of evaluation. Economics 101 was chosen as it was wholly evaluated through multiple-choice tests, and thus, one instructor volunteered to participate in the program.

**Negotiation for the Pilot Study**

At a follow-up meeting with the instructor, details were arranged to introduce the program to two large sections of an introductory Economics 101 class. The instructor agreed to provide positive verbal support by communicating the importance of study group program to the class. An Orientation meeting was scheduled to provide students with more information about the program. The pilot project was conducted from September-December, 1993.

**Results of the Pilot Study**

The pilot project was offered in an introductory course to all students enrolled in the course at the first class in September and concluded twelve weeks later. The pilot study indicated the following suggestions for the main study:

1. A questionnaire from class would be helpful to prepare for the organizational meeting in the second week of class; and,
(2) A brochure would be written and attached to the course outline to give the students more information on the program.

(3) While several evaluation methods were attempted in the pilot project, telephone interviews were found to be the most efficient and effective way to communicate and receive feedback from study group participants.

Introduction to the Methodology

Phase One provided a descriptive overview of how a study group program was established in an introductory course and its general characteristics. This included (1) questionnaire surveys, (2) observations of organization meetings to form study groups, and (3) telephone interviews with contact members of each study group.

Phase Two consisted of a case study and analysis of one study group. The case study method was designed to reflect the characteristics of student experience as discussed by Lincoln & Guba (1985):

..... reality constructions cannot be separated from the world in which they are experienced and that any observations that might be made are inevitably time and context-dependent. No phenomenon
can be understood out of relationship to the time and context that spawned, harboured and support it. (Lincoln & Guba, 1985, p.187)

Case studies are descriptive in detail and context and offer readers insights into the ways in which participants experience the phenomenon under review (Merriam, 1988). Material collected were (1) verbatim transcripts of the eight sessions and (2) interviews with the four participants. From this data, categories emerged which offered more intensive ways of characterizing study groups.

Phase One: Descriptive Overview of the Study Group Program

Comprehensive information was required about how students used the study group program as an effective learning strategy in their course work. There was a need for a descriptive overview of the study group program which could provide insight into how, where and why the program was useful to first-year students. Therefore, the purpose of Phase One was to describe how a first-year study group program was established and to characterize the student’s and instructor’s experience. It was necessary at this stage to prepare brochures, the study group questionnaire, and a telephone interview schedule.
Procedure for Establishing the Program

Negotiating with the instructor. The results of the pilot project were incorporated into the Fall, 1994 study and the same instructor agreed to offer two sections of his Economics 101 first-term introductory course for the study. Planning activities were completed in August, 1994 (see Appendix A). Study group brochures were written and attached to each student course outline (see Appendix B). The instructor agreed to an interview at the conclusion of term to discuss his feedback to the program. Final grade point averages would be provided by the instructor at the end of term to enable an analysis to compare the results of the study group participants with non-study group participants.

In-class introduction to study groups. On September 13 and 15, 1994 a brief introduction was given to two classes describing: (1) why the Study Group Project was developed for students; and, (2) how this program might be of value to students in an Economics 101 class. A class announcement (see Appendix C) was made about an Organization meeting featuring a panel of "study group graduates" discussing their experiences with the pilot project. Students interested in participating could then form study groups.

Formation of Groups

Study group questionnaire. A questionnaire (see Appendix D) was distributed to all students during the first class. Students were asked to indicate their name, sex, the faculty in which they were registered, their year of
study, their academic and career goals at that time, and the reasons for their interest in the program. Students were asked to indicate their wish to participate in the program.

**From questionnaires to groups.** Of the 378 study group questionnaires distributed in-class, 221 (58.5%) were completed by students who were interested in participating. As Table 3-1 indicates, 163 (73.8%) of questionnaire respondents were first-year students, and 58 (26.2%) were upper-year students.

As Table 3-2 reveals, 58.4% of questionnaires were from students enrolled in the Faculty of Mathematics, 26.7% from the Faculty of Arts, 9.5% from the Faculty of Engineering, 3.6% from the Faculty of Science, 1.3% from the Faculty of Applied Health Sciences, and .5% from the Faculty of Environmental Studies. First-year students were primarily in the Faculty of Mathematics (52%) and Faculty of Arts (20.3%) suggesting these two Faculties would be the largest group of potential study group members.

In preparation for the Organization meeting, six facilitation teams were formed, each composed of a staff member and a study group "graduate" student from the pilot project. On the basis of questionnaire returns, faculty facilitation teams were organized so that: (1) three teams assisted students from the Faculty of Mathematics; (2) two teams had responsibility for students
| Total Class Enrolments | Female | | Male | | Total | | |
|------------------------|--------|--------|--------|--------|--------|--------|
|                        | Q      | %      | T      | %      | Q      | %      | T      | %      |
| First Year Students    | 53     | 23.9   | 65     | 17.2   | 110    | 49.8   | 146    | 38.6   | 163    | 73.8   | 211    | 55.9   |
| Upper-year Students    | 19     | 8.6    | 47     | 12.4   | 39     | 17.8   | 120    | 31.7   | 58     | 28.2   | 167    | 44.1   |
| Sub-total              | 72     | 32.5   | 112    | 29.6   | 149    | 67.4   | 266    | 70.3   | 221    | 100.   | 378    | 100.   |

Notes:

Q = Study Group Questionnaires Returned
T = Total Class Enrolment
<table>
<thead>
<tr>
<th>Faculty</th>
<th>Departments</th>
<th>First Year Student</th>
<th>Upper-Year Student</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>Computer Science</td>
<td>43</td>
<td>2</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accounting</td>
<td>37</td>
<td>0</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Math</td>
<td>20</td>
<td>5</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Actuarial Science</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Business</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub-total</td>
<td>115</td>
<td>14</td>
<td>129</td>
<td>58.4%</td>
</tr>
<tr>
<td>Arts</td>
<td>Non-declared Major</td>
<td>31</td>
<td>0</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arts Accounting</td>
<td>14</td>
<td>0</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Declared Major</td>
<td>0</td>
<td>14</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub-total</td>
<td>45</td>
<td>14</td>
<td>59</td>
<td>26.7%</td>
</tr>
<tr>
<td>Engineering</td>
<td>Systems Design</td>
<td>0</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electrical</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemical</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management Science</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mechanical</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Civil</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Computer &amp; Electrical</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub-total</td>
<td>0</td>
<td>21</td>
<td>21</td>
<td>9.5%</td>
</tr>
<tr>
<td>Science</td>
<td>Biology</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemistry</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub-total</td>
<td>0</td>
<td>8</td>
<td>8</td>
<td>3.6%</td>
</tr>
<tr>
<td>Applied Health Science</td>
<td>Health Studies</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recreation</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sub-total</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1.3%</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>Environmental Resource Studies</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>.5%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>163</td>
<td>58</td>
<td>221</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
enrolled in the Faculty of Arts, and (3) one team was assigned students from the Faculties of Engineering, Science, Applied Health Studies and Environmental Studies. Each team was given the completed Questionnaires from their Faculty as a general introduction to their students prior to the meeting.

Organization meeting. Two organizational meetings were held on September 20 and 22, 1994 one week after introductions to the study groups had been given in class. Both meetings were held in MC 2065 across the hall from where the class met weekly. There were two parts to the meeting — a student panel discussion to illustrate the benefits of the program and, secondly, an opportunity to volunteer and form study groups.

The panel responded to the question "What would you say to new study group members that you wished somebody had told you when your study group began to meet?". Betty spoke of how her study group had met and organized a meeting schedule that coincided with key dates listed in the course syllabus. Cash explained how his study group helped him with academic work while helping cope with the pressure of first-term university. Macy talked about the importance of communication and commitment amongst her study group members. Hope was very nervous and chose to read a letter to the audience about her experience.
Hope's Letter

It seems like only yesterday I was sitting where you all are now but it has been an entire year. If someone would have told me that I would be speaking about my experience with Economics study groups, I would have said "Yeah right, I don't even know why I'm here". I have come a long way since then and that's why I wanted to discuss this with you today.

As you can tell, I didn't think too highly of study groups then, but I was certainly wrong about them. At first I thought, well I won't know anybody and a perfect stranger won't want to help me. I was mistaken. People either I did know, or people I didn't know too well, helped me out with problems I had and vice versa. Eventually you do get to know the people in your group either as fellow students, friends or acquaintances.

Oh, I'm not saying everything was wonderful, we had to endure people not showing up, problems with scheduling and different goal ideas and finally different ways of looking at an issue. I believe this year's groups will overcome some of these problems with the new system of grouping people together. I like the idea of people with similar goals, or their understanding being put together. It will resolve some of the problems I had. I also strongly believe in the idea of regular or periodic meetings that will be discussed later. Being alone in the world of problems in Economics is unnecessary and frustrating. Study groups are one definite solution to this dilemma. (Study Group Letter, 20/9/94)

Each student brought differing perspectives from the experience and together they provided a rich description of study group experiences. They offered credibility, authenticity and lived experience with which new students
could identify. From sharing this experience, the purposes of study groups were understood by everyone.

Formation of the study groups followed with an introduction to the facilitation teams. Each team was responsible for twenty to forty students. They were assigned to rooms to work with the group members on common times available for meetings. Students indicated when they were available to meet and organized themselves into groups according to available times. Each member of the study group completed a form identifying the names of other students in their group. As well, the name of one study group member was designated as a contact member for the group and a duplicate copy of the form (see Appendix E) was given to the researcher, identifying the names of the group members and the contact member for the group. Table 3-3 indicates 23 study groups formed with a total of 86 students participating in the program.

Scheduled meetings. Study groups agreed on a date, time and location for their next meeting. All groups appointed a designated person who agreed to telephone the study group members prior to their first meeting to remind them of the meeting. It was also agreed this contact person could be telephoned to follow-up on the outcome of the study group members at the end of term. As members left the meeting, they were given a sheet entitled "Things You Might Consider Doing in a Study Group”. A copy is included in Appendix F.
Table 3-3
Formation of Study Groups

<table>
<thead>
<tr>
<th>Size of Study Groups</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>7</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Study</td>
<td>Students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Study Groups</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-year Students</td>
<td>7</td>
<td>9</td>
<td>16</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>First &amp; Upper-year Students</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Upper-year Students</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Total Study Groups</td>
<td>9</td>
<td>13</td>
<td>1</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Total Students</td>
<td>27</td>
<td>52</td>
<td>7</td>
<td>86</td>
<td></td>
</tr>
</tbody>
</table>
Summary

From the 221 questionnaires completed in class, 102 (46.0%) students came to either of the Organizational meetings, and 85 (83.3%) of those attending joined the study group program. These participants composed 23 study groups formed across two classes.

Obtaining Information About Study Group Process

Questions for study group contact person. A short set of open-ended questions was developed to ask in a telephone interview with contact members in each study group at the end of term. They were asked about their feedback on their study group experiences over the term. Open-ended questions were developed on the basis of the research literature and the pilot project information.

- What were the characteristics of the study groups and how would they describe their group?
- What were the student experiences in the study group and what were the benefits and limitations they perceived from the study group?
- Did the students have suggestions for future study group programs?
- Were there any comments they felt had about study groups that they would like to add?
**Telephone interviews.** Telephone interviews were held the last two weeks of November, 1994. Participants were asked if they would give permission to tape the telephone conversation and all agreed to this request. The questions raised above were used to form the questions used as a guidelines in the telephone interviews (see Appendix G). Twenty-one study group contact participants answered, with an additional two contact members unavailable by telephone (See Table 4-5).

**Obtaining Information From Non-participants**

**Questions for non-participants.** The names and telephone numbers of ten students were gathered from the one hundred and twenty-five students who had completed questionnaires but had not participated in the program. An open-ended question was used (see Appendix H) to survey these students at the end of term who had not participated in the program.

**Telephone interviews.** Telephone interviews were held in January 1995 and all ten gave their permission to tape the telephone conversation. They were asked about their reasons for their decisions and future suggestions for the program. These ten interviews were transcribed and entered into the computer for further analysis.

**Instructor’s Feedback**

**Interview with the instructor.** This was held in January 1995, with permission granted to tape for transcription. Open-ended questions, were designed as guideline for the discussion, provided a description of the
Economics 101 course, the role of study groups in the course and suggestions for future study group programs. A copy of the questions is contained in Appendix I.

**Final grade reports.** In January, 1995 copies of final grade reports for two sections of Economics 101 were forwarded to examine the t-test results comparing marks for participants and non-participants in the study group program.

**Analysis of Telephone Interviews**

**Study group participants.** The telephone interviews completed at the conclusion of the term revealed that 18 study groups (67 students) had met, 3 study groups (13 students) had not met, and no response was received from contact members in 2 study groups (6 students). Each of the eighteen operating study groups were coded according to the frequency of study group meetings. From this information, the study groups were categorized into regular, periodic, exam or occasional meeters. The telephone transcripts were then categorized into one of these four categories.

From telephone interviews, further information was provided about the size of study group membership, place, time and purpose for the meetings. Students suggestions were collected and all information was recorded on computer.
**Study group non-meeters.** Two groups (13 students) had initially planned to meet but failed to meet at any time during the term. Both these interviews were coded as "study group non-meeters", and the dates of the interview were recorded.

**Study group non-participants.** Interviews were also held with ten students who were not participants in the study group program. These were defined as "non-participants" and dates of the interviews were documented.

**Summary**

The preparation of research was done in the Summer of 1994 and included: Five audiotapes from taped telephone interviews were transcribed and entered into the computer for later review; duplicate tapes, hard copies and diskettes of data sources were made and stored in a separate location for safekeeping. Copies of the Economics 101 course materials were kept for future reference. A summary of all documentation assembled for Phase One of the study is contained in Appendix J.

**Phase Two: Case Study and Analysis of a Study Group**

The purpose of the inquiry was to document each meeting of a selected study group. Because no previous research literature offered information on how study groups functioned, conversations among the members were recorded and analyzed at the end of the term.
Qualitative research had been used in limited studies of study groups of different types (Hartley & Bahra, 1992; Light, 1992; Tang, 1993), but no studies concentrated on an in-depth understanding of one group's progress through the term. While an overview of the program offers maximum student flexibility and control, the content of the discussions of a study group over the term had not been explored. These were often private discussions not easily accessed by an outsider to the group. This challenge could be addressed in using a case study method.

Case study research methodology could offer insights into the way in which a study group developed its own style, agenda, content and discussions which were unique to the group. Merriam (1988) poses a convincing argument for the case study method:

.....research focused on discovery, insight, and understanding from the perspectives of those being studied offers the greatest promise of making contributions to the knowledge base and practice of education. (p.3)

The case study provided a way to non-obtrusively learn about the study group process while not interfering with the initiatives, control, and autonomy that developed within the study group.

Procedure for Selecting the Study Group

Selection of a study group was based on several criteria including:
(1) all students in the group should be in their first-term of university; (2) their desire for participation in the study group was their decision; (3) students
could be living on or off-campus; and (4) students had to be free to meet or not to meet in the study group over the term. A study group formed at the Orientation meeting met the outlined criteria and was selected for further review.

**Negotiation with the study group.** At the first meeting, the idea of allowing the group members to tape their meetings rather than being taped by the researcher was discussed. It was explained to the group the tapes from each meeting would be transcribed and this information would enable others (e.g., students, faculty, researchers) the opportunity to understand the content and process of study group meetings. This information could be summarized and assembled into a report or article for public distribution. Students were guaranteed their participation would be confidential and their identities would remain anonymous.

An offer to experiment with a tape recorder to record their study group dialogue was made and the students used it for the first meeting. When asked how they felt about the process after the meeting, they indicated they felt self-conscious at the first meeting but reported this passed as their attention focused on their discussions. They felt there was no problem in carrying on with this process for subsequent meetings. In mid-October, 1994, I met with the study group outside of their meetings and invited them to consent to having their discussions included in my doctoral thesis. They all agreed with enthusiasm.
**Portrait of the study group members.** Using one idea given from the list of study group suggestions, members of the study group were invited to introduced themselves and to briefly outline each of the member's personal background (see Appendix F). To portray this, excerpts from the transcripts were selected detailing each member's hometown, their high school experiences and family background.

**Data collection.** Eight cassette tapes were transcribed ranging in length from 15 pages to 110 pages. Table 3-4 summarizes the dates, members present, and the length of each of the eight first-year study group meetings. Once completed, the transcripts were read for content and for further review.

**Analysis of the Case Study Data**

**Development of the coding system.** The transcripts for each meeting were parsed into discussion segments. These descriptions were listed by transcript. While this was a time consuming process, it provided a way to organize the transcript material which could be further sorted and categorized.

This method was chosen as a way to operationalize the process of breaking down masses of text into manageable text passages. From this step, the text became more useful and the meaning became clearer to the researcher by identifying descriptions in the transcripts. From this point, further steps would be needed for analysis.
Table 3-4
Summary of Case Study Meetings

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Members</th>
<th>Length</th>
<th>Transcript Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28/9/94</td>
<td>3</td>
<td>50 minutes</td>
<td>15 pages</td>
</tr>
<tr>
<td>2</td>
<td>3/10/94</td>
<td>4</td>
<td>60 minutes</td>
<td>19 pages</td>
</tr>
<tr>
<td>3</td>
<td>5/10/94</td>
<td>4</td>
<td>90 minutes</td>
<td>25 pages</td>
</tr>
<tr>
<td>4</td>
<td>12/10/94</td>
<td>4</td>
<td>55 minutes</td>
<td>27 pages</td>
</tr>
<tr>
<td>5</td>
<td>26/10/94</td>
<td>2</td>
<td>50 minutes</td>
<td>21 pages</td>
</tr>
<tr>
<td>6</td>
<td>31/10/94</td>
<td>3</td>
<td>70 minutes</td>
<td>42 pages</td>
</tr>
<tr>
<td>7</td>
<td>2/11/94</td>
<td>3</td>
<td>95 minutes</td>
<td>60 pages</td>
</tr>
<tr>
<td>8</td>
<td>14/12/94</td>
<td>4</td>
<td>150 minutes</td>
<td>110 pages</td>
</tr>
</tbody>
</table>

Total                        319 pages
Discussion categories. The coded passages were analyzed and were named, tabled, graphed and patterns of content emerged. While some of these processes could be identified in advance, the research contained a number of surprises (Hunt, 1993) which are addressed in Chapter Five.

Summary

A summary of the documentation assembled for Phase Two of the study is contained in Appendix K.
Chapter Four

Phase One: Overview of the Study Group Program

This chapter provides a detailed description of: (1) the characteristics of the study groups; (2) the relationship between study group participation and academic performance; and (3) perceptions of the study group program by students and instructor.

Characteristics of Study Groups

Categories of Study Groups

As noted in Table 4-1, twenty-three groups (86 students) were formed in September, 1994. Results from the telephone interviews held with contact members in December, 1994 revealed changes over the term. Of the original 23 study groups, 18 study groups (78.2%) had successfully met over the term. Thirteen (81%) of the sixteen first-year study groups met over the term.

Study groups that met. As summarized in Table 4-2, the 18 study groups that met were categorized into one of four clusters of study groups. Study groups which met weekly were defined as regular meeters, those meeting biweekly were referred to as periodic meeters, those that met prior to exams were considered as exam meeters, and those meeting sporadically were identified as occasional meeters.
Table 4-1

Study Groups:

Beginning Versus End of Term

<table>
<thead>
<tr>
<th>Study Groups</th>
<th>Sept/94</th>
<th>Dec/94</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-year Study Groups</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>First &amp; Upper-year Study Groups</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Upper-year Study Groups</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Non-meeters:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-year Study Groups - 2</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>First &amp; Upper-year Study Group - 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Response:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-year Study Group - 1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Upper-year Study Group - 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>23</td>
</tr>
</tbody>
</table>

(Personal Documentation, 1/5/95)
### Table 4-2

Frequency of Study Group Meetings

<table>
<thead>
<tr>
<th>Study Group Category</th>
<th>Number of Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Meeters (8-10 meetings)</td>
<td>7</td>
</tr>
<tr>
<td>Periodic Meeters (4-7 meetings)</td>
<td>4</td>
</tr>
<tr>
<td>Exam Meeters (3 meetings)</td>
<td>5</td>
</tr>
<tr>
<td>Occasional Meeters (1-2 meetings)</td>
<td>2</td>
</tr>
<tr>
<td>Non-meeters</td>
<td>3</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23</strong></td>
</tr>
</tbody>
</table>
Study groups that did not meet. Table 4-2 summarizes three study groups that failed to meet over the term. Reasons for this included conflicting course commitments, too large a membership for convenient notices of meetings and failing to organize an advanced meeting schedule with study group members.

Frequency of Meetings

The contact persons from each study group indicated the frequency of their study group meetings as summarized in Table 4-2.

Regular meeters. Members met routinely by the week and often had additional meetings in anticipation of midterm exams. Interviews with contacts from these study groups indicated the frequency of the meetings.

We usually try to meet weekly, especially before the midterms. While the beginning of term was manageable, our meetings really increased when midterms came around. (Regular Meeters, Study Group #7, 27/11/94)

While some groups arranged to meet at a consistent time, other study groups had difficulty arranging consistent study group times across the term.

Periodic meeters. These groups met less frequently to discuss issues raised in lectures or independent readings. One contact person indicated why they often met later in the evening.

....we have our meeting usually late evening, nine to ten every other week. That's the only time everyone can come because some people have
night classes or other commitments. (Periodic Meeters, Study Group #6, 27/11/94)

**Exam meeters.** Their meetings were task-oriented, primarily to study for exams. These meetings were often lengthier focusing on reviewing previous midterms. One exam meeting study group had the following comments.

There are a couple of times when we have made extra time to get together before an exam. We have met together twice or three times in a week if people seem to maybe need it more. (Exam Meeters, Study Group #2, 27/11/94)

**Occasional meeters.** These groups had difficulty in identifying common times together. Their studying strategies were more individualistic to each student and emphasized readings from the text or lecture notes.

**Size of Group Membership**

Table 4-3 summarizes the number of study group members in each of the three study group categories. Those with 3 - 4 members met most often with contact people frequently noting these study groups were easily reached by telephone. Study groups with more than five members did not meet.
Table 4-3

Size of Memberships

<table>
<thead>
<tr>
<th>Group Type</th>
<th>Number of Members in Group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Study Groups</td>
</tr>
<tr>
<td>Regular Meeters</td>
<td>2 3 4 7</td>
<td>7</td>
</tr>
<tr>
<td>Periodic Meeters</td>
<td>1 3</td>
<td>4</td>
</tr>
<tr>
<td>Exam Meeters</td>
<td>2 3</td>
<td>5</td>
</tr>
<tr>
<td>Occasional Meeters</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Non-meeters</td>
<td>2 1</td>
<td>3</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>Study Groups</td>
<td>9 13 1</td>
</tr>
<tr>
<td></td>
<td>Students</td>
<td>27 52 7</td>
</tr>
</tbody>
</table>

(Study Group Telephone Contact Interview, 5/12/94)
**Place of Meetings**

Meetings were arranged by each study group. Locations included a residence cafeteria or residence room, a small room in the library, alcove on the fourth floor of an academic building, and a private residence off-campus.

**Time of Meetings**

Contact interviews indicated that study groups often met in the evenings for several reasons:

- enabled students living on and/or off-campus to attend meetings
- avoided conflicts with other courses
- easier availability of parking for students
- more flexibility in selecting quieter meeting locations for student discussions.

**Purposes of the Meetings**

Although the initial purpose for meeting was academic, students also cited social and personal reasons for meeting. Table 4-4 summarizes statements and the frequency the 18 contact members mentioned such issues.
Table 4-4

Purposes For Study Group Meetings

<table>
<thead>
<tr>
<th>Purposes</th>
<th>Number of Study Group Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(18 Contact Members)</td>
</tr>
<tr>
<td><strong>Academic</strong></td>
<td></td>
</tr>
<tr>
<td>Explaining economic concepts</td>
<td>14</td>
</tr>
<tr>
<td>Studying prior midterms</td>
<td>14</td>
</tr>
<tr>
<td>Discussing economic graphs</td>
<td>13</td>
</tr>
<tr>
<td>Organizing material</td>
<td>9</td>
</tr>
<tr>
<td>Reviewing lecture notes</td>
<td>5</td>
</tr>
<tr>
<td>Summarizing lecture material</td>
<td>4</td>
</tr>
<tr>
<td>Understanding others' learning style</td>
<td>3</td>
</tr>
<tr>
<td>Understanding new lecture material</td>
<td>2</td>
</tr>
<tr>
<td>Clarifying lecture material</td>
<td>1</td>
</tr>
<tr>
<td><strong>Personal</strong></td>
<td></td>
</tr>
<tr>
<td>Discussions about coping at university</td>
<td>10</td>
</tr>
<tr>
<td>Relying on students rather than professors</td>
<td>4</td>
</tr>
<tr>
<td>Developing a student support system in the course</td>
<td>1</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
</tr>
<tr>
<td>Benefits of working in a group</td>
<td>4</td>
</tr>
<tr>
<td>Advice from upper-year students</td>
<td>3</td>
</tr>
<tr>
<td>Students supporting other students</td>
<td>1</td>
</tr>
<tr>
<td>Learning about each other</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>89</td>
</tr>
</tbody>
</table>

(Study Group Telephone Contact Interviews, 5/12/94)

Note: These answers were in reply to the following questions asked of study group participants (Appendix G):

3. What did you do in your meetings?
4. Can you give me some examples of your experiences?
**Academic purposes.** As indicated in Table 4-4, the majority of time spent in study group meetings was on active studying strategies for Economics 101. For example, one first-year study group regularly reviewed their notes from lectures, while another tended to discuss specific economic concepts.

Our purpose was to review the lecture material because I tend to take notes but not to look at them again. If you meet as a study group, you automatically review them. It also helps to summarize and talk about material with your friends. (Regular Meeters, Study Group #9, 30/11/94)

We usually start by talking about the lectures, what it is they concentrated on, and we would explain anything other members of the group didn't understand.

One of our biggest problems was graphs. We would go over them with others in the group who would explain them to others. (Regular Meeters, Study Group #6, 27/11/94)

Midterms from the prior year were available for the students to practice for upcoming tests. When reviewing these, two strategies were used by two different groups. One chose an informal approach while the second selected a structured strategy.

If it is before an exam, we go through last year's midterm question by question and try to answer it and give an explanation for the answer. And usually out of the three of us, somebody knows the answer and if we don't, we figure it out together. (Exam Meeters, Study Group #3, 3/10/94)
One meeting we reviewed the midterm as a group but for the next midterm we went over those questions that we had wrong. I would say either technique works, but the second technique takes less time because you concentrate on the questions you don't understand. (Regular Meeters, Study Group #6, 30/11/94)

When asked about their study group time, one contact who was a mature student analyzed their group activities in terms of percentage of time spent on a cross-section of issues.

We spent about 50% of our time on Economics 101 and 50% other topics outside of Economics. It just varied depending on what kind of mood people were in. Typically, the normal student cycle was that we would become very concentrated just before the exam and ease up after the exam was over. (Regular Meeters, Study Group #15, 15/1/95)

Personal purposes. Telephone interviews with contact members summarized in Table 4-4 indicated members also benefitted personally from their study group participation. For one first-year study group member, it was knowing that other students were faced with similar experiences.

In study groups, you know where you are and someone is with you that understands what you are going through. And, they may be able to explain it to you. (Regular Meeters, Study Group #6, 27/11/94)

Some members expressed the feeling that it is often unsettling to speak to the professor because of the perceived discrepancy of the level of
knowledge between the professor and the first-year student. One first-year student expressed this idea in the following way:

Study groups are helpful because it's very difficult to ask questions in a big lecture hall. Do you know what I mean? It's a lot easier to ask someone in your study group to explain something than to be potentially centered-out, running the risk of asking a simple or dumb question in class. (Exam Meeters, Study Group #3, 29/11/94)

One student expressed the feeling that his decision to pursue university may have been made prematurely. The reality of classes was in conflict with his expectations about university. He talked with his study group about his dilemma.

I met a couple of times with the study group but I felt the study group was concerned about academic problems while I was worried about whether I had made a mistake in coming to university. I talked about it briefly in the group and others said they would support me whichever way I proceeded. (Occasional Meeters, Study Group #13, 25/11/94)

**Social purposes.** As evidenced by the responses in Table 4-4, students enjoyed the opportunity to work with each other in the group. In one telephone interview, a student explained how he felt the other study group members had helped him while he was supportive to other members.

There was good value in that it gave me external motivation to work on the course with others. When we met before class people would say, "How are you doing?" It was kind of nice and that kind of encouraged me to say something in return. I met some new people and I think I was able to
help them. It's nice to be able to help someone else. (Regular Meeters, Study Group #12, 15/1/95)

Several students commented on the value that working together in a course offered them. Most students had not previously worked in groups in high school and were unaware of the advantages of collaborative learner efforts.

This was the first time I worked in groups and it was neat. The guys in my group were really good at spending time with me to try and make sure I understood. If I hadn't had them, I would have dropped the course. (Regular Meeters, Study Group #11, 9/6/94)

Reciprocity was also experienced by students who had formed study groups of first and upper-year students. Upper-year students could provide informal mentoring to those who were enrolled in first-year of university.

D. was a slightly older student in second year and he had taken Macroeconomics so he helped me out a fair bit. T. was another member of the group and though he had not taken economics previously, he was able to lead me through some concepts that I was having difficulty with in the course. (Regular Meeters, Study Group #6, 29/11/94)

Benefits from the Study Group Program

The contact interviews held in December 1994 indicated that members felt they had benefitted, for different reasons, from participating in a study group. These benefits are indicated in Table 4-5 and are summarized below.
### Table 4-5

**Benefits Indicated by Contact Members**

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Number of Study Group Responses (18 Contact Members)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic</strong></td>
<td></td>
</tr>
<tr>
<td>Clarifies content for yourself</td>
<td>14</td>
</tr>
<tr>
<td>Working with other students in class</td>
<td>6</td>
</tr>
<tr>
<td>Adjusting to different learning styles in the group</td>
<td>2</td>
</tr>
<tr>
<td><strong>Personal</strong></td>
<td></td>
</tr>
<tr>
<td>I wish I had it in other courses</td>
<td>10</td>
</tr>
<tr>
<td>I think the program really helped us learn the material</td>
<td>6</td>
</tr>
<tr>
<td>We would have met as friends but not as we do now as a group</td>
<td>3</td>
</tr>
<tr>
<td>Working in groups is a way to reduce competition in students</td>
<td>2</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
</tr>
<tr>
<td>Useful for large first-year classes</td>
<td>12</td>
</tr>
<tr>
<td>Study groups provide a way to meet other students in class</td>
<td>9</td>
</tr>
<tr>
<td>Having an upper-year student helped when difficulties occurred</td>
<td>4</td>
</tr>
<tr>
<td>Offered a way to meet and help other students</td>
<td>2</td>
</tr>
<tr>
<td>We shared a number of future course suggestions</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>75</td>
</tr>
</tbody>
</table>

(Study Group Telephone Contact Interviews, 5/12/95)

**Note:** These answers were in reply to the following question asked of study group participants (Appendix G):

5. What were the benefits for you in belonging to a study group?
**Academic benefits.** A benefit mentioned by several contact people was the opportunity to learn how to work with others which helped to clarify content for themselves. Learning course content by answering questions of others was recognized to be important by members. As one student said:

You know you have learned something when you can explain it to somebody else! (Occasional Meeters, Study Group #7, 5/12/95)

Working with others was a concept that group members felt other students could gain from in their studying experiences.

**Personal benefits.** Several students offered personal reasons why they felt study groups were beneficial for them. Many students indicated the study groups were helpful in providing the opportunities for others to help them with problems, explanations and clarifications. Students felt more comfortable working with peers instead of resorting to the professor when problems remained unsolved. This was described by one student in the following way:

While most professors will answer your questions, some will not. If you get one of these prosfs, you are sunk. This wasn't a problem in our course, but I know it was a problem for students in another course. Having these kinds of groups around helps you when you run into trouble. (Exam Meeters, Study Group #3, 5/12/95)
Students also understood working together was a way to help each other:

Working in groups is a way to reduce competition in students. (Contact person, Study Group #9, 5/12/95)

One contact person indicated as a result of her experiences with the study group, she quickly realized how well her high school had prepared her for university.

From the study group, I realized I came from a high school that really prepared me for university. This became very clear to me as we would talk about our high school course experiences. (Contact Person, Study Group #6, 27/11/94)

Social benefits. Students felt study groups provided a way to meet other students in class. They found the experience beneficial as they started their university careers. This was expressed by a one student the following way:

Study groups could be very helpful for courses that have large proportions of first-year students. (Contact Person, Study Group #3, 27/11/94)

Many mentioned the benefits of getting to know students in class and how this could be helpful in learning about the course and other aspects of university life.
Study Group Non-meeters

The three study groups non-meeters had reasons for their situations. One group knew others in class and used their peer relationships to clarify course questions for themselves and their friends. Through this informal network, learners were able to help each other.

Three of us were going to meet but we're in Engineering so we knew each other already from our program. We had set aside Saturday mornings to meet in the Library but we got so busy it never took off. We had others we could check things out with if need be. (Non-meeters, Study Group #19, 8/1/95)

Students who did not have an informal network expressed concern with their inexperience in small group work. They felt their past academic experiences had not prepared them for group work and were unsure how to work with other students.

Three of us were supposed to meet but we never seemed to have that much to talk about. We met for 20 minutes but we didn't know what to talk about. We had never worked in groups before so maybe that was a problem. We met twice but we decided not to continue because we really were not getting much out of it. (Non-meeters, Study Group #20, 7/1/95)

This perspective was most frequently cited among first-year students and was in contrast to upper-year students who had experience with student
groups through friendships, shared residence arrangements and enrolment
with friends in the same course.

Study Group Non-participants

A small number of first-year students who had not joined the Study
Group Program were contacted to ask them if they had any future
suggestions that could be useful in future. One first-year student said she did
not have any friends in September and was overwhelmed by this situation
within a new environment.

University was so new to me that I really was kind
of overwhelmed in September. It’s getting better
now I have a couple of friends. For this reason I
think the study group idea is good and I’d probably
use it if it were offered again. (Non-participant,
6/1/95)

She suggested she might have been given this closer attention if
information about the program had been mailed to her home before coming
to the university in September.

The challenge of working in small groups was also felt by other first-
year students. One female first-year student describe her experience in the
following way:

I didn’t really have any experience working with
other students and I just figured I probably could
do as well on my own as with a group. I have
made friends which is great...they are usually able to help me if I have questions...I hadn't a lot of experience with groups for academic stuff in high school and I thought I didn't want to take on more than I could handle in my first term at university. Now that I have made it through, I might be interested in trying it, but I didn't know what I was facing last September in terms of work. (Non-participant, 6/1/95)

The challenge of having minimal experience with group work in high school combined with maximum academic workloads the first term of university can make it difficult for students to consider collaborative learning strategies.

Academic Performance and Study Group Participation

To ascertain whether academic performance was related to study group participation, the 18 study groups (see Table 4-3) that met were compared to all those who did not actively meet in a study group. For instance, this includes those who did not choose to participate, those who did not meet, and those who did not respond. Results indicated that although the grade mean of study group participants was slightly higher (74.96%) then for those who had not participated in the program (72.71%), the t-test (t=1.13) was not significant.

A more specific analysis followed looking at academic performance in first-year students only. Again, the results indicated that although the grade
mean was higher for first-year study group participants (73.75%) than for first-year non-participants (71.85%), the t-test result was not significant (t=1.22).

Instructor's Perceptions of Study Groups

In January 1995 the instructor for the Economics 101 course was interviewed about the study group program in his class. While not directly involved with the study group program, he mentioned several themes that were important to the program.

Theme #1: Transition to University

The instructor was clear about the reasons he felt the study group program should be supported by instructors.

The university is frequently isolating for students in that learners do not often get to know others in class. I saw study groups as a possibility for meeting other students from across disciplines as an asset to the students, to the class, to me and to the department. We need to do more of this. (Instructor Interview, 30/1/95)

Although study groups had been open to all students across year levels, study groups were one of the ways he felt instructors could serve first-year students adjusting to a new and complex learning environment.

Theme #2: Student Inquiries

A second theme reflected students' inquiries of the instructor outside of class. Office visits by those in study groups indicated students were
seeking further clarification on a question raised by their group. The instructor explained this in the following manner:

It was common for some groups to discuss something that they were having trouble with in the course. Someone was appointed as spokesperson to come and ask for clarification. Most of the people who saw me were frosh and the irony is this could have also been one of the effects of study groups. (Instructor Interview, 30/1/95)

Selecting a student from the study group to ask a question of the instructor might have been a way to deal with the challenge of asking the professor for further explanations.

**Theme #3: Diversity of Experience**

The third theme that emerged was the diversity of student experience in this large introductory class. Students who were comfortable with the academic workload, pace, structure and content in the course might well have helped those students who were less prepared for these challenges – especially those students in their first-year.

The course is demanding and students are forced to respond quickly to these requirements. For students having difficulty coping with these external demands, a study group helps students to work out these demands with peers. (Instructor Interview, 30/1/95)

Study groups can provide a positive, practical and useful approach to learning for students. And, they have the opportunity to adjust and respond successfully to new challenges of a university environment.
Theme #4: Working with Others

A fourth comment of the instructor related to the benefits to students of working together in a course. If students are given the opportunity to learn how to work with others, they have the chance to see the advantages that are offered by teamwork and collaborative learning approaches.

To use their initiative and organizing skills for collaborative work are the ingredients of teamwork. And this is what is required to succeed in today's world and into the future. (Instructor Interview, 30/1/95)

Although potentially helpful for students, the instructor also noted a limitation to small group work. Because their past educational experiences have not prepared them for group or teamwork, working in groups is not a strength of many students. He saw the study group program as a risk to students in deciding if they felt they would like to explore a collaborative student learning strategy at a time in their lives when they are vulnerable to the pressures of achieving desired grade results.

They need something that allows them to work together. If students have the opportunity to academically prepare themselves as a group, then there is an opportunity for students to achieve levels of growth which are greater than working alone. (Instructor Interview, 30/1/95)

Interviews with students also confirmed this fact and it appeared the process of how to work together was a decision that was realized to varying degrees by students.
Other Suggestions

A suggestion from the instructor was to establish study groups "on-line" with the use of computer discussion groups, electronic mail or electronic bulletin boards.

If you wished to be part of a group meeting, you would post your question to the board. The menu would be open to every student and possibly to meet or talk to fellow classmates. The advantage of e-mail is that it would allow students to set up a meeting on neutral ground. (Instructor's Interview, 30/1/95)

Students would require computer accounts, passwords and to be knowledgeable with computer procedures prior to electronic communication. This would not be a problem for upper-year students who have worked through these issues, but may create a challenge for first-year students requiring time to arrange these facilities. Study groups need to be set up at the beginning of term and the possibility of establishing full electronic communication might be a source of frustration for students within the first month of university.

Student Suggestions for Future Study Group Programs

Two suggestions were offered by students to enable more first-year students to use this technique in first-year classes.
Expansion to Additional First-year Courses

One suggestion given by students was the study group program be expanded to additional introductory first-year courses in Arts and other faculties. Courses that lacked seminar or teaching assistant components were noted by students. Students felt large introductory courses were potential candidates for a study group program.

Strategies for Working with Others

A second suggestion was that further information be provided about ways students could work in study groups.

Have some suggestions on how we could study in a group because most of us have never studied in a group. It is a new experience for us. (Study Group Contact Interview, 29/11/94)

One student contact suggested a way this could be offered.

....maybe a session or two could be held with someone who could work through a few sample problem exams with groups for practice. Working through the examples, showing them how they could work with each other might be really helpful. (Study Group Contact Interview, 29/11/95)

Expanding the program and offering a workshop in how study groups might work with each other could be introduced at minimal costs to a department.
Summary

The overview of the study group program demonstrated the frequency, size, place, time varied successfully across groups while the contact persons were able to identify the purposes and benefits of participating in a study group program over the term. Although no significant findings were found in the academic performance of study groups, the instructor and students felt this opportunity had been worthwhile for them. They suggested expansion of the program into additional courses for future first-year students. The next phase of the analysis was to analyze one first-year group to explore the content and process issues in one case study.
Chapter Five

Phase Two: Case Study of a First-year Study Group

To complement the general description of study groups previously presented, this chapter focuses on one group to provide detailed information about what occurred as these four students met in eight sessions over the term. Several frameworks for analyzing the 319 pages of transcripts were developed. Two were chosen: (1) a coding system to convey content information; and (2) a cluster analysis to discover indicators of interactions.

The Study Group

Characteristics of group members. The study group composition included three men and one woman, all residing in university residences. All were between the ages of 17 and 19 years and came from communities in southern Ontario. Students introduced themselves to other members at the first meeting. A pseudonym was selected by the researcher to retain the confidentiality of members.

The first member of the group was Bal who described his family and interests. A friendly and articulate young man, accepted into the Arts Accounting Program, Bal's hope was to complete the program and achieve the Certified Accountant designation within five years.
Well my name is Bal and I was born in Toronto but my parents come from India. I'm Sikh by religion. I don't know the kind of person I am but one of the things I like are sports. I love hockey, watching it, listening to it or playing it. (Mtg.#1, p.4, 28/9/94)

The second member of the group was Geeta. She was cheerful, organized and very patient in providing information to other members of the study group. Geeta decided to take several Arts courses before making a final decision to major in Economics. Her career goal was to work in the business, commerce or marketing areas.

My name is Geeta. My parents are from India too. I was born there and I came to Canada when I was two years old. I'm from Hamilton, the steel city. I guess I want to be an economist so that's why I'm taking the course. So I need 75 or above. I like sports. I'm a lifeguard and I like to play tennis, badminton and pick up sports like volleyball. (Mtg.#1, p.4-5, 28/9/94)

Mic was the third person in the group. Raised in a small town in Ontario, his adventuresome spirit had resulted in some interesting directions for him over the last two years. With his French language skills developed while on exchange, his options at university included majoring in French with an intention to teach upon graduation.

My name is Mic, and I'm from Sarnia. I used to live in a place called Tipowash for 18 years of my life then I decided to go to France last year on a student exchange program. When I came back my family had moved to Sarnia. So I went to a new high school. I've got a little sister. I get along with my family really well. I'm not religious at all. Golf's my favourite sport and I love reading,
travelling, and taking pictures. I'm in economics for international trade. I don't know if that is exactly what I want to do, but I think I want to do it. So we'll see. If it doesn't go, I won't go into it, and if it goes well, I will go into it. (Mtg.#1,p.5, 28/9/94)

The fourth member of the group was Kert from Ottawa. As the son of a Canadian diplomat, he had traveled and lived in countries with diverse cultures. Kert's decision to attend UW was based on the co-operative education program. It offered the opportunity to travel while completing a degree.

My name is Kert and I live now in Ottawa but my Dad is a Diplomat so I traveled a lot when I was growing up. You grow up a lot faster when you are doing that. That's all I have ever done. I went to Brookfield High School that was upper middle class but my family's never been rich. I want to travel and I don't care whether I go into International trade, political science, or whatever as long as I can get to see the world. (Mtg.#2, p.1, 3/10/94)

Previous experience with groups. In an informal interview at the end of the term, a canvas of the group revealed that no member had previous exposure with study group work experiences in high school. In addition to being a new learning experience, Bal said he would not have met with other students without the study group project.

We would not have probably even met each other had it not been for the study group. Each of us has different interests and each of us has our own courses, and friends. For me, the study group was for a course we were taking and it seemed
like it might be useful to understand Economics 101 better. It was really helpful in studying for midterm and finals in the course. (Bal, Interview, 12/94)

**Time and place of meetings.** The case study group meetings are summarized in Table 3-4. Using dates given in the course outline, sessions were planned emphasizing lecture reviews and exam preparations. Meetings were scheduled two to three sessions in advance in the residence cafeteria or lounge during quiet evening hours. Illness and time tabling conflicts occasionally prevented attendance for one or two members.

**Coding System**

**Development of the Content Categories**

With the text passages for each meeting categorized by descriptions, these were grouped together by common topic. From this step, the frequency of topics ranged from 110-246 text passages per meeting. Passages of the text were also deleted at this stage if there was no clear indication of a topic. This occasionally occurred from external noise recorded on the tape.

**Packages of content categories.** Placed together into common topical groups, the text formed groups or "packages" of content. If members started to discuss a topic, left the topic but returned to it later, this was added to the package. When all descriptive passages were collected, the content package
from the meeting was closed. This procedure lead to the development of 360 content packages across eight meetings.

**Selection of content names.** While the content matched the academic, personal and social categories discussed in Chapter 4 and summarized in Appendix L, the detail of these packages revealed additional categories might be selected. Therefore, seven content categories were developed and based on the information contained within the categories, seven definitions were developed as summarized in Table 5-1. A total of 20 to 64 content packages were contained across these seven categories.

Each of these content categories included (1) verbatim passages dealing with content from the text; and (2) supportive documentation identifying the meeting number, page number, and a brief title.

**Application of the Coding System**

**Distribution by Category**

Table 5-2 summarizes the number of packages of units reflecting content found across the categories over all meetings. Overall, the academic categories contained the largest percentage, 57.2%, while the personal and social categories were 30.0% and 12.8% respectively.
<table>
<thead>
<tr>
<th>Academic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1: Meeting Topics</td>
<td>How the meetings were set-up, instructional resources available to the group, preparing for further meetings, and closing meetings.</td>
</tr>
<tr>
<td>1.2: Course Content Topics</td>
<td>How the study group explored the Economics 101 course and topics discussed by the group.</td>
</tr>
<tr>
<td>1.3: Working Together</td>
<td>Methods by which the group worked together to better understand economics. Discussing economic problems with each other, sorting out confusion about content, problem-solving strategies including teaching a concept to others.</td>
</tr>
<tr>
<td>1.4: Evaluation Topics</td>
<td>Included preparing for midterms, completing sample exams and student awareness strategies for exam studying.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Personal</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1: Perceptions Topics</td>
<td>Members discussing their backgrounds with other in the group. Examples include learning about others, students’ perceptions of the course, midterms and university life.</td>
</tr>
<tr>
<td>2.2: Self-disclosure Topics</td>
<td>Members discussed personally meaningful issues including self-questioning about pursuing economics, positive expressions from the group towards self, personal stresses and coping with the academic lifestyle.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3:1 Conversation Topics</td>
<td>A variety of non-academic topics were discussed including sports, plans for holidays, Christmas and visits with others.</td>
</tr>
</tbody>
</table>
### Table 5-2

Categories by Meetings

<table>
<thead>
<tr>
<th>Meetings</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members Present</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Exams**

<table>
<thead>
<tr>
<th>Academic Category</th>
<th>1.1: Meeting Topics</th>
<th>1.2: Content Topics</th>
<th>1.3: Working Together</th>
<th>1.4: Evaluation Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24 34.8% 2 5.0% 2 3.2% 10 32.2% 8 40.0% 12 31.6% 3 9.8% 11 15.9% 72 20.0%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 8.7% 25 62.5% 0 0 2 10.0% 0 2 6.4% 11 15.9% 46 12.8%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 0 21 33.8% 0 10 50.0% 0 11 35.5% 6 8.7% 48 13.3%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 0 25 40.4% 0 0 4 10.5% 2 6.4% 9 13.1% 40 11.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Personal Category</th>
<th>2.1: Perceptions Topics</th>
<th>2.2: Self-disclosure Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21 30.4% 13 32.5% 0 13 41.9% 0 0 2 6.5% 3 4.3% 52 14.4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 0 8 12.9% 2 6.5% 0 14 38.8% 11 35.5% 21 30.4% 56 15.6%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Category</th>
<th>3.1: Conversation Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18 26.1% 0 6 9.7% 6 19.4% 0 8 21.1% 0 8 11.6% 46 12.8%</td>
</tr>
</tbody>
</table>

**Total**

| Members Present | 69 100.0% 40 100.0% 62 100.0% 31 100.0% 20 100.0% 38 100.0% 31 100.0% 69 100.0% 360 100.0% |

**Notes:**

- Denotes a midterm exam in the course
- Denotes a final exam in the course
**Academic category.** In reviewing Table 5-2, study group meeting topics (1.1) were consistently discussed at each meeting across the term. In fact, this was the only topic that was mentioned from 3.2% to 40.0% across the term. Content topics (1.2) were initially very strong at 62.5% by the second meeting; however, this was reduced over the term and replaced by working together (1.3) which gained increasing prominence over the term.

At meeting three, there was a close relationship between working together (1.3) and evaluation topics (1.4) prior to the first midterm. For example, students spent 33.8% of the meeting working together and 40.4% on evaluation topics. The two members attending the meeting quickly agreed on how they would perform their evaluation task using questions contained in their first practice midterm. Working through this sample exam was, for this group, a catalyst for working together as the following exemplar illustrates:

Bal I figure what we could do is go through each question. Start with that and then we can go back and refer to our notes later. I figured we'd go through it, compare answers, and try to analyze each question. What do think?

Mic That sounds good. (Mtg.#3, p.1, 5/10/94)

Bal The question refers to "most circumstances" (said in unison).

Mic That's right

Bal As opposed to "all circumstances".
Mic  So you got to search your brain for some of the answers.

Bal  Exactly, you got to think a little bit on the extreme side to correctly answer some of these questions. (Mtg.#3, p.16, 5/10/94)

At meeting seven, in preparation for the second midterm, they had increased their members to three. The discussion focused on working through the second sample midterm. They spent time discussing the content and type of questions that might be asked and less time on the actual answers to the sample exam questions. This was clearly reflected in the percentage (35.5%) of time spent together analyzing the exam. They focused on explaining and questioning economic concepts they felt would be on the exam, rather than simply working through the sample questions on the exam as they had done in meeting three. This is illustrated in the following exemplar:

Geeta  Some questions you are going to know right off the bat. If you take ten seconds to answer one question you can give a lot more of your time on another question that's harder. That's how he has designed it so far.

Bal  Exactly

Kert  Yes. Maybe there will be some easier questions that can be done faster and I suppose some that will be harder, using more skill and time. (Mtg.#7, p.92, 2/11/94)
At meeting eight, the last meeting of the term, all four members were present and discussion centered around the final exam. There was a balance between all four academic topics as shown in Table 5-2.

**Personal category.** As noted in the Table 5-2, self-disclosure topics gained increasing prominence recording levels of above 30% in each of the last three meetings of the term. Content varied, and one discussion illustrated the amount of stress, pressure and personal questioning of the members in their first-year at university.

Bal If I don't make it in Accounting, where would I go? I can't answer that question. Co-op is what really brought me here and if that goes then I'll really have to consider all my options. My dad has been unemployed for a couple of years now and he's been on temporary contracts.

Kert My dad's retired, but I have the problem of going back home having failed. That would kill me. That hurts.

Bal Your parents are saying "My son is off to university studying this", and bragging to their friends. You just can't imagine the disappointment there's going to be.

Kert To come home with a 72. I mean that's not a fail in any book, but too bad it is here. That's what really rubs me the wrong way. I suppose the university has established things to live with but really.... (Mtg.#7, p.7, 2/11/94)
This type of self-disclosure illustrates the importance of gaining success at university and what it means to students and their families. Failure to achieve these goals weighs heavily on these students’ minds.

Social category. As summarized in Table 5-2, members regularly focused on conversational topics throughout the term. These were non-academic discussions, frequently on sports, travel or social club activities, as indicated by the following quotation.

Mic  I also joined the French club called the French Circle.

Bal  What do you guys do?

Bal  A social thing. That’s cool.

Mic  It’s like your India Students Association. Just meet and talk. The main purpose of the club is to speak French.

Bal  Right. That’s cool.

Mic  Anyway, I guess we should get down to business, right? OK, then for 1, I marked “c”.... (Mtg.#3, p.3, 5/10/94)

Members used conversations when the group required a break from their academic work. Topics were usually short with one group member refocusing the group to academic work.
Cluster Analysis

While the analysis using the coding system provided a general portrayal of the group over eight sessions, I wanted to explore a way which would portray the distinct qualities of this group in more depth. I refer to this qualitative approach as cluster analysis.

Although quite familiar with the transcripts, I reread them with the intention of identifying the features which seemed to distinguish each meeting. My approach was intuitive, qualitative and attempted to identify the special characteristics of this group. My impressions led to three distinct areas or clusters: (1) Support; (2) Cohesiveness; and (3) Risk-taking.

With these three clusters identified as a preliminary basis for characterizing this group, the second phase of the analysis was to reconsider each transcript to see how it contributed to one of the three clusters. Each indicator is described below.

Support

The quotations taken across the transcripts produced different forms of support that characterized the interactions of the group. Some examples are listed below.

<table>
<thead>
<tr>
<th>Examples of Support</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I want to hear what Geeta has written because I didn’t write anything.”</td>
<td>(Mic, Mtg#2, p.4, 3/10/94)</td>
</tr>
<tr>
<td>“This has helped me because you gave me your input where I needed it.”</td>
<td>(Bal, Mtg.#3, p.24, 5/10/94)</td>
</tr>
</tbody>
</table>
These indicators were grouped into four different types of support: (1) consensus-building; (2) sharing with others; (3) encouraging others; and (4) co-operating with others. These are summarized in Table 5-3.

**Cohesiveness**

Reviewing the transcripts produced different forms of cohesiveness identified with the interactions of group. Two examples are indicated below.

<table>
<thead>
<tr>
<th>Examples of Cohesiveness</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;...there were times when I really appreciated getting together.&quot;</td>
<td>(Geeta, Mtg.#8, p.36, 14/12/94)</td>
</tr>
<tr>
<td>&quot;I wish I had something like this group in my other courses.&quot;</td>
<td>(Kert, Mtg.#8, p.36, 14/12/94)</td>
</tr>
</tbody>
</table>

These Indicators were grouped into three forms of cohesiveness; (1) appreciating the group; (2) understanding others’ needs; and (3) strengthening the group. Table 5-4 provides verbatim examples of these indicators of cohesiveness.

**Risk-taking**

The transcripts were reviewed for indicators of risk-taking displayed through group interactions. Two examples are illustrated below.

<table>
<thead>
<tr>
<th>Examples of Risk-taking</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;You have just got to do the best you can and hope that it is good enough.&quot;</td>
<td>(Mic, Mtg.#8, p.41, 14/12/94)</td>
</tr>
<tr>
<td>&quot;I’m sure we’ll all be ready by tomorrow. Don’t worry about it.&quot;</td>
<td>(Kert, Mtg.#8, p.41, 14/12/94)</td>
</tr>
</tbody>
</table>
### Table 5-3

**Cluster #1: Indicators of Support**

<table>
<thead>
<tr>
<th>Type of Support</th>
<th>Verbatims</th>
</tr>
</thead>
</table>
| Consensus-building              | "Where do you want to start?"  
(Bal, Mtg.#2, p.4, 3/10/94)  
"I figured we'd go through it, compare answers, and try to analyze each question. What do you think?"  
(Bal, Mtg.#3, p.1, 5/10/94)  
"That sounds good."  
(Mic, Mtg.#3, p.1, 5/10/94)  
"Yes and then we'll see how well we do."  
(Kert, Mtg.#3, p.2, 5/10/94) |
| Sharing with Others             | "Is there anything you would like to ask me?"  
(Geeta, Mtg. #1, p.5, 28/9/94)  
"I mean that's not a fail in any book, but too bad, it is here."  
(Kert, Mtg.#7, p.7, 2/11/94)  
"Do you think one of us should give Geeta a call to tell her when the next meeting is?"  
(Mic, Mtg.#5, p.20, 26/10/94) |
| Encouraging Others              | "If we can finish this question, that'll be it for tonight."  
(Mic, Mtg.#3, p.23, 5/10/94)  
"Excellent. You're getting the hang of this."  
(Bal, Mtg.#3, p.16, 5/10/94) |
| Co-operating with Others        | "You helped me when I had problems so we all helped each other."  
(Bal, Mtg.#8, p.99, 14/12/94)  
"I don't know if you guys think it's important-what would you like to do?"  
(Geeta, Mtg.#2, p.4, 3/10/94)  
"Do you have any questions about this?"  
(Mic, Mtg.#3, p.24, 5/10/94) |
Table 5-4
Cluster #2: Indicators of Cohesiveness

<table>
<thead>
<tr>
<th>Type of Cohesiveness</th>
<th>Verbatims</th>
</tr>
</thead>
</table>
| Appreciating the Group | “You guys are really helpful in helping me to sort this stuff out.”  
(Mic, Mtg. #3, p.13, 5/10/94)  
“I wish I had something like this group in my other courses.”  
(Kert, Mtg.#8, p.36, 14/12/94)  
“Your aim is not to destroy the group-the group is there to help you, not work against you.”  
(Bal, Mtg.#6, p.29, 31/10/94) |
| Understanding Others’ Needs | “When I came to university, I needed something to get me going so you have helped me get through the midterm.”  
(Mic, Mtg.#4, p. 22, 12/10/94)  
“O.K. We could start with that problem. What page did it start on again?”  
(Bal, Mtg.#7, p.2, 2/11/94)  
“That’s a good example, I’ll remember that.”  
(Kert, Mtg. #3, p.10, 5/10/94) |
| Strengthening the Group | “I wish I had something like this group in my other courses. I could have really used it in my German class.”  
(Kert, Mtg.8, p.36, 14/12/94)  
“I know what you mean, I’m exhausted too.”  
(Mic, Mtg.#8, p.44, 14/12/94)  
“Back to work-that was a nice break!”  
(Kert, Mtg.#3, p.23, 2/11/94) |
The indicators were grouped into three different forms of risk-taking; (1) risk-taking by members; (2) risk-taking in the course; and, (3) risk-taking by the group. These are illustrated with verbatim examples in Table 5-5.

Implications from this Work

Three preliminary clusters emerged from this specific experience. This type of clustering analysis may be applicable to future practitioners and researchers interested in using a cluster analysis for further studies.

Study Group Benefits

Just as the objective coding system provided information on the academic, personal and social categories, so too were similar results found in the case study. These benefits are highlighted below.

Academic Benefits

Throughout the term, members used the factual information in class for their study group discussion as seen below.

Geeta  OK. I have here that in 1993 the Canadian economy grew faster than Japan.

Kert  I think I have that somewhere.

Mic  Yeah, I remember doing that.

Bal  I know we have more percentages of exports than Japan.
Table 5-5

Cluster #3: Indicators of Risk-taking

<table>
<thead>
<tr>
<th>Types of Risk-taking</th>
<th>Verbatims</th>
</tr>
</thead>
</table>
| Risk-taking by members                    | “Well, we are all back for the second meeting which is a good sign!”  
  (Bal, Mtg.#2, p.2, 3/10/94)  
  “Maybe we are all so scared, we have decided to group together.”  
  (Mic, Mtg #2, p.3, 3/10/94) |
| Risk-taking in the Course                 | “I’m beginning to think it isn’t that tough as long as you think about it.”  
  (Mic, Mtg.#3, p.20, 5/10/94)  
  “As long as we make up our reference carefully, we can refer to that in the exam.”  
  (Bal, Mtg.#3, p. 24, 5/10/94)  
  “I hope we have covered enough for the exam - I guess our marks will tell the tale.”  
  (Kert, Mtg. #8, p. 76, 14/12/94) |
| Risk-taking by the Group                  | “Sort of wish the others were here. It helps to get another view on some of these things.”  
  (Bal, Mtg. #5, p.14, 26/10/94)  
  “I'm sure we'll be ready by tomorrow. Don't worry about it. We've studied hard”  
  (Kert, Mtg. #7, p. 48, 2/11/94) |
Geeta  Yes, it says here from 1970 to 1990
Canada was the principal exporter of autos
to the U.S.  (Mtg. #2, p.6, 3/10/94)

The members used an interactive learning skills by adding additional
components of application, reasoning and synthesis in their study group
discussions. Teaching each other economic concepts, using a questioning
style to apply factual information to "real-life" situations and promoting
understanding through active discussions were performed in the group.
Members were aware of their ability to learn through discussion but would not
have otherwise had a place to develop this skill had it not been for the study
group experience. Kert expressed his feeling about the experience.

Kert  I find it is just nice to have somebody to
talk at, not necessarily to. Maybe it is a
quirk with me, but I sit there alone and I
won't understand the problem.
Somebody will say what don't you
understand and I'll sit there and talk it
out. By the time I finish my sentence, I'll
understand the problem that I never
would by myself. It happens to me all
the time.

Bal    No, I agree. I'll be sitting there reading a text
for another class and nothing is going in until I
say it out loud. I have to hear it in order to
understand it. (Mtg. #7, p.2, 2/11/94)

Personal Benefits

Similar to the benefits raised by other contact members, this group
expressed a feeling of responsibility to others for having the opportunity to
come to university for further education. Kert and Mic expressed the feeling
that with the opportunity to come to university served as a confidence booster for them.

Kert  You know, I have got to say I really enjoyed the course. I liked it. It was the best course I took this term. The instructor was really excellent, the topics were Canadian and covered in interesting ways and the study groups were there if you wanted to participate in them.

Mic  I'm going to really upset if I do badly on this exam. I got a lot out of this course. Kert, I am really pleased I've been able to handle this course. You know, sometimes you wonder how you are doing....at least in this course, I'm fine.

Mic  Yes, I know what you mean. It's really a good feeling. Mtg. #8, p.96, 14/12/94)

It was also a time which brought feelings of responsibility, guilt and self-doubt about courses and plans for the future.

Kert  I came to university with the feeling that I knew I could do well with just a little bit of work. I wasted valuable time early in the term with a lot of parties, drinking and generally having a ball. (Mtg. #7, p.7, 2/11/94)

Social benefits

Over the term, the members developed a friendship with each other.

Their conversations were based on sports, travel or their future plans including going home for Christmas as captured in the following quote.

Bal  My parents are coming to get me right at 10:00 at night.
Geeta They are?

Bal As long as the weather's good.

Mic So you get to pack tomorrow morning?

Bal No, I've packed.

Kert I'm packed too.

Bal I packed yesterday, that's what I did after the Computer Science exam.

Geeta I haven't even packed yet and I'm leaving on Friday. I can't leave until Friday afternoon.

Bal Oh, you have an exam on Friday?

Geeta I don't, but I can't go home Thursday night because I haven't started packing. It's going to take me all day and my dad wants to come in the morning so Friday's the day.

Bal Nice little break there. On to topic 10.
(Mtg. #8, pp. 26-27, 14/12/94)

The friendship between members was genuine with each actively contributing to the conversation in unique ways. Such socializing was consistent over the term and the members frequently used conversation topics to break from study group work.
Chapter 6
Summary and Implications

This chapter summarizes the study's results in terms of (1) establishing a foundation and support for the program; (2) characterizing study groups; (3) suggestions for future study group programs; and (4) implications for future practitioners and researchers.

Summary of the Study

Establishing a Foundation

The support of the university was obtained through the participation of a Committee composed of members of the Teaching Resources and Continuing Education Office (TRACE), the First-Year Arts Office and two faculty responsible for teaching large first-year Arts courses. The Committee discussed the recommendations of the first-year focus group study and agreed on the feasibility of exploring study groups to help students cope with the challenges of their first-year academic studies. This step marked the establishment of the program with agreement and support of the university administration, faculty and student constituencies.

The results of the pilot project indicated that (1) an introductory study group brochure would be needed; (2) a study group questionnaire would be
useful in planning the facilitation teams; and (3) former study group participants would help in explaining the study group program at the Orientation meeting.

Initiating the Study Group Program

Students at the first class were introduced to the program by the instructor and he reviewed the successful results gathered from the pilot project conducted a year earlier in his class. He introduced me, as the program facilitator, to give a brief description of the program. At the conclusion of the session, questionnaires were returned by 221 students. An invitation was extended to these students to attend an Orientation meeting the second week of class (1) to learn more about the program through a student study group panel discussion; and (2) to form study groups.

At the meetings, study group participants from the pilot project talked about the way in which study groups helped them cope with their academic course demands. The students reaffirmed the importance of communication, commitment and flexibility to ensure the study group served the needs of the group. Following this, facilitation teams were introduced and students were directed to the facilitation team responsible for their program. Each facilitation team helped the students to identify dates, times and meeting places with students forming into groups. Students completed a study group membership form with names, addresses and/or phone numbers of each group member; one member was selected as a contact person for the group;
and an extra copy of the form was completed and given to the facilitators to be used for a follow-up telephone interview. Study group members were also given practical tips to begin their next study group meeting.

**First and upper-year representation.** First-year students made up 54.4% (206 students) of the Economics 101 classes, while 45.6% (172 students) were upper-year students. As summarized in Table 6-1, the program was successful in attracting first-year students into the program. More first-year students completed the questionnaires, attended the organization meeting, formed study groups and were active study group meeters than upper-year students.

Of the 54.4% first-year students, 79.1% completed questionnaires, 38.3% attended the organization meeting, 32.6% became study group members and 26.2% were study group meeters. This participation rate was achieved in a voluntary program in which the decision to continue with the program remained with the students throughout the term. Further, the commitment to the study group program by those who participated was achieved with minimal economic or staff costs to the university administration.

**Gender Representation.** As seen in Table 6-2, class enrolment revealed that 68.5% and 31.5% respectively were male and female. Men represented slightly more than twice the number of women in class.
Table 6-1
First and Upper-year Student Responses

<table>
<thead>
<tr>
<th></th>
<th>First-year Students</th>
<th>Upper-year Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class Enrolment</td>
<td>206</td>
<td>172</td>
<td>378</td>
</tr>
<tr>
<td>Questionnaires</td>
<td>163</td>
<td>58</td>
<td>221</td>
</tr>
<tr>
<td>Organization Meeting</td>
<td>79</td>
<td>23</td>
<td>102</td>
</tr>
<tr>
<td>Study Group Member+</td>
<td>67</td>
<td>19</td>
<td>86</td>
</tr>
<tr>
<td>Study Group Meeters*</td>
<td>54</td>
<td>13</td>
<td>67</td>
</tr>
</tbody>
</table>

Notes:

+ Based on the 23 Study Groups formed.

* Based on 18 Study Groups that Met and excluding the 3 Study Groups that Did Not Meet and the 2 Study Groups from which there was No Response.
Table 6-2

Gender Representation

|                          | Women |   | Men |   | Total |   |
|--------------------------|-------|--|-----|--|-------|--|--|
| Class Enrolment          | 119   | 31.5% | 260 | 68.5% | 378 | 100.0% |
| Questionnaires           | 72    | 60.5% | 149 | 57.3% | 221 | 58.5% |
| Organization Meeting     | 43    | 36.1% | 59  | 22.7% | 102 | 27.0% |
| Study Group Members+     | 37    | 31.1% | 49  | 18.8% | 86  | 22.7% |
| Study Group Meeters*     | 29    | 24.4% | 38  | 14.6% | 67  | 17.7% |

Notes:

+ Based on the 23 Study Groups formed.

* Based on 18 Study Groups that Met and excluding the 3 Study Groups that Did Not Meet and the 2 Study Groups from which there was No Response.
Interestingly, these percentages were consistently reversed when percentages were gathered for questionnaires, organization meetings, study group members and study group meeters. In each case, rates were greater for women in planning and participation in study groups. While the program facilitator was female, study group panelists and facilitator teams were composed of equal numbers of males and females. This suggests study groups may be accessible to women reflecting preferred ways of learning and working (see Belenky et.al, 1986).

Characterizing Study Groups

Overview of the Study Group Program

Study group response rates. The results from the telephone evaluation indicated 18 or 78.2% of the 23 study groups met during the term. Of the total 23 groups, 30.4% met regularly, 17.4% met periodically, 21.8% met to study for exams, and 8.7% met occasionally to study. Those who had indicated a desire to meet but did not do so over the term (i.e. study group non-meeters) composed a further three study groups or 13.0% of the 23 study groups, while those that did not respond to the telephone interview (i.e. the "no response" study groups) represented two groups or 8.6% of the 23 study groups over the term.
**Frequency of meetings.** The majority of study groups met once, and occasionally twice a week, to review course materials and midterm preparation. Periodic meeters raised questions about lecture or independent readings, while exam meeters met only to study for the three exams scheduled for the course. Occasional meeters had difficulty in arranging consistent common times for meetings over the term.

**Size of groups.** Study groups were formed with three to seven members, however, four members developed as the most practical size for study group membership. Membership of four ensured the groups had some flexibility to continue with their meeting plans when others were ill or temporarily absent from the group. The only group with more than four members (i.e. seven members) did not meet at all.

**Purposes of meetings.** As summarized in Table 4-4, members cited many academic purposes for their meetings. These included explaining economic concepts, reviewing midterms, discussing graphic information, organizing, reviewing and summarizing material. These academic purposes were specific, descriptive and clearly indicated how the study groups used their time together.

Personal reasons for meeting included discussions about coping at university and efforts to rely on each other to clarify concepts rather than asking the instructor. Working together was cited as an important purpose for meeting regularly. The peer support which developed through the study
group experience offered new friendships to first-year students in an academic course setting.

**Academic achievement.** When the effect on academic achievement was investigated, it was found that the study group participants showed a higher grade point average than those that did not participate. This difference was not statistically significant.

**Non-study group participants.** Telephone interviews were conducted with ten first-year students who had not volunteered to participate in the study group program. These students cited the difficulty in working in small groups and personal worries of over-commitment in their first-term university courses as the two major reasons why they had not volunteered to participate in the program.

**Benefits of the study group program.** As summarized in Table 4-5, students reported the academic benefits of the study group program included the opportunity to clarify content and to work with others in a class. While students had no previous background in study group programs in high school, they felt this concept would be of interest in other first-year courses as a way to build friendships and to reinforce academic content presented in class.

It is also interesting to consider that students felt building a sense of co-operation in study groups helped reduce competition between themselves. For example, students felt study group programs should be expanded to
other large, first-year classes. Meeting new first and upper-year classmates and talking about future course selections with others were seen as important benefits of the study group program.

**Instructor benefits.** The instructor indicated several positive perceptions he felt were important for his class. These included (1) the positive impact that study groups created as students embarked on their course work; (2) students working together offered the opportunity to develop a small student network amongst their peers in the course; (3) the diversity of the student experience enabled students to offer one another support as they dealt with the challenges of university life; and, (4) the opportunity to experience the advantages of working together.

**Case Study Summary**

The case study focused on four members of a first-year study group. The members had not met together previously and had no experience in working with small groups. Each study group meeting was taped by the participants and later transcribed for analysis to learn how one study group proceeded across the term.

A coding system was developed and applied to the transcribed passages. Academic categories made up the majority of the passages with specific trends noted. For example, working through the exams together became of greater concern over the term, with more students participating in the discussions over the term. In the personal category, self-disclosure rose
in the term as students were more comfortable in sharing their own experiences with each other.

To portray the unique richness of one study group's interactions, a cluster analysis was completed illustrating the qualitative aspect of the group. By categorizing all the indicators of support, four different forms of support were identified: (1) consensus-building; (2) sharing with others; (3) encouraging others; and (4) co-operating with others. Similarly, the indicators of cohesiveness revealed three different types of cohesiveness: (1) appreciating the group; (2) understanding other's needs; and (3) strengthening the group. Finally, the indicators of risk-taking included three aspects of risk-taking; (1) risk-taking by members; (2) risk-taking in the course; and (3) risk-taking by the group. By exploring these qualitative aspects, new perspectives into the insight of the group were possible in ways that objective analysis did not reveal. This form of exploration can be useful to practitioners and researchers interested in exploring these factors in future studies.

There were academic, personal and social benefits stemming from participation in the group. Academic benefits included peers teaching, a questioning style of study, and an active learning strategy for members. Personal benefits included discussions about self-confidence and the sense of responsibility that members feel as they undertake a university education.
Developing new friendships are the social hallmarks of study group participation.

Student and Instructor Suggestions

Students recommended expansion of the program to include other first-year courses in departments which offer large, introductory classes. Because students often do not know other students, this program helps them bridge the transition barrier by establishing a way to develop peer support groups within large first-term classes.

Students also suggested that providing useful tips in ways of working in small groups were helpful. This could be facilitated by offering illustrations of how study groups might handle sample problems taken from a course and demonstrating ways of dealing with this information by using and building small group communication skills. This might be addressed in a workshop at the beginning of term either in or outside class.

Students who did not volunteer to participate in the study group program may have reservations, as one student expressed, about time commitments required for the study group program. A suggestion was offered to disseminate information on the study group program (e.g., a brochure could be mailed out with registration information) over the summer to give students an opportunity to read and learn about the program. This
brochure could include information about time commitments and would be a precursor to participation in the program in September. Students would take some time to learn about the program over the summer and the program facilitator would re-introduce the program in September knowing information had been previously disseminated to students.

Implications

Building a Foundation

Over the past three years, I have conducted several workshops for senior university officials, faculty, graduate students and student leaders (See Appendix M). These have led to some innovative new program initiatives. For example, the workshop on Study Groups led the Department of Mathematics, York University, to initiate a pilot project of study groups using study groups in first-year mathematics courses in which students have traditionally worked independently.

Similarly, the Educational Development Office, University of Western Ontario, sponsored an informal discussion of the study group program in December, 1996 with senior university administrators. With their support, faculty are to be chosen from four Faculties to participate in a large pilot project of study groups in the Fall, 1997 involving several departments across campus. It is expected that 500 first-year students will participate in this
Study Group Program. Further details on the program have been accepted by the university (see Appendix N).

Student councils at Canadian universities may be interested in learning more about first-year study groups as a learning method for students. For interested institutions, the opportunity to build a foundation through the joint co-operation of the student governance, senior administrators, first-year office and/or instructional development centres serves — and is seen to be accountable — the academic goals of students, faculty and the larger university community.

Initiating the Program

The success of the study group program is predicated largely on the availability of student-to-student contact about the program. There is no substitute for students sharing information with each other. For this reason, the opportunity to develop a student study group manual based on the many quotations that students communicated to me and to each other could be easily prepared as convincing information for future first-year students. Alternatively, a tape cassette that would incorporate the actual quotations from first-year students could be assembled detailing one study group's journey through a first-term course. In either case, these could be made available to students in the summer months to prepare students for the study group program in September.
Student leadership. Within institutions, a student bursary or other government funded programs administered through student services could serve to provide upper-year students with an opportunity in providing leadership, advice and counsel to incoming study groups. Using upper-year students to participate in student study group panels was done in this study. They also conducted telephone evaluations with contact members, offering suggestions about how to work with others. These are experiences which upper-year students could positively participate in offering the program to others.

Learning and study skills. A workshop could be created to offer students suggestions and guidance when working with peers. Many student workshops are presently available on topics dealing with common student challenges (e.g., student procrastination, time-management, exam anxiety). These might be expanded to include workshops on how to work in study groups or effective ways to students to work with each other.

Research Implications

Follow-up studies. There were indications in the present research that members of a first-term study group remained friends after their course finished. In fact, one evening, while preparing to deliver a lecture, I met two of the case study members and was delighted to learn they were sharing off-campus accommodation while in their school term. Contacting first-term study group participants to explore if and how others were influenced as a
result of their decision to volunteer in the program could be done in future. Additionally, this might be of interest to the Alumni interested in promoting successful student programs to others.

While not previously explored in study groups research, retention rates and gender participation are two areas for further study. Ancillary studies might be planned to inquire whether retention rates are improved with study group programs and gender issues in relation to course content and group study skills might be explored.

**Learning strategy research.** With study groups occurring in the first-term of university, further study would be useful in exploring if students demonstrate the same pattern of student learning identified by Baxter Magolda (1992). Students may pass through "absolute knowledge" (Baxter Magolda, 1992) to a stage where peers are highly valued by first-year students and efforts made to work in a collaborative relationship with others.

**Transitional focus of the research.** While elementary and early secondary students are given the opportunity to work in collaborative and co-operative groups in school, learners in senior high school years often discover increasing emphasis is put on independent and competitive work. With this experience, it takes time to rekindle student co-operative and collaborative team skills by working together in first-year university. If this were developed as a common thread throughout the elementary and high
school years, it would lessen the challenge of making the transition to first-term university for students.

This collaborative form of learning offers an innovative approach to student studying and might also be used in developing workshops for others. Workshop Presentations on Study Group Research (see Appendix N) have been given in which the present research has been a central feature of presentations to faculty, staff and student leaders. A parallel workshop needs to be developed for interested students based on the present study geared to first-year students entering university.

The transitional stage of entering university is, by definition, a time of change. Study groups help students by offering a strategy to meet other people, to work together in a course, to encourage students to work together and to develop learning strategies to support them as they work through the course together. Study groups are a way to promote academic learning with peers in these times of reduced fiscal support in universities. By developing a program for first-year students, the strength of the program allows students control, autonomy, cooperation to learn and experience their academic, personal and social lives at university.
References


Williams, C. (June, 1975). The use of peer groups in assisting freshman students adjust to university. *University of Sydney: Research Report No.1.*


Appendix A

Summary of Study Group Planning Activities, 8/94
**Summary of Study Group Planning Activities**  
August, 1994

**Planning the Program**

- The Study Group brochures were written for distribution with the course outline the first night of class.
- Time constraints meant visits to class would be limited to the first lecture of class. The instructor and I agreed the study group program would be open to all first and upper-year students enrolled in the instructor's Tuesday or Thursday classes.
- The instructor and I agreed how we would introduce the study group program to students the first night of class, complete the study group questionnaire and to announce the dates, time and place for the organization meeting.
- The instructor and I agreed the study group project was independent from the course and no marks would be given for participation in this program. Students were told orally and verbally that no marks were associated with this program.

**Projected Activity for the Program**

- Rooms would have to booked for the organization meeting and panellists were confirmed
- Facilitation teams would be created to help students in forming their study groups
- Visits were planned for both of Larry's two classes to introduce the program, to distribute study group brochures and a short oral presentation as previously agreed upon with the instructor.
- The study group questionnaire would be completed by interested students and the results were tabulated prior to the organization meeting.
- In forming the study groups, the first priority was for common academic programs for students, followed by common times when students could arrange meetings.
- Meetings would be held with each facilitation team to give them the names and orientation sheets for students who might be in their faculty grouping
Appendix B

Study Group Brochure
Economics 101:
Study Group Guide

For
Larry Smith's Class
Fall, 1994

Prepared by
Jo-Anne H. Willment
TRACE Office
MC 4055
885-1211, Ext. 2001

Organization Meeting

There will be an informal meeting for students interested in forming Study Groups in Economics 101 on:

THURSDAY, SEPTEMBER 22ND @ 5:30-6:45 PM in MC 2065

We hope you are able to join us for this event!
Background to the Project

TRACE recently spoke with first-term students about their adjustment in coming to the University of Waterloo. Students told us about skills needed for university (i.e. organizing time, seeking out quiet areas for study; ability to set short-term goals in courses) and also commented on some unexpected academic challenges including:

- The amount of required reading for courses
- Diversity of teaching styles amongst professors
- Uncertainty about the first mid-term
- Managing academic pressures and stresses
- Students need to have self-reliant and independent learning style

The students suggested small informal study groups might be useful in helping cope with the new transitions to courses. Jo-Anne Willment and Larry Smith, instructor for this course, initiated a pilot project last Fall in which first-year students in his course had the opportunity to belong to study groups. Student results were very encouraging:

"Everyone in the group wanted to do better, it was a chance to review notes, it brought students together to meet one another which I would not have done if I had not signed up for the project";

"By talking it over together it is possible to explain what the lecture is talking about".

"Building a sense of confidence from each other and learning from each other was good for me".

The students involved in the project offered suggestions to us and recommended study groups be offered this September for students in Economics 101. This summer we have streamlined the process, and are inviting any student from first year, upper year or mature students from any faculty- to participate in the program if they so desire. Our hope is to offer study groups to other large, first year classes in future.

Benefits to Students

The advantages of study groups in Economics 101 include the following:

- they introduce you to a small group of students to work together on a course;
they give you the chance to ask students in your group to explain sometimes confusing or complex lecture material:

- they provide the opportunity for the group to summarize key concepts from lectures, study notes and texts;

- a group of peers is a great resource for preparing response sheets for exams or bonus assignments to build up your marks;

- and, they are a good way to informally develop friends in your class!

Our goal for study groups is to help YOU become more independent and active learners in the course. By putting in a small investment of time, study groups are an effective method to develop your competencies in academic areas. We know that upper year students frequently form student study groups to help them with academic material which is required, complex or difficult. By initiating this student strategy in the first-term of university, it provides you with the opportunity to develop an informal academic student support network to respond to the new challenges of the course and the university.

**Evaluation Methods Used in This Course**

We chose this course for our study group project because it is a large, introductory course which has many characteristics students frequently find in first year courses including:

- based on lectures, study notes and textbook readings, mastery of this course is completed through three multiple-choice exams;

- the first multiple-choice test worth 20% is given the week of October 4th (four weeks into the term), the second multiple-choice worth 20% is given the week of November 1st (eight weeks into the term), and the final multiple-choice exam is given in the examination period at the end of term;

- students may use summary sheets to take into exams;

- two optional bonus assignments each worth 3% can be done to add towards the final grade a student receives in the course;

- and depending on your program, an overall average of 75% may be required to remain in your academic program.
Organizing into Study Groups

For students interested in study groups, we are asking you to complete the Study Group Project sheet distributed in class. **WHEN COMPLETED, PLEASE GIVE THIS FORM TO JO-ANNE WILLEMEN**T. Study groups will then be created on the basis of the information you provide to us. We will attempt to "link" students together into small groups of 3-4 according to your academic interests.

Study groups will be created and an organization meeting will be held at the time shown below for you to meet and discuss with members of your study group what you would like to accomplish in the study group.

**THURSDAY, SEPTEMBER 22, 1994 @5:30-6:45 PM in MC 2065**

We anticipate that students who participated in study groups in last Fall's Economics 101 class will be available to talk about their activities and to discuss how study groups were useful to them. We hope you will be able to join us for this session.
Appendix C

First-class Announcement
NOTE TO USERS

Page(s) not included in the original manuscript and are unavailable from the author or university. The manuscript was microfilmed as received.

138-139

This reproduction is the best copy available.

UMI
Appendix D

Study Group Questionnaire
STUDY GROUP QUESTIONNAIRE

First Name: __________________ Last Name: ________________________________
Hometown/Country: ____________ Local Telephone: __________________________
Local Address: __________________________________________________________

Program: Undecided __ Decided __ Major: ______________ Hons_ Gen__
Faculty: ______________________

Are you an upper year student? No ___ Yes ___ Year _____

What is your academic goal for this course? ________________________________

What is your career goal at this time? ________________________________

In order to help us plan for the organizational meeting, it would be helpful if you could
give us some idea of the study group areas in which you are most interested. Please
mark a "1" beside your preferred choice, followed by a "2" and a "3" for your second and
third choices.

____ I would like to work with students who have an
academic or career goal.
    (eg. to do well in this course; interested in majoring
or minoring in economics; or a specific career)

____ I would like to work with students who are accessible to me.
    (e.g. students living on or off-campus)

____ I would like to work with students interested in
    understanding how economics applies to their discipline.
    (e.g., history major student looking at economics issues;
     computer science student looking at costs, supply
     and demand in the computer industry)

____ I would like to work with students studying for tests
    in this course.

____ I would like to have an upper year student in the group.

____ I would like to work with mature students.

____ Other? ________________________________
______________________________
Appendix E

Study Group Membership Form
ECONOMICS 101 STUDY GROUP MEMBERSHIP: FALL '94

NAMES OF YOUR STUDY GROUP MEMBERS:

1. ___________________________ Phone No: ____________
   Address:__________________________________________

2. ___________________________ Phone No: ____________
   Address:__________________________________________

3. ___________________________ Phone No: ____________
   Address:__________________________________________

4. ___________________________ Phone No: ____________
   Address:__________________________________________

5. ___________________________ Phone No: ____________
   Address:__________________________________________

WHO WILL CONTACT OTHERS IN THE GROUP INFORMING THEM OF THE NEXT MEETING?

__________________________________________________________________________

WHEN AND WHERE ARE YOU HAVING YOUR NEXT STUDY GROUP MEETING?

__________________________________________________________________________

PLEASE KEEP ONE COPY OF THIS FOR YOURSELF AND GIVE A DUPLICATE TO THE FACILITATORS
Appendix F

Things You Might Consider Doing In A Study Group
THINGS YOU MIGHT CONSIDER DOING IN A STUDY GROUP

(1) Hold a meeting to get to know others in your study group. For example-

* Where you are from; why did you come to UW?
* How have you found it so far?
* What courses are you taking?
* Have you ever belonged to a study group before?
* How might a study group help you?

(2) Plan a schedule of meetings over the term with your study group. This could include-

* working out a schedule when everyone can meet
* date, place and time for your meetings

(3) Use your course outline to plan agendas for your meeting.

(4) Make an appointment with the Study Skills counsellor as a study group to explore how you can make the most of your studying time.

(5) Sit together in Larry Smith's lectures. Ask questions in class. There is strength in numbers!!

(6) Regroup your collective studying strategies as you learn more about the course.

(7) Talk about the lectures with your study group. Ask questions of each other. Get problems sorted out early.

(8) What concepts does your study group anticipate in the exam? Work out a strategy for answering multiple choice questions.

(9) Talk with your group after the midterm class. What might you change the next time you write?

(10) A lot of things can be worked out by discussing this with one another. Communication and commitment are two of the strengths of study groups.
Appendix G

Telephone Questions Asked of Study Group Participants, 11/94
**Telephone Questionnaire**

My name is Jo-Anne Willment and I work in the TRACE Office at UW. We met in early September at an organization meeting for study groups in Larry Smith's Economics 101 course. I hope I am not calling at an inconvenient time, but I was hoping you might help by indicating your degree of success in meeting together with your study group. Some students have met, others have not met and would help to know about your experience. Do you have a few minutes to chat?

1. Did your group meet?

   IF THEY ANSWERED NO, GO TO SECTION B

**SECTION A**

2. Who met and how often did you meet?

3. What did you do in your meetings?

4. Can you give me some examples of your experiences?

5. What were the benefits for you in belonging to a study group?

6. Were there any drawbacks for you in belonging to a study group?

7. Do you have any additional comments that would you would like us to know about?

8. Have you any suggestions for improving the study group program in the future?

   GO TO SECTION C

**SECTION B**

9. It is important for us to know why study groups did not meet. Could you give the details about your experience with your study group?

10. Do you have any insights on the reasons for this?

11. Do you have any comments that would help us to handle problems of this kind in future study group programs?

12. Is there anything you would like to add at this time?
13. Would you recommend future study group programs in view of your experience?

SECTION C

Thanks very much for your time and comments. This information will be compiled and used if we decide to extend the program to other courses in future.
Appendix H

Telephone Questions Asked of Non-participants, 11/94
TELEPHONE QUESTIONS TO ECONOMICS 101 STUDENTS

Hello, this is Jo-Anne Willment calling from the TRACE Office, UW. You may remember last September I came to speak to Larry Smith’s Economics 101 class to tell students about a new Study Group Program for students in the class. It is this topic I was wondering if you had a few minutes to talk about on the phone. Is this convenient for you to discuss for a few minutes?

We were interested in creating study groups for the economics course. Participation in the program was voluntary, and some did follow through and others were not interested in joining at that time. My recollection is you were unable to join us at that time.

The purpose of this call is to check back with several students who did not pursue study groups and see whether you would have joined today knowing what you know now about the course.

1. Knowing what you know now about the course, do you think a study group might have helped you in this course?

2. How was this reflected in the course and your studying within the course?

3. In future, if we were again to offer this program is there anything we might have done in September that might have changed your decision?

Thanks very much and I really appreciate your time in helping us out.
Appendix I

Interview Questions Asked of the Instructor, 1/95
1. Who typically takes your course? What years and faculties are represented in your Economics 101 course?

2. Why do they take your course?

3. From the instructor's vantage point, who should join a study group?

4. Why do you think study groups work?

5. Is there any relationship between success in a university economics course and completion of a previous high school course in economics?

6. You didn't know who was involved in the project, did you have any feedback from students about the program?

7. With content becoming heavier, do you have any ideas on how study groups might be done differently in the future?
Appendix J

Phase One: Documentation Summary
## Phase One: Documentation Summary

<table>
<thead>
<tr>
<th>Type of Information</th>
<th>Code</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of Research:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ontario Human Research Forms</td>
<td>OHRF</td>
<td>5/94</td>
<td>20 typed pages</td>
</tr>
<tr>
<td>Organization Panel Invitations</td>
<td>LET1</td>
<td>6/94</td>
<td>8 typed pages</td>
</tr>
<tr>
<td>Study Group Brochures</td>
<td>SGB</td>
<td>8/94</td>
<td>6 typed pages</td>
</tr>
<tr>
<td>Study Group Questionnaires</td>
<td>SGQ</td>
<td>8/95</td>
<td>2 typed pages</td>
</tr>
</tbody>
</table>

**Outcomes of the Research:**

(1) Taped Interviews:

- Interviews-Personal: I-P, 9/94, 2 cassette tapes
- Interviews-Telephone: I-T, 11/94, 2 cassette tapes
- Interview- Faculty: I-F, 1/95, 1 cassette tape

(2) Transcripts:

- Confidentiality Letter: LET2, 10/94, 2 typed pages
- Transcript-Personal: T-P, 9/94, 24 typed pages
- Transcript-Telephone: T-T, 1/95, 70 typed pages
- Transcript-Faculty: T-F, 2/95, 30 typed pages

(3) Economics 101 Materials:

- Course Syllabus: CS, 9/94, 3 typed pages
- Course Notes: CN, 9/94, 250 typed pages
- Final Grades: FG, 1/95, 8 typed pages
NOTE TO USERS

Page(s) not included in the original manuscript are unavailable from the author or university. The manuscript was microfilmed as received.

155

UMI
Appendix K

Phase Two: Documentation Summary
## Phase Two: Documentation Summary

<table>
<thead>
<tr>
<th>Reference</th>
<th>Code</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audio Cassette Tapes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Group Meetings</td>
<td>SGM #1-#8</td>
<td>9/94-12/94</td>
<td>9 hours</td>
</tr>
<tr>
<td>Research Meeting: Study Group</td>
<td>RM</td>
<td>11/94</td>
<td>1 hour</td>
</tr>
<tr>
<td><strong>Transcriptions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Group Meetings</td>
<td>T-SGM #1-#8</td>
<td>10/94-2/95</td>
<td>383 pages</td>
</tr>
<tr>
<td>Research Meeting</td>
<td>T-RM</td>
<td>1/94</td>
<td>27 pages</td>
</tr>
<tr>
<td><strong>Journal Log</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journal Notes</td>
<td>JL</td>
<td>9/94-12/94</td>
<td>25 pages</td>
</tr>
<tr>
<td><strong>Economics 101 Materials</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Syllabus</td>
<td>CS</td>
<td>9/94</td>
<td>3 pages</td>
</tr>
<tr>
<td>Course Text</td>
<td>CT</td>
<td>9/94</td>
<td>300 pages</td>
</tr>
<tr>
<td>Course Notes</td>
<td>CN</td>
<td>9/94</td>
<td>250 pages</td>
</tr>
</tbody>
</table>
Appendix L

Categories in the Coding Systems
### Appendix L-1

**Summary of Academic Categories Across Meetings**

<table>
<thead>
<tr>
<th>1.1 - Meeting Topics</th>
<th>1.2 - Course Content Topic</th>
<th>1.3 - Working Together</th>
<th>1.4 - Evaluation Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meeting Preparation</strong></td>
<td><strong>Course Content Exploration</strong></td>
<td><strong>Working Together</strong></td>
<td><strong>Evaluation Topics</strong></td>
</tr>
<tr>
<td>Setting-up the Meeting</td>
<td>Exploring Economics 101 Course: <strong>Volume of Material</strong></td>
<td>Challenges to Each Other:</td>
<td>Preparing for a Midterm: <strong>Setting aside study time</strong></td>
</tr>
<tr>
<td>Arranging for Meeting</td>
<td>Assignments &amp; Tests</td>
<td>Repeating a Principle</td>
<td>Preparing the exam summary sheet</td>
</tr>
<tr>
<td>Dates, Times, Location</td>
<td>Bonus Assignment</td>
<td>Query #1 - little assistance given</td>
<td>Identifying what will go on the exam sheet</td>
</tr>
<tr>
<td>Review Notes</td>
<td>Use of Tutors</td>
<td>Query #2 - subtle disagreement shown between members</td>
<td>Lecture Sheet</td>
</tr>
<tr>
<td>Sample Midterm</td>
<td>Gathering Info vs. Applying Info</td>
<td>Query #4 - C trying to impress B</td>
<td>Cheat Sheets</td>
</tr>
<tr>
<td>Length of the Meeting</td>
<td>Independent Studies Units</td>
<td>Query #5 - B doesn't know what's happening but tries to</td>
<td>Cheat Sheets</td>
</tr>
<tr>
<td>Keep on Topic</td>
<td>Speed of the Lecture</td>
<td>follow the conversation.</td>
<td><strong>Evaluation Topics:</strong></td>
</tr>
<tr>
<td>Short-term Goal for Next Mtg</td>
<td>Time for Other Subjects</td>
<td><strong>(A) Options to Consider When Disagreeing with an Answer</strong></td>
<td><strong>Practicing Exam Topics</strong></td>
</tr>
<tr>
<td>Comparing Lecture, Text &amp; Midterm</td>
<td>Changing Lecture Times</td>
<td>Disagree with the given answer</td>
<td>Explanation of the Correct Answer</td>
</tr>
<tr>
<td>Sit Together in Class</td>
<td>Textbook Readings</td>
<td>Hierarchy of student response to the problem</td>
<td>Difficulty with question seeming to have two correct answers.</td>
</tr>
<tr>
<td>Getting Started</td>
<td>Response to the Instructor: <strong>Instructor's Lecturing Style</strong></td>
<td>- Discuss the answer amongst the study group</td>
<td>Self-correcting on an answer</td>
</tr>
<tr>
<td>Setting a Goal</td>
<td>Lecturer's Style</td>
<td>- Try to find the answer in the text</td>
<td>One member explaining a concept to another</td>
</tr>
<tr>
<td>Where To Start the Review</td>
<td>Discussion About this Instructor</td>
<td>- Phone others in the group trying to get clarification</td>
<td>One student asking another to explain a concept</td>
</tr>
<tr>
<td>Regrouping to Task</td>
<td>Acceptance of the Instructor's Knowledge</td>
<td>- Go to the TA for clarification before the midterm</td>
<td>Comparing himself against the exam timing</td>
</tr>
<tr>
<td>Moving to Another Location</td>
<td><strong>Topics Discussed:</strong></td>
<td>- Go to the Prof for clarification before the midterm</td>
<td>End of the time for the exam</td>
</tr>
<tr>
<td><strong>Instructional Resources:</strong></td>
<td>Sharing Notes on Topics</td>
<td><strong>(B) Positive Ways the Group Helped Each Other</strong></td>
<td><strong>(B) Final Exam Topics</strong></td>
</tr>
<tr>
<td>Office Hours</td>
<td>Lecture vs. Text Content</td>
<td>Identifying the key words in the question</td>
<td>Final exam copies</td>
</tr>
<tr>
<td>Reading the Chapter</td>
<td>Taking Notes</td>
<td>Explanation of the correct answer between group members</td>
<td>Request for a sample final exam</td>
</tr>
<tr>
<td>Textbook</td>
<td>Topic 2</td>
<td>Two members agreeing on the same answer</td>
<td>Group discussion about final MC exam</td>
</tr>
<tr>
<td>Previewing Text to Learn</td>
<td>Topic 3</td>
<td>Thinking aloud together on all the options given and then making a decision</td>
<td>Response to exam questions</td>
</tr>
<tr>
<td>Going Over Notes (Lecture)</td>
<td>Topic 4</td>
<td>Selecting the correct answer by progressing through logical steps</td>
<td>Final exam copies</td>
</tr>
<tr>
<td>Text Notes</td>
<td><strong>Topics Discussed:</strong></td>
<td>Talking out the answer together</td>
<td>Request for a sample final exam</td>
</tr>
<tr>
<td>Text Notes</td>
<td></td>
<td>Chatting about a question</td>
<td><strong>(C) Student Self-awareness Strategies for Exam Studying</strong></td>
</tr>
<tr>
<td>Reviewing Upcoming Material</td>
<td></td>
<td>Too bad we couldn't do the midterm in pairs</td>
<td>Ability to see where you went wrong and self correct</td>
</tr>
<tr>
<td>Volume of Material Still to Come</td>
<td></td>
<td>Return to the example again</td>
<td>Student's self-perception of not thinking it through</td>
</tr>
<tr>
<td>Figuring Out Lecture-Topic Schedule</td>
<td></td>
<td>Too bad we couldn't do the midterm in pairs</td>
<td>Reasoning through the answer alternatives</td>
</tr>
<tr>
<td>Textbook Readings</td>
<td></td>
<td>Return to a known example &amp; applies</td>
<td>Raising self-confidence by reasoning through the options</td>
</tr>
<tr>
<td>Identifying the Instructional Source</td>
<td><strong>Economic Concept</strong></td>
<td>New question</td>
<td>Importance of using your common sense for question</td>
</tr>
<tr>
<td>Economic Concept and Text</td>
<td>(Trailer Park Question)</td>
<td></td>
<td>Setting the question up differently (Verbal &gt; Math)</td>
</tr>
<tr>
<td>Reference</td>
<td>Explanation of an Economic Term</td>
<td><strong>Risk Taking by Student</strong></td>
<td>Talking out graph questions together</td>
</tr>
<tr>
<td>Lecture-IS Material Covered</td>
<td>Queries from a Group Member</td>
<td>Co-operation between each other</td>
<td></td>
</tr>
</tbody>
</table>
### Appendix L-2
Summary of Personal Categories Across Meetings

<table>
<thead>
<tr>
<th>2.1 - Perceptions Topics</th>
<th>2.2 - Self-disclosure Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning About Others' in the study Group</td>
<td>Self-Questioning</td>
</tr>
<tr>
<td>B- Member 1</td>
<td>Blowing a Future Program Option</td>
</tr>
<tr>
<td>G- Member 2</td>
<td>Should I Change My Plans?</td>
</tr>
<tr>
<td>M- Member 3</td>
<td>C- Asking if he is being confusing to the group</td>
</tr>
<tr>
<td>C- Member 4</td>
<td></td>
</tr>
<tr>
<td>Academic options for the Future</td>
<td>Positive Growth of the Group</td>
</tr>
<tr>
<td>Comparing Midterm Schedules</td>
<td>Encouragement to Take the Initiative</td>
</tr>
<tr>
<td>Comparing Study Strategies</td>
<td>Compassion for Illness</td>
</tr>
<tr>
<td>Students' Perceptions:</td>
<td>Raising others self-confidence</td>
</tr>
<tr>
<td>(A) Course</td>
<td>Thank-you</td>
</tr>
<tr>
<td>Student Response to the Instructor</td>
<td>Encouragement to Another Group Member</td>
</tr>
<tr>
<td>Self-doubt About Economics 101</td>
<td>Confidence booster</td>
</tr>
<tr>
<td>OAC Economics</td>
<td>Having to Say Goodbye to a Student</td>
</tr>
<tr>
<td>OAC Economics vs Economics 101</td>
<td>Insights from the Group</td>
</tr>
<tr>
<td>Student Perception of the Course</td>
<td>Concentrated Effort-one student's comment</td>
</tr>
<tr>
<td>(B) Midterm</td>
<td>Reunderstanding</td>
</tr>
<tr>
<td>Fear of Multiple-Choice Exams</td>
<td>Reviewing Material/Getting Organized</td>
</tr>
<tr>
<td>Ways of Reviewing Questions</td>
<td>Studying for Other Courses</td>
</tr>
<tr>
<td>Application of Topics</td>
<td>Student Comment About Difficulty of the</td>
</tr>
<tr>
<td>Time for the Test</td>
<td>Questions</td>
</tr>
<tr>
<td>Method of Marking Questions</td>
<td>Read the Questions Carefully</td>
</tr>
<tr>
<td>Question Format</td>
<td>Sections to Study</td>
</tr>
<tr>
<td>Midterm</td>
<td>Tricky Questions</td>
</tr>
<tr>
<td>Study Guide Questions</td>
<td>Student Stresses</td>
</tr>
<tr>
<td>Cheat Sheet</td>
<td>Feeling About Economic Midterm Mark</td>
</tr>
<tr>
<td>Student Seating for Exam</td>
<td>Other Course Marks</td>
</tr>
<tr>
<td>Cheating on a Midterm</td>
<td>Lack of Concentration in Lectures</td>
</tr>
<tr>
<td>Marks Posted</td>
<td>Frustration and Tired</td>
</tr>
<tr>
<td>Class Procedure for Reviewing Marks</td>
<td>Frustration and Help</td>
</tr>
<tr>
<td>Viewing Your Paper</td>
<td>Frustration with the Work</td>
</tr>
<tr>
<td>Bonus Assignment Discussion</td>
<td>Fairness</td>
</tr>
<tr>
<td>How He remembered The Question</td>
<td>Student's View</td>
</tr>
<tr>
<td>Exam Marks</td>
<td>Tired</td>
</tr>
<tr>
<td>Forgot Student Card</td>
<td>Worrying</td>
</tr>
<tr>
<td></td>
<td>Hard to Concentrate</td>
</tr>
<tr>
<td></td>
<td>Student Stress</td>
</tr>
<tr>
<td></td>
<td>Stress &amp; Time</td>
</tr>
<tr>
<td></td>
<td>Weary</td>
</tr>
<tr>
<td></td>
<td>Studying &amp; Sickness</td>
</tr>
<tr>
<td></td>
<td>Student Overload</td>
</tr>
</tbody>
</table>
3.1 - Conversational Topics

Travel Experiences
Stress
Fencing
Marketing Club
French Club
Marketing-DECA Club
Young Liberals of Canada
Visiting Home
Family Phone calls
Halloween Parties
Christmas Departure Plans
Friend's Plans
Christmas Shopping
Airport Visit
Conversation About Christmas
Stock Game
Psych Course
Accounting Course
Influence of Other Courses
Computer Science Course 100
Calculus Final
Hockey
Snack Time
Appendix M

Study Group Presentations
# Table 1

**Timelines for Study Group Program**

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Study Group Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr.25 '97</td>
<td>Preliminary Meeting</td>
<td>* Brainstorming of ideas</td>
</tr>
<tr>
<td>May 5 '97</td>
<td></td>
<td>* Planning Document</td>
</tr>
<tr>
<td>May 27 '97</td>
<td>EDO Meeting to discuss planning document</td>
<td>* Decisions made on courses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Pre-registration materials approved</td>
</tr>
<tr>
<td>May 28 '97</td>
<td></td>
<td>* Faculty notified about courses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Dates set-up for faculty meetings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Information to students duplicated for the pre-registration</td>
</tr>
<tr>
<td>Jun-Aug '97</td>
<td>Students introduce study group program to summer academic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>orientation program</td>
<td></td>
</tr>
<tr>
<td>Jun 20 '97</td>
<td>EDO visit</td>
<td>* Faculty meetings to create brochures</td>
</tr>
<tr>
<td>Jul 25 '97</td>
<td>EDO visit</td>
<td>* Draft brochure is discussed with faculty</td>
</tr>
<tr>
<td>Aug 5 '97</td>
<td>EDO visit</td>
<td>* Final copies of brochure produced</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Student training needs reviewed with Student Life Program Manager</td>
</tr>
<tr>
<td>Aug 22 '97</td>
<td>EDO visit</td>
<td>* Training begins with students</td>
</tr>
<tr>
<td>Sep 4-9 '97</td>
<td>Classes begin</td>
<td>* Willment addresses first year classes</td>
</tr>
</tbody>
</table>
Appendix N

Initiating A First-year Study Group Program
at the University of Western Ontario: A Planning Document
May, 1997
Initiating First-year Study Groups
at the
University of Western Ontario
September, 1997

Planning Document
May, 1997

Prepared by
Jo-Anne H. Willment
Teaching Learning Consultant
Waterloo, Ontario
Introduction

In September 1994, an innovative first-year study group program was developed, implemented and evaluated at the University of Waterloo. It was used by an instructor teaching two large classes of Economics 101. At the conclusion of the course, students reported how their first-year study group was successful in helping them to respond to their academic course work in the first-year course. Further, results indicated this program was extremely helpful in responding to the academic, personal and social transitions confronting students when coming to university.

Subsequently, the author was invited to present a synopsis of the first-year study group program for first-year university classes to the Educational Development Office, University of Western Ontario. Discussions were also held with the Vice-provost, Academic Affairs, and personnel from the Student Development Centre. Shortly thereafter, a decision was made to initiate a First-year Study Group Program at the University of Western Ontario under the direction of the Educational Development Office (EDO) in September, 1997. Serving as a Study Group Program Consultant to the Educational Development Office, we began to plan the program in April, 1997. A copy of the research was also shared with the Educational Development Office at that time.

At the first meeting, we were joined by the Student Life Program Manager and he identified the importance of linking together the academic components with residential life. This resulted in some informal guidelines for our work in the upcoming months.

Goals of the First-year Study Group Program

Preliminary discussion of the ambience of the university indicated key educational aims of first-year students as they pertain to the Study Group Program.

1) To convey to first-year learners the academic culture as a central component to the University of Western Ontario;

2) To integrate both on and off-campus residential accommodations into a learning community for first-year students;

3) To use the Study Group program to assist first-year students with academic performance;

4) To use the Study Group Program to help with first-year student retention rates; and

5) To promote friendship and support among first-year students.
Preliminary Objectives for the Study Group Program

Several objectives were decided upon for the study group program. These include:

- specific courses from four Faculties would be selected by the EDO to participate in an exploratory study group program;

- a set-up process would be developed in the Spring, 1997 so that first-year students would be introduced to the program when visiting UWO for the summer academic orientation program in July-August, 1997;

- a component within the training program would be provided by the Student Life Program Manager and the Consultant to ensure information on study groups was provided for academic residence programmers in August, 1997;

- the opportunity to work with students in the first days of class to organize study groups would be facilitated by the EDO Office;

- an evaluation component would be completed to monitor the progress of the study group program early in 1998;

To ensure acceptance and co-operation of others, it is essential that the following steps are initiated:

- the program needs to be explained, discussed and approved by each participating faculty member;

- the EDO and the faculty member for the course need to outline all details to ensure agreement on all arrangements;

- the method of evaluation for each course should be clearly identified for each course included in the program;

- arrangements should be discussed with the instructor about the way in which students are notified about the study group program opportunities; and

- all arrangements should be finished by August 15, 1997 to ensure all is in place for September, 1997.

Development of Study Group Materials

To introduce the Study Group Program to students, the following publicity materials have been drafted for discussion with a copy included in the Addendums of this document.
Introductory Letter. A short introductory letter is included (see Addendum A) which would be given to new students involved in the courses selected for the study group program. This letter is designed to provide students with the details of the program.

Study Group Questionnaire. Building upon the success of research into first-year study groups, a study group questionnaire has been drafted (see Addendum B) for approval. This would be completed by interested students registering for section(s) of a first-year course in which the study group program was to be offered in September, 1997.

Student to Student Communication. Research has demonstrated the best way to communicate the purposes and benefits of study groups is to have students explain the program to others. There are a number of ways this could occur.

- a brief handout could be prepared for pre-registration describing the aims and workings of a first-year study group as indicated in the brochure entitled Student Study Group Brochure (Addendum C) research. Some cost would be involved to distribute this at pre-registration but this would be a short-term publicity tool in preparation for September, 1997.

- a cassette tape suitable for a portable cassette player would include an introduction to study groups by students. This could be done using the quotes available from the research. Introducing the program auditorially would be an attractive method to introduce the program - perhaps in preparation for September, 1998.

- a cheery first-year study group guide written for students might be prepared outlining the case study of one first-year study group involved in a first-year course. This might be sold at cost to interested students through the UWO bookstore in September, 1998;

- a study group "package" might be prepared for students identifying how the students’ perceived the program, the resources applicable to program (e.g.; academic programmers, study skills personnel, first-year office staff), the cassette tape and a list of practical suggestions to try in study groups.

Because time is limited, Option #1 is feasible for the academic summer orientation set to begin June 9, 1997. If the program proves successful, we might look to developing a cassette tape and/or student information guide at a modest cost as a self-education tool for students planning to come to Western. This type of package would be unique in the Canadian university system.

Personal note: This program might also be of interest to publicity/marketing/alumni staff if they are interested in innovative ideas for first-year
students. There might be benefit in discussing this idea with UWO to see if they would be interested in addressing this discussion at some point.

Other Considerations

Certificates for study group participation. While this could be included in the study group handouts we might see how the program is received by Western students. It could be offered to successful groups at the conclusion of the academic year if desired.

Study group evaluation. Because this is a pilot project, an evaluation component should be included in the training session in August but a more detailed evaluation workshop should be entertained for those individuals involved in the process once the study groups have met for more than a term. The telephone interview protocols shared with the EDO needs further discussion in the Fall, 1997.

Timelines for Development

As a summary, Table 1 outlines the timelines set for activities over the next four months and links these dates with a set of timelines for the development of the study group program. If these timelines are useful, this would be the blueprint by which we the study group program is planned.
NOTE TO USERS

Page(s) not included in the original manuscript are unavailable from the author or university. The manuscript was microfilmed as received.

170-171
Addendum A

Pre-registration Introductory Letter
Welcome to Western!

The transition to university from high school or the employment world can be challenging for any student. For that reason, we are introducing a new program for first-year students this Fall called First-year Study Groups. It gives you the opportunity to link up with four students in one or more of your classes. Students often appreciate a "helping hand" to:

- introduce students to each other;
- meet colleagues outside of class to go over notes with each other;
- explain concepts to each other;
- review problems, assignments and textbook readings;
- study for midterms together;
- talk about their first-year course experiences with others; and
- help and support YOU in your course.

No marks are associated with this program but this is an opportunity to build friendships with others in your class. If you are interested in this program, more information is available in the brochure entitled "Student Study Groups: Would They Help Me?". A copy is available from the academic orientation leaders. It would be helpful to have you complete the form on the reverse side of this sheet to know how many students are interested in the program.

When you have completed the study group questionnaire, please return it to the academic orientation leader after you have completed your academic course selection for the fall. We will see you in September!

Educational Development Office, UWO
Addendum B

Study Group Questionnaire
 STUDY GROUP QUESTIONNAIRE

First Name: ___________________ Last Name: ___________________

Reference No. (ID No.) _______________ E-mail ____________________

Address: _______________________________________________________

Hometown/Province/Country _______________ Local London phone: _______

Will you be living on or off-campus? _ On-campus _ Off-campus _

What Faculty are you registering in? _________________________________

Probable Future Program: _______ General ___ Honours ___ Undecided ___

What is your academic goal at this time? ____________________________

What is your career goal at this time? _______________________________

Please list the first-year courses with sections you are registering for:
(Check with the academic leader if you need help)

(1) ________________________________

(2) ________________________________

(3) ________________________________

(4) ________________________________

(5) ________________________________

(6) ________________________________

Thank you for your help and we look forward to working with you this year. Please
hand this sheet to the academic orientation leader who is helping you with your
timetabling.
Addendum C

Student Study Group Brochure
WHAT ARE STUDY GROUPS?

Study groups are small groups of students meeting outside of class to discuss details of lectures, to exchange class notes, to work on assignments, to study for exams or to assist in other ways with a course. Students report they find fellow students a very valuable resource when working on student strategies for their course work. Study groups often informally meet for different reasons:

- enhancing understanding of lecture material;
- mastering key course concepts;
- reviewing for tests or exams; or
- preparing summary notes used for studying or exams.

If we were to eavesdrop on a study group, we might discover students utilizing various learning strategies such as:

- gathering definitions, understanding concepts, talking or examining concepts from lectures or notes, textbooks or readings;
- summarizing or explaining concepts to other members as a way to self-check knowledge of course content (e.g., “Can you explain the concept to me?”)
- breaking the course work into chapters or units and preparing summaries for other group members to review before exams;
- discussing results of practice multiple-choice tests together; or
- planning response strategies for the exam.

Study groups share many common characteristics which are useful to students.

- they are created on a voluntary basis (i.e. independent from the professor) and are composed of students from the same class or set of classes;
- the purpose(s) for the study group is controlled by the students (e.g., to pass the course, to major in the discipline; to learn about the subject);
- students collectively decide when, where and how long the group will meet;
- students decide how much group structure they want to organize their work;
• Successful study groups often operate in an informal and flexible style offering a diversity of tasks; and

• Friendships formed during study groups may continue after completion of the course.

HOW ARE STUDY GROUPS CREATED?

In some cases, study groups may be formed by students talking with classmates before, after or at break time through classes. First-year students enrolled in large, introductory courses may be glad of an "organizing" helping hand at an organization meeting designed to meet and form study groups. Alternatively, you could confer with a member of a student association (e.g., Economics Student Association), drop in for coffee at a student office (e.g., Lucy's, Centrespot, The Nucleus), chat with a student member of a club (e.g., Economics Reference Centre), discuss starting a group with the first-year student office or talk with an academic planner in your residence about it.

HOW MANY STUDENTS ARE IN A STUDY GROUP?

It is important you feel comfortable working with others. Working in groups of four is suggested— the group should be from the same class and should take time to get to know one another before beginning with academic course work.

WHAT CAN STUDENTS DO IN THEIR FIRST STUDY GROUP MEETING?

Get Acquainted.

The first meeting of the study group is an excellent opportunity to get to know other members of the group. Introduce yourself to other members (e.g., your hometown, where you presently live, perhaps your short or long-term personal or career plans, reasons for taking this course). You could also discuss how a study group could be helpful. For example, study groups may be a strategy to meet friends in a new university setting, a way to cope with a new style of instruction, or as a student response to the volume of reading and studying required of students in the course.

A study group should be an enjoyable experience for you— and the group!

Develop A Study Plan
It is often useful for a group to discuss how each student feels the course is going for them. This idea can be realized by having each member answer four questions:

1) What is your personal goal for this course?  
   (e.g.; "I think I am interested in majoring in this subject so I need a good mark in this course"; "I need to understand this course material"; "I need a 60% mark in this course")

2) What are your strengths in this course?  

3) What are your concerns about the course?  

4) How could the group help you achieve success in the course?  

Each question is handled one at a time. For each question, take a few minutes to privately write an answer and then ask each participant for their response. If a blackboard is close by, it may be possible to work out a study "plan" based on the answers to these questions. The purpose(s) of the study group are articulated by the members (Q.1), the strengths of the group are identified (Q.2), the study issues are known (Q.3) and a study plan can begin to be created (Q.4).

It is also useful to review the course outline for key dates (e.g., date of exams, study group meeting times) and course details (e.g. type of exams). When mid-term results or course assignment marks are received from the professor or TA, you may enjoy a debriefing meeting where the group can review and update their study plans accordingly.

THE DECISION IS YOURS.....

The decision is yours whether to take part in a study group for a course. We know study groups have proven to be very effective for students at other universities in Canada, the United States, Britain and Australia. When Harvard undergraduates were asked about their use of study groups, students reported that "study groups were absolutely crucial to academic progress and success". Further, they recommended "all students should at least consider, or try, participating in such a group".

For more information on how you can join a study group, contact the First-year Office.
Dates & Titles of Study Group Presentations

April, 1997  \textbf{Initiating a First-year Study Group Program}  
University of Western Ontario, London, ON

February, 1997  \textbf{A Strategy for coping with Large Classes}  
Ontario College of Art, Toronto, ON

February 1997  \textbf{First-year Study Groups at University}  
York University, Toronto, ON  
\textbf{Creating & Troubleshooting A Study Group Program}  
York University, Toronto, ON

December, 1996  \textbf{Study Group Research: What Can It Tell Us?}  
University of Western Ontario, London, ON

June, 1996  \textbf{Study Groups: A Learning Strategy for First-year Students}  
York University, Toronto, ON

November, 1994  \textbf{The Study Group}  
Learning and Study Skills Association of Ontario  
University of Toronto, Toronto, ON.

June, 1993  \textbf{Results of Pilot Project on Study Groups}  
Society for Teaching and Learning in Higher Education  
University of British Columbia, Vancouver, B.C.