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Appendices

Appendix A

Information Brochure

Information brochure and acknowledgement form for INF152

> It is important that you read this and then SIGN the Informed
> Consent form and HAND IT IN to the secretary in the Department
> of Informatics or the lecturer at your first INF152 lecture.

Dear student,

Thank you for taking the time to read this information brochure and complete the Informed Consent form. The research described here is intended to help me to evaluate one aspect of telematic teaching which also is relevant in modern virtual organizations, namely the functioning of virtual teams. You will benefit from the research in a number of ways. Firstly, by participating in it you will be encouraged to find out how you yourself prefer to learn. Secondly, students who choose to do assignments in teams will have greater control over when they study and how much time they spend on the module. And thirdly, you will discover first hand how technology can affect the working environment. It is hoped that the university as a whole will also benefit from the research and your contribution to it.

This research project allows you to choose from three different study options for INF152.
a)   You may:
- EITHER take this module in the traditional form of lectures
- OR only attend occasional lectures and work in groups via e-mail
- OR only attend occasional lectures and work in groups meeting face to face.
b)   Participation in the research is voluntary, if you choose the option of attending normal lectures you will be unaffected by the research.
c)   The research will only involve module INF152 and takes places in the second half of the first semester.
d)   You will be allowed to change from one option to another if you find an option unsatisfactory. This will have to be done in an orderly way as explained later.
e)   All three options will be fully supervised by lecturers and assistants.
f)   Feedback and comments from students will be encouraged and this will include having student representatives in a monitoring committee set up for the project.
g)   All the INF152 students will write the same examination and their final marks will be calculated using the same formula (that is, it will be calculated in all cases with the examination mark and the module mark each contributing 50% to the final mark.)
h)   Please sign the form that you have been given to confirm that you have been informed about the research and to tell us whether you want to participate.
i)   As part of this research it will be necessary that the lecturer:
- receives copies of all of the e-mail exchanged by members of the virtual teams as part of the project
- and records working sessions of the face-to-face teams.

Please remember that both I and the university have committed ourselves to complete confidentiality and you can be assured that your answers to questionnaires and other information recorded as part of this research will never be communicated to any third party or be used in any way to evaluate you.

If you would like more details about the research project please read Appendix A. This information will in any case be explained in the introductory lecture which will be given at the start of this module.

Refer to the last page of this brochure to see what you have to do with respect to this module.

Please complete the Informed Consent form which will be handed out separately to you.

Thank you for your co-operation

Mrs P M Alexander
Room 5-61, Dept Informatics, University of Pretoria
(012) 420-3367 or (012) 807-0983

Details of this research

What will be investigated in the research?

1.   Telematic education

As many of you may know, the University of Pretoria uses Telematic education in some courses. Clearly it is necessary to investigate ways in which it can be used most effectively and this is one of the purposes of this research.

What is Telematic education? It is the use of the Internet in education for any of a variety of purposes and allows students to get information, send messages or even do certain tasks at any time and at a distance.

a.   It can be used for primarily *administrative purposes*, for example, to ensure that you can get information about lecture times and venues, the dates of tests and examinations, what work you need to study for a particular test, and the mark you got for a test or assignment.
b.   It can also be used in the *teaching* of courses. Summaries of lectures, full explanations of topics, or links to additional articles which you might find interesting or which may explain a topic in a different way can be provided as web pages.
c.   Another way in which telematic education can be used is to present *tests* that are taken online or to allow you to check how well you know a topic by means of *online exercises* which are marked immediately and which include helpful comments if you give a wrong answer.
d.   Telematic education also allows students to discuss their work with their lecturers and other students via e-mail. This improved *communication* means that you can submit electronic versions of assignments via e-mail and the marked assignment can be returned in the same way.

All of these options are possible, but not all of them are necessarily used in all courses.

This research will focus on one particular aspect of telematic education where students work in teams. A detailed description follows but briefly the virtual team members communicate with each other and a lecturer via the facility provided by WebCT which is similar to e-mail, and complete assignments as a team.

1.   Virtual organizations and virtual teams

The Internet is also used extensively outside education as a part of the globalization of our modern world. This is particularly noticeable in e-commerce and virtual organizations and it is becoming increasingly important to teach Informatics students about this new development in Information Systems.

This research is, therefore, also intended to:

- teach you how to work effectively in a virtual team in case you have to work in a such a team in the future.
- allow you to experience how technology can affect you and your work activities when they must be carried out using it. This will give you a very real understanding of issues involved in Informatics. It is important that designers of technology based systems recognise that people are affected by these systems in numerous ways that are often difficult to predict.

How will the research be carried out?

1.   During the research students will be offered the choice between three different study options.

a)   *Lectures*

You may choose to attend three, double-period (one hour twenty minutes) lectures per week in which the content of the module will be covered.

If you choose this option you will be expected to:
- participate in discussions in class;
- work on assignments alone;
- take class tests;

b)   *Face-to-face teams*

You may choose to work on assignments as part of a face-to-face team.

If you choose this option you will be expected to:
- study the module on your own and as part of your team, using a prescribed book which covers the topic completely;
- attend a contact session (lectures with the rest of the teams and the lecturer) once every two weeks; (The contact sessions will be held after normal lecturing hours at 17:30).
- take class tests.

You are not expected to attend the regular lectures which are held three times a week although you may do so if you choose.

As part of the research we will monitor and record the activity of these teams.

c)   *Virtual teams*

You may choose to work on assignments in a virtual team with team members who communicate with each other only via e-mail.

If you choose this option you will be expected to:
- study the module on your own and as part of your team, using a prescribed book which covers the topic completely;
- attend contact session (lectures with the rest of the teams and the lecturer) once every two weeks; (The contact sessions will be held after normal lecturing hours at 17:30).
- take class tests.

You are not expected to attend the regular lectures which are held three times a week although you may do so if you choose.

As part of the research we will monitor and record the activity of these teams.

2.   Introductory lecture

All the INF152 students will be required to attend a lecture on cooperative work where we will discuss specific ways of working effectively in a virtual team. This lecture will be given at the usual lecture times and in the usual venues on Wednesday 28 March, Thursday 29 March and Friday 30 March. The ways in which the two different types of teams mentioned above must work together, how they will be monitored, how marks will be allocated for the assignments which are done by the teams, and how potential grievances will be handled, will also be discussed. It is important that you attend this lecture.

3. Selecting an option

   You will be given a limited amount of time after receiving this brochure in which to decide finally which of the study options you want to use (although we do ask you to give us a provisional indication of your choice in the Informed Consent form which you are to fill in on receiving this brochure). During the introductory lecture mentioned in point 2) above and you will be asked to fill in a questionnaire in which you finally decide and you explain why you made that choice. You may change your study option immediately after Assignment 1 has been submitted and before work on the Assignment 2 starts, provided that you complete the necessary request form and inform everyone concerned. Students who decide to work in teams must register the names of their team members and arrangements for monitoring the team activities will be made.

4. Recording team discussions

   As part of this research it will be necessary that the lecturer:
   - receives copies of all of the e-mail exchanged by members of the virtual teams as part of the project
   - and records working sessions of the face-to-face teams.

   The individuals whose comments are recorded will not be identified, and the records will be held solely for research purposes.

Virtual and face-to-face Teams

a. A team may consist of no more than six or fewer than four members.
b. Each team has its own personal character and culture and this is something that will be examined as part of the research.
c. Each team needs to communicate within the group in a language that all the team members are fluent in. This may be any one of the eleven official languages of South Africa (or even some other language).
d. You will choose your own team members (although we will try to help you to find a team to join if this is necessary). One of the important aspects of this research is that students are in teams where they feel comfortable, can communicate easily with each other, and trust fellow team members from the start.
e. All the members of a virtual team *as well as the researcher* must be sent all that team's e-mail.
f. All the members of a face-to-face team must be informed when and where the team is meeting. Two days advance notice must be given to the team members *and to the research office so that a research assistant can be present to record the meeting.*
g. Since we would like students to relate the information that they are learning about to their own life worlds and to the type of social structures that they are familiar with, it is

advisable for students in a team to have reasonably similar backgrounds. For example, in one of the assignments, one of the options is for you to design an information system for a public transport company. It would be useful if all the team members working together on this assignment had experience in using a particular type of public transport. Another option in this assignment is to design an information system for a crime prevention or security company. A team addressing the concerns of a particular type of community that all the team members are familiar with would work together better than one where some members had a different understanding of the issues.

Assignments

a. Assignment 1

This assignment will be available on 18 April. You may collect a printed copy from your lecturer during the normal INF152 lectures on 18 and 19 April, or from Mrs Alexander when you submit your lists of team members. It will also be available on the Internet.

a) Teams
- The first assignment will be a multiple choice assignment where each (every) team member will be required to answer different questions.
- The team members must check all the answers to the questions that they did not do, and if they do not agree with the answers give reasons and discuss the answers until consensus is reached.
- The members of each team will all get the same mark for the assignment (though different teams will probably get different marks) but the discussion entered into by the team will be noted by the lecturer and be taken into account in marking. Thus, if there is evidence that a team had a convincing argument for selecting an option, even if it was not the answer indicated as correct in the model answer, it would be given the mark.

b) Students not working in teams
Those students who are not working in teams will simply answer all the questions on their own and hand in the answers. The mark awarded will be determined in the usual way, that is, according to how the answers compare with the set of correct answers.

2.   Assignment 2

This will be in the form of a mini-project in which aspects of systems analysis and design must be considered in the context of an imaginary system. It will be available in the first week of May (30 April to 4 May). You can collect a printed copy from your lecturer during the normal INF152 or from Mrs Alexander. It will also be available on the Internet.

a)   Teams

All the students in the team are expected to participate actively in an attempt to relate the material in the prescribed text to an information system which they will describe. Each team member will be allocated a role to be fulfilled in order for the task to be completed. There will be at least one contact session in the period when students are working on this assignment in which they will be able to discuss it with a lecturer.

b)   Students not working in teams

The students will have the opportunity to discuss the exercise in class but will complete it individually.

Resources provided by the university

Students who wish to participate in virtual teams will need to use e-mail. The university will make e-mail facilities available but reserve the right to limit the amount of e-mail that a student may send and to whom. Access to computers and the Internet will be provided for this purpose but bookings may have to be made ahead. Students who choose to use e-mail from home cannot claim any compensation for the cost.

<div align="center">

Thank you for your co-operation

Mrs P M Alexander
Room 5-61, Dept Informatics, University of Pretoria
(012) 420-3367 or (012) 807-0983

</div>

What you, the student, need to do

Now (when you receive this pamphlet)
a)   Fill in the form given to you separately, which indicates that you have been informed about the project. It is essential that you do this as otherwise it will not be possible for you to participate in the project. The choice made now as to which option you want to take is not binding but we need some indication of numbers for initial planning. Please read this pamphlet carefully and decide on an option.
b)   If you want to work in a team, start thinking about who you would like to be in a team with.
c)   Buy the prescribed text book if you do not already have it.

March
d)   Make sure you write the dates of the compulsory information sessions into your diary (28, 29 and 30 March) and ensure that you attend one of these sessions.

During these information sessions you will be given further information regarding procedures, dates for the contact sessions in which all the teams and the lecturer(s) will meet, and we will discuss the use of e-mail as a management tool and the functioning of teams in virtual organizations (please note that this is not covered in the prescribed text).

During the information session (28, 29 and 30 March)
e)   Fill in the first questionnaire
f)   Help select representatives to be on the committee monitoring the research project.

April
g)   Submit a list of members in your team signed by each team member to the researcher, or place into Mrs Alexander's post box in the Dept of Informatics (no later than 19 April).
h)   Check that the list of members posted on the departmental notice board and web site corresponds with the list you signed. This will be posted on the notice board on 23 April. Changes must be in by 26 April.
i)   Ensure that you have a copy of the Assignment 01 questions for INF152.
j)   If you are working in a face-to-face team let the researcher know at least two days in advance when and where your team is meeting. The full team also need to be given the same advance notice.

May
a)   Submit Assignment 01.
b)   Ensure that you have a copy of the Assignment 02 questions for INF152.
c)   Submit Assignment 02.

Participation by
the University of Pretoria students who are registered for module INF152
in the Virtual Teams research project

. . . .
(Student's name)

. . . .
(Student number)

I voluntarily agree to participate in the project as explained in the Information Brochure for INF152. I understand of the nature and objectives of this research. I understand my right to choose whether to participate in the project and that the information furnished will be handled confidentially. I am aware that the results of the investigation may be used for the purpose of publication.

Mark the option you would most like 1 ; the next most acceptable choice 2; and the choice you least prefer 3.)

☐   I would like to study the module during my own time using the prescribed book as study material and to do assignments as part of a virtual team that communicate via e-mail. I will use my own e-mail (from home or work). I will attend the contact sessions between students and lecturers which will be held once every two weeks at 17:30.

☐   I would like to study the module during my own time using the prescribed book as study material and to do assignments as part of a virtual team that communicate via e-mail. I will need the university to give me access to e-mail. I understand that I may not be accommodated in this option. I will attend the contact sessions between students and lecturers which will be held once every two weeks at 17:30.

☐   I do not wish to participate in the research but instead will attend full lectures and do assignments on my own.

☐   I would like to study the module during my own time using the prescribed book as study material and to do assignments as part of a team that meets for this purpose. I will attend the contact sessions between students and lecturers which will be held once every two weeks at 17:30.

This choice is NOT binding. A final choice will be made later.

Signed Name   Date

           Witness   Date ....

           Researcher   Date ....

You will be provided with a copy of this form once you have signed it.

Appendix B

Questionnaires

INF152 Questionnaire 1
Choice of study option
(To be completed prior to starting the module.)

Student number[*] . . . .

For each question, mark the one option that you choose.

1.1.1

When did you first register at the University of Pretoria?

1. before 1999   2. 2000   3. 2001

1.1.2

How many modules did you pass in the last year in which you registered (not this year)?

☐ not registered before this   ☐ more than four   ☐ four
   year

☐ three   ☐ two   ☐ fewer than two

1.1.3

In the last year in which you were registered (not this year), how many modules did you take? (If you officially cancelled a module do not count it.)

☐ not registered before this   ☐ more than four   ☐ four
   year

☐ three   ☐ two   ☐ one

1.1.4

Are you repeating this module (INF152) this year?

☐ Yes   ☐ No

---

[*]Please remember our undertaking to respect confidentiality and not to communicate your responses to the university in any way.

1.1.5

Have you ever used e-mail or something similar such as the e-mail facilities on WebCT?

☐   Yes   ☐   No

1.1.6

Do you have access to e-mail or a similar electronic post outside the university?

☐   at home   ☐   at work   ☐   elsewhere

1.1.7

Do you attend many more lectures for some university modules than for other modules?

☐   Yes   ☐   No

Why . . . .

. . . .

1.1.8

Last year, approximately how many of the scheduled lectures for the modules you were registered for did you attend?

☐   I was not at this university   ☐   more than 75%   ☐   between 75% and 50
     in 2000

☐   between 50% and 25%   ☐   fewer than 25%

1.1.9

So far this year, approximately how many of the scheduled lectures for the modules you are registered for have you attended?

☐   more than 75%   ☐   between 75% and 50%   ☐   between 50% and 25%

☐   fewer than 25%

1.1.10

What is your home language?

. . . .

1.1.11

Which lecture group are you in for INF152?

☐ E1   ☐ MI   ☐ OI

☐ E2   ☐ M2

1.1.12

What makes you decide to skip lectures for a particular module? *(Mark at most three options. Mark the most important 1; the next most important 2; and the third most important 3.)*

☐ the time when the lecture will be given

☐ clashes on the time table

☐ how busy you are with other module work (eg, assignments due, tests coming up)

☐ the quality of the lecturer

☐ how easy or difficult the module is

☐ how well the prescribed book covers the material

☐ whether a friend will be attending the class and will let you know if there was anything important

☐ the lecturer frequently indicates what is important in the prescribed book and this it useful to know this

☐ you know that you probably will not get round to study this work if you do not attend classes

Other . . . .

. . . .

1.1.13

Do you enjoy doing teamwork as part of your studies? *(Omit if you've never worked in a team or haven't worked in a team very often.)*

☐ Yes   ☐ Sometimes   ☐ I don't care one way or

☐ No   the other

1.1.14

When you worked in a team before, have your results been satisfactory? *(Omit if you've never worked in a team or haven't worked in a team very often .)*

☐ Yes   ☐ Sometimes   ☐ No

1.1.15

Are you confident you'll pass the modules you registered for this year?

☐ all of them ☐ more than half ☐ fewer than half

☐ not certain of any

1.1.16

How good are you at getting your point across in a group of four or five people? *(Mark at most three options. Mark the most important 1; the next most important 2; and the third most important 3.)*

☐ I join in a discussion freely.

☐ I enjoy discussing quite serious topics such as the work I'm are studying.

☐ I join in as long as no teachers or lecturers are in the group.

☐ I mostly listen to what everyone else is saying and do not say much.

☐ People usually understand the point I am trying to make.

☐ The discussions are usually in a language that is not my home language and so I'm shy about joining in.

☐ I won't try to press my own point of view or explain it more fully even if I'm sure that I am right.

☐ I enjoy influencing my fellow students.

1.1.17

How good are you at communicating in writing (not essays but short, friendly notes to fellow students)? *(Mark at most three options. Mark the most important 1; the next most important 2; and the third most important 3.)*

☐ very good

☐ good

☐ fairly good

☐ bad

☐ I don't like communicating in this way because my spelling and grammar aren't good

☐ I don't like communicating in this way because my hand writing is not good

☐ I don't know as I do not do this often

1.1.18

How good are you at communicating by telephone?

☐ I enjoy talking on the phone and do so as often as I can.

☐ I enjoy talking on the phone but prefer talking to someone face to face.

☐ I only use the phone to give someone a message.

☐ I avoid the phone as much as possible.

☐ I do not have easy access to a phone most of the time.

1.1.19

Which way do you prefer to study? *(Mark only one.)*

☐ attending lectures

☐ alone from books

☐ doing practical work or exercises

☐ using other media such as the Internet or videos

INF152 Confirmation of the study choice

(To be signed by the student)

Student number: . . . .

Mark the option you would most like 1 ; the next most acceptable choice 2; and the choice you least prefer 3.

☐ I would like to study the module during my own time using the prescribed book as study material and to do assignments as part of a virtual team that communicate via e-mail[*]. I will access the e-mail facilities of WebCT via the Internet from home or work. I will attend the contact sessions between students and lecturers which will be held once every two weeks at 17:30.

☐ I would like to study the module during my own time using the prescribed book as study material and to do assignments as part of a virtual team that communicates via e-mail[*]. I will need the university to give me access to the e-mail facilities of WebCT. I will attend the contact sessions between students and lecturers which will be held once every two weeks at 17:30. I understand that I may not be accommodated in this option.

☐ I do not wish to participate in the research but instead want to attend all the usual lectures and do assignments on my own.

☐ I would like to study the module during my own time using the prescribed book as study material and do assignments as part of a team that meets for this purpose and attending occasional contact sessions between students and lecturers.

This is my own, informed decision, and I confirm that I have been given full explanations and an opportunity to discuss the implications of my choice. I accept responsibility for the choice that I have made.

Signature: . . . .

Give your reasons for deciding on this option.

. . . .

. . . .

---

[*]E-mail facilities in the universiy's WebCT system

. . . .

. . . .

What do you think you and your fellow students should do in order to make this option work well?

. . . .

. . . .

. . . .

. . . .

INF152 Questionnaire 2
Registering a virtual or face-to-face team
(To be completed prior to starting the module.)

- *Your signature indicates that you agree with the composition of your team. Sign only after the names of all members of the team have been put on the list.*
- *You are expected to check the lists of teams and members once these are displayed on the notice board in the Dept. of Informatics in order to confirm that your details are correct. The lists will also give you your very important team identification number. Please report any problems immediately.*
- *It is possible to change teams, but this can only be done:*
  - < *before Assignment 1 is handed out, that is, before 14 May, 2001*
  - < *OR after the first assignment has been handed in and before work starts on the second assignment (end of May).*

Name of student	Student number	Contact telephone number or e-mail address	Signature

INF152 Questionnaire 3
Changing your study option

(To be completed on changing from one option to another.)

Once you have committed yourself to one study option you may only change your mind before 14 May, 2001 OR after the first assignment has been handed in and before work starts on the second assignment (end of May)

Date:

Name: Student number

Option that you previously chose

☐ lectures   ☐ teams that meet face to face

☐ teams that work via e-mail[*]

Option that you now want to change to

☐ lectures   ☐ teams that meet face to face

☐ teams that work via e-mail[*]

Give the identification number of the team that you want to leave. . . . .

If you want to leave a team, you MUST attach a note signed by ALL the members of the team saying that you have personally informed them of your decision to leave the team.

Give the identification number of the team that you want to join. . . . .

If you want to join a team, you MUST attach a note signed by ALL the members of the team saying that you are welcome to join and team members must give phone numbers or e-mail addresses where they can be contacted to confirm this.

Reason for the change *(This must be given no matter what your original choice was.)*

. . . .

. . . .

Signed:

---

[*]E-mail facilities in the universiy's WebCT system

INF152 Questionnaire 4
Evaluation of the study option you chose

Every student must please complete a copy of this questionnaire and hand it in together with the second assignment.

Student number** . . . .

If you submit this questionnaire, you will be awarded bonus marks towards your module mark.

For each question, mark the one option that you choose.

Section A - General
*To be filled in by **all** students*

4.1.1

When you had to choose one study option (lectures, face-to-face teams or virtual teams) did you clearly understand the purpose of the research?

☐ Yes   ☐ No

4.1.2

Did you clearly understand how the study option(s) you chose would work?

☐ Yes   ☐ No

4.1.3

What is your home language? . . . .

**Please remember our undertaking to respect confidentiality and not to communicate your responses to the university in any way.

***E-mail facilities in the universiy's WebCT system

4.1.4

Which study option did you use for Assignment 1?

☐ lectures ☐ teams that meet face to face ☐ teams that work via e-mail***

4.1.5

Did you have access to a copy of the prescribed book for this module when you needed it?

☐ Yes ☐ No

4.1.6

Which study option did you use for Assignment 2?

☐ lectures ☐ teams that meet face to face ☐ teams that work via e-mail

4.1.7

Mark the following comments if you agree. (You may mark more than one statement.)

Was the prescribed book:

☐ easy to read ☐ interesting ☐ unnecessary if you went
☐ too long ☐ too expensive to lectures

4.1.8 Was the module:

☐ interesting ☐ difficult

Additional comments . . . .

. . . .

. . . .

4.1.9

Did you complete Assignment 1?

☐ Yes ☐ No

4.1.10

Was Assignment 1:

very difficult	difficult	easy	very easy

4.1.11

Did you complete Assignment 2?

☐ Yes ☐ No

4.1.12

Was Assignment 2:

very difficult	difficult	easy	very easy

4.1.13

Did you choose to take this module or did you have to take it because it was a compulsory part of the degree you are taking?

☐ chosen ☐ compulsory

Fill in one or more of the following sections.

Complete Section B if you attended normal lectures and did at least one assignment on your own.

Complete Section C if you studied the module during your own time using the prescribed book as study material and did at least one assignment as a member of a team that met for this purpose.

Complete Section D if you studied the module during your own time using the prescribed book as study material and did at least one assignment as a member of a virtual team.

 IF YOU CHANGED OPTIONS DURING THE MODULE PLEASE COMPLETE THE SECTIONS CORRESPONDING WITH BOTH CHOICES.

Section B - Lectures
Complete if you attended lectures and did at least one assignment on your own.

4.2.1

What percentage of scheduled university lectures for this module did you attend?

☐ more than 75% ☐ between 75% and 50% ☐ between 50% and 25%

☐ fewer than 25%

4.2.2

Did you find the lectures useful?

☐ Yes ☐ No

. . . .

. . . .

4.2.3

Did the research project affect your studies?

☐ it helped me ☐ uncertain ☐ it was disruptive

☐ no

. . . .

. . . .

. . . .

4.2.4

Were there discussions during the lectures that the students participated in?

☐ useful discussions occurred during nearly every lecture and students participated well

☐ there were not many discussions

☐ only a few students took part in discussions and it was always pretty much the same students in every discussion

☐ discussions wasted time

. . . .

. . . .

. . . .

Section C - Face-to-face teams

Fill in this section if:
- *you participated in the research **for all or part of the module**,*
- *studied the module during your own time using the prescribed book as study material,*

- *AND did at least one assignment as part of a team that met for this purpose.*

4.3.1

Did your group meet often enough?

We met far more often than necessary.	We could have had fewer meetings.	We could have met slightly more often.	No, we should have met much more often.

4.3.2

Mark the description that describes your group best? Attendance at team meetings was:

Very good. All team members almost always attended.	Most members attended most of the time.	Certain team members hardly ever attended the meetings.	Attendance was generally very poor.

4.3.3

Mark the description that describes your group best?

Everyone usually took part in discussions.	The same people usually dominated and did not give others the chance to speak.	Some team members usually did not say much.	It was usually difficult getting any discussion going.

4.3.4

On the whole did team members get on well with each other?

☐ Yes ☐ No

4.3.5

Did you know the other team members before you worked together in the team?

☐ Yes, I knew them all quite well. ☐ I knew some but not everyone. ☐ No, I didn't know anyone at all.

4.3.6

Do you consider most of the people who were in your team to be friends you will try to spend more time with in future?

☐ Yes ☐ No

4.3.7

Where did your team usually meet?

☐ on campus but not in a lecture room ☐ at someone's home ☐ in a lecture room
 ☐ at different places ☐ none of these

4.3.8

When did your team usually meet?

☐ evenings ☐ weekends ☐ mornings or afternoons during the week

4.3.9

Were people in the group usually friendly and patient?

☐ Yes ☐ No

4.3.10

How successful were you at communicating in the group? *(Mark at most three options. Mark the most important 1; the next most important 2; and the third most important 3.)*

☐ I joined in most discussions freely.

☐ I enjoyed the discussions.

☐ Having a researcher in the group put me off.

☐ I mostly listened to what everyone else was saying and didn't say much.

☐ People usually understood the point I was trying to make.

☐ The discussion was usually in a language that is not my home language and so I was shy about participating.

☐ I did not try to press my own point of view or explain it more even when I was sure I was right.

4.3.11

Was there a research observer at your team meetings?

☐ most times ☐ about half of the meetings ☐ rarely

☐ never

4.3.12

Were you satisfied with the standard of the assignments that your team submitted?

☐ Yes ☐ No

4.3.13

Were you satisfied with getting information and studying for the examination from the textbook only?

☐ Yes ☐ No

4.3.14

Did you attend contact sessions (the meetings with the lecturer and other teams)?

☐ Yes ☐ No

4.3.15

Were the contact sessions between lecturer and student useful?

☐ Yes ☐ No

4.3.16

What do you think the best feature of the teamwork was?

. . . .

. . . .

. . . .

4.3.17

What was the worst feature of the teamwork?

. . . .

. . . .

. . . .

4.3.18

What improvements can you suggest for contact sessions?

. . . .

. . . .

. . . .

4.3.19

Do you think you did your fair share of the work?

☐ more than your share ☐ about the right amount ☐ not enough

4.3.20

You should answer all of these questions.

Did most of the team members:	Always	Mostly	Usually	Never
do what they said they would do and when they said they would				
behave in a friendly way				
discuss work during the meetings rather than chat				
prepare for these meetings by studying the text book				
contribute to the team effort satisfactorily				
pay attention (listen carefully) to what other people were saying, particularly if they did not agree about an answer or how the assignment should be done				

4.3.21

When teams do not work together successfully how do you think the problem should be solved?

. . . .

. . . .

. . . .

4.3.22

Did your team ever need to address a problem concerning the way people worked together?
☐ Yes   ☐ No

4.3.23

If the answer to the previous question was yes, how did the team attempt to solve the problem and how successful were they?

. . . .

. . . .

. . . .

. . . .

4.3.24

How did you decide who you wanted to be in a team with?

. . . .

. . . .

. . . .

4.3.25

If you decided to attend the normal lectures (not the contact sessions) for the module even though you were working in a team, how many lectures did you attend?

☐ all   ☐ more than 50%   ☐ only a few

Please give reasons for this decision . . . .

. . . .

. . . .

Section D - Virtual teams

Fill in this section if:
- *you participated in the research **for all or part of the module**,*
- *studied the module during your own time using the prescribed book as study material,*

- *AND did at least one assignment as part of a virtual team that only **communicated via** e-mail.*

4.4.1

What language did you use as a team for e-mail?

. . . .

4.4.2

Where did use email? *(You may mark more than one option for this question.)*

☐ home ☐ university labs ☐ work
☐ Internet café ☐ friend or family assisted ☐ somewhere other than these options

4.4.3

Did your group communicate with each other via e-mail sufficiently often?

☐ Yes ☐ No

4.4.4

Did everyone in the group take part in discussions via e-mail?

☐ Yes ☐ No

4.4.5

Did team members need to use means of communication other than e-mail (such as telephone or face to face meetings) in order to get the work finished?

☐ Yes, once ☐ Yes, more than once ☐ No

☐ the group stopped using e-mail completely and communicated in other ways

4.4.6

Did you know the other members of the team before the project?

☐ yes, knew them all quite well ☐ knew some but not everyone ☐ no, did not know anyone at all

4.4.7

Do you consider most of the people who were in the team to be friends you will try to stay in touch with in future?

☐ Yes ☐ No

4.4.8

Did most of the other team members respond to e-mail which you sent out?

☐ within a day ☐ within two days ☐ they said they did not receive it
☐ they ignored it ☐ within a week

4.4.9

Did you have difficulty with e-mail? *(Mark at most three options. Mark the most important 1; the next most important 2; and the third most important 3.)*

☐ I couldn't get permission to use a computer at the university for the amount of time that was necessary.

☐ I had problems with the network.

☐ It cost too much.

☐ The instructions explaining what I had to do were unclear or insufficient.

☐ I thought I would have access from home but this proved to be impossible.

☐ I didn't receive all the messages sent by the other team members.

Other . . . .

. . . .

4.4.10

Were people in the group usually friendly and patient?

☐ Yes   ☐ No

4.4.11

How successful were you at communicating in the group? *(Mark at most three options. Mark the most important 1; the next most important 2; and the third most important 3.)*

☐ I joined in most discussions freely.

☐ I enjoyed the discussions.

☐ Knowing that a lecturer was monitoring the group put me off.

☐ I mostly read what everyone else wrote and did not write much.

☐ People usually understood the point I was trying to make.

☐ I was shy about writing in a language that is not my home language.

☐ I didn't try to press my own point of view or explain it more fully even if I was sure I was right.

4.4.12

Were you satisfied with the standard of the assignments that your team submitted?

☐ Yes   ☐ No

4.4.13

Were you satisfied with getting information and studying for the examination from the textbook only?

☐ Yes   ☐ No

What do you think the best feature of the virtual teamwork was?

. . . .

. . . .

. . . .

. . . .

4.4.14
What was the worst feature of the virtual teamwork?

. . . .

. . . .

. . . .

. . . .

4.4.15
If you decided to attend the normal lectures (not the contact sessions) for the module even though you were working in a team, how many lectures did you attend?

☐ all   ☐ more than 50%   ☐ only a few

Please give reasons for this decision . . . .

. . . .

. . . .

4.4.16
Did you attend contact sessions (the meetings with the lecturer and other teams)?
☐ Yes   ☐ No

4.4.17

Were the contact sessions between lecturer and student useful?

☐ Yes ☐ No

4.4.18

What improvements can you suggest for contact sessions?

. . . .

. . . .

. . . .

. . . .

4.4.19

Do you think you did your fair share of the work?

☐ more than your share ☐ about the right amount ☐ not enough

4.4.20

How did you decide who you wanted to be in a team with?

. . . .

. . . .

. . . .

4.4.21

(You should answer all of these questions.)

Did most of the team members:	Always	Mostly	Usually	Never
do what they said they would do and when they said they would				
behave in a friendly way				
discuss work in their e-mail messages rather than chat				

seem to have prepared by studying the text book				
contribute to the team effort satisfactorily				
pay attention to what other people were saying, particularly if they did not agree about an answer or how the assignment should be done				

4.4.22

When virtual teams do not work together successfully how do you think the problem should be solved?

. . . .

. . . .

4.4.23

Did your team ever need to address a problem concerning the way people worked together?
☐ Yes   ☐ No

4.4.24

If the answer to the previous question was yes, how did the team attempt to solve the problem and how successful were they?

. . . .

. . . .

. . . .

4.4.25

Do you think that you would like to work in a virtual team for some other university modules (not necessarily all)?
☐ Yes   ☐ Not sure   ☐ No

☐ Yes provided certain essential changes are made (Explain below)

. . . .

. . . .

. . . .

Appendix C

Assignments

INF152 Assignment 1
Work to be covered: Chapter 8 of S&R
Due date: 2 May
Marks: 20

INSTRUCTIONS

a) Read through the assignment and try to ensure that you all have an overall idea what the questions are asking and how they should be tackled.

b) Allocate sections of the assignment to one or more team members.

c) Agree on a work schedule.

d) Each member of the team should then independently do the part of the work allocated to him or her and submit it to the rest of the team by the agreed time and date.

e) Each team member should now work through the complete set of answers and make notes as to how to improve them.

f) The team must now *jointly* discuss these suggestions for improvement and once consensus has been reached make the changes.

g) The final set of answers must be handed in by the due date.

Question 1

Apply the transaction processing cycle to the Computer-based Education/Training (CBT) tests that you have taken (for example, for INF151 in the University of Pretoria CBT labs). In other words, take each activity in the transaction processing cycle give by Stair and Reynolds and explain in no more than ten lines what processing is required in a CBT testing system. Some parts of this system you have first hand knowledge of and hence you will be expected to give fairly accurate and quite detailed accounts. Some aspects of the system are not completely obvious and so you will simply make assumptions and educated guesses in your answer.

[6]

Question 2

Although a university at first may not seem to require the same traditional transaction processing applications as those described in Chapter 8 of Stair and Reynolds, on thinking more carefully the similarities can be detected.

a) Adapt the description of the order processing system to be suitable for a university. Draw a data flow diagram for the "order entry system" suitable for a university similar to the one in figure 8.8 for this system and briefly explain (between five and ten lines each) what the four processes might involve.

[8]

b) An order processing system as depicted in Figure 8.7 includes seven subsystems (we have already considered the order entry system in a)). Would a university's order processing system include these as well? Describe subsystems for use at a university that are in some respect similar to those given (between five and ten lines). [6]

INF152 Assignment 2

Work to be covered: Chapters 9, 10 and 11 of S&R
Due date: 21 May
Marks: 30

Question 1
Choose one of the following applications
☐   A public transport system
☐   A security management system

Choose one of the following classes of information system
☐   Decision Support System
☐   Expert system

You are going to design a purely imaginary information system and are encouraged to include unusual ideas as well as those that might be expected in such a system.
In all cases you must:
•   Indicate at the start which options you have chosen
•   Briefly (no more than ten lines) give an overall description of the purpose of the system
•   Draw an overall systems flowchart in the style used by S&R.
•   Include a section of no less than one page on ethical and social issues that are reflected by the system you have designed
•   Design an MIS:
    Identify the functional area. Identify *in detail* the input data obtained from the supporting TPS and other sources. Give *detailed* accounts with report or screen layouts of the output. For each report indicate when these will be produced (scheduled, key-indicator, etc), and what level of management it supports (operational, tactical etc)

In addition

•   If you choose to design a DSS:
Explain in detail what type of decisions you are going to enable management to make and how. Give examples of the types of queries that the manager will require the DSS to provide answers for. The fields that need to be held in the underlying database must be described in detail including where the input data will be obtained from and how it will be verified.

•   If you choose to design an expert system:
You need to give details of the knowledge based required. You must say exactly what kinds of expertise the system is covering and the scope of that expertise. You must give no fewer than

ten rules that will guide the user of the system. You must give detailed screen layouts showing the user interface.
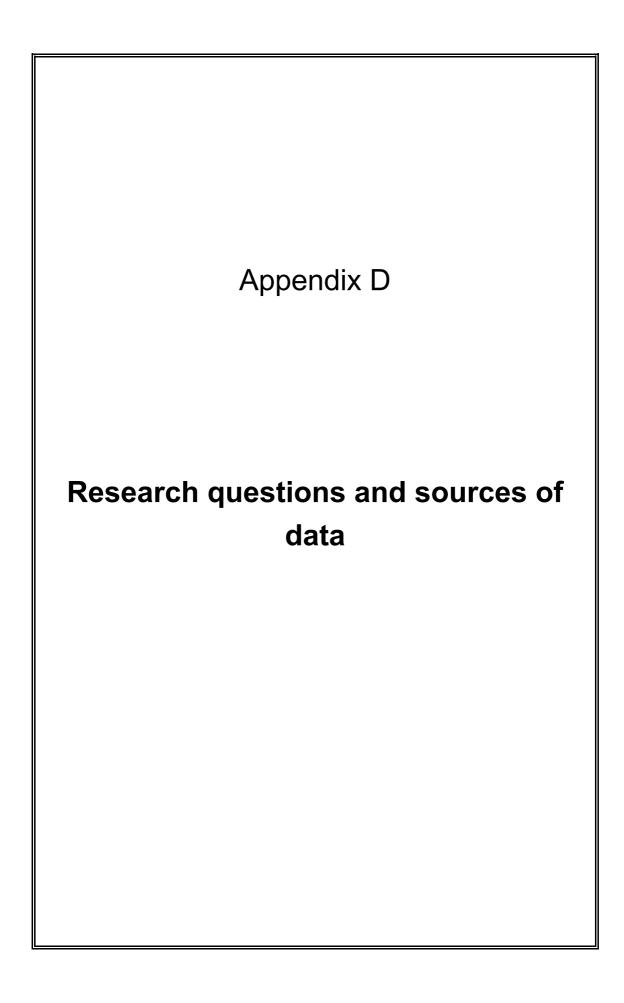
INSTRUCTIONS

There are six possible options

	MIS	DSS	Expert system
Transport			
Security			

1. This assignment is as much about working as a team as it is about designing a system. Hence we require evidence that you have worked as a team.

2. Marks will only be awarded to:
- Face-to-face teams if they have registered a group and recorded their discussions on a tape or digital recorder. Assignment 2 will be handed out when the team is registered.
- Virtual teams if they are registered and actually do use e-mail or WebCT discussions to reach a consensus on their final answers. Assignment 2 will be on WebCT 10 May.
- Normal teams if all team members are present during both of the case study lectures 10 or11, and 17 or 18 May. Assignment 2 will be handed out in class on10 and 11 May. It must me handed in during class on 17 and 18 May.

3.   What to do.
a. Read through the assignment together and try to ensure that you all have an overall idea what the questions are asking and how they should be tackled.
b. Allocate sections of the assignment to one or more team members for them to do initial preparation or come up with some ideas that the team can build on.
c. Agree on a work schedule.
d. Each member of the team should then independently do the part of the work allocated to him or her and submit it to the rest of the team by the agreed time and date.
e. Each team member should now work through all the work done so far and make notes as to how to improve it.
f. The team must now *jointly* discuss these suggestions for improvement and once consensus has been reached make the changes.
g. The final set of answers must be handed in by the due date.

4.   This assignment is more complex than the previous one because:

a. You have to decide which scenario you want to tackle using the options given. Before you can decide on this you need to have devised a team strategy for making this decision.

b. The project is larger, covers more work is and less well defined than that in assignment 1 and stretches over a longer period of time. You will need to meet at least twice to complete it. Virtual teams should work only via e-mail.

c. You should NOT try to work independently as the sections rely largely on the decisions made in other sections. Your communication channels will have to be good.

5.   Your work will be evaluated using the following marking scheme

a. Grasp of concepts and theory. Is this really the type of IS that it is intended to be? I.e. an MIS not a TPS, a DSS not a MIS, or an Expert System not anything else. This is indicated by the purpose and output (reports, queries et cetera) [7]

b. General presentation. This is visual, neatness, grammar and spelling. [4]

c. Originality [4]

d. Logic (can the output be obtained from the data available) [4]

e. Ethical issues [3]

f. Completeness, detail [8]

Appendix D

Research questions and sources of data

	WHAT IS	
1.1	What is information?	Theory (Chapter 3)
1.2	What is information richness?	Literature study (Chapter 5)
1.3	What is a virtual team?	Literature study (Chapter 6)
1.4	What is telematic education?	Literature study (Chapter 5)
1.5	What cultural characteristics in South African society affect tertiary education?	Chapter 8[***]. There was evidence that the difference language groups did have different attitudes towards the course, the textbook and teamwork. It was not clear whether this could be attributed to cultural, schooling, or other differences in background.
1.6	What is a culturally homogeneous group?	Literature study (Chapter 6)
1.7	What is Computer Supported Cooperative Learning?	Literature study (Chapters 3 and 6)
	HOW DOES	
2.1	How does trust develop in virtual teams and how is it maintained?	The literature study (particularly Chapters 6) supported by data from questionnaire 4 (questions regarding trust/success/ in questionnaire) give preliminary data but the main evidence is obtained in recorded e-mail and audio recordings and be analysed in Chapter 9.
2.2	How does rich information get reconstructed in a virtual team? In other words, how does meaning get shared?	Literature study: Computer-mediated communication (Chapter 5) Habermas' Theory of Communicative Action (Chapters 2 nd 4), data, particularly analysis of e-mail and conversations (Chapter 9)

[***]and in the more detailed article which will be submitted for publication.

2.3	How does cultural homogeneity affect trust in a virtual team?	Data from questionnaire 4 (questions regarding trust/success/ in questionnaire) give preliminary data analysed in Chapter 8 but the main evidence is obtained in recorded e-mail and audio recordings and be analysed in Chapter 9.
2.4	How does culture affect learning in a virtual team?	
2.5	How feasible is this form of telematic education in the short term?	Questionnaire 4 provided some of these answers but Chapter 9 explores the issues more thoroughly.
2.6	How efficient is this form of telematic education appear to be (estimated cost/benefit)?	Analysis of the process is discussed in Chapter 9.
	WHY IS	
3.1	Why do first year Information Systems students decide to participate in virtual teams rather than co-present teams or lectures?	Quantitative analysis of Questionnaire 4 in Chapter 8 and in the more detailed article which will be submitted for publication.
3.2	Why do students change from one study environment to another?	
3.3	Why do students select certain team mates?	
3.4	Why do the students enjoy and succeed in working in a virtual team?	
3.5	Why do students think they need contact sessions?	Questionnaire 4 provided some of these answers but Chapter 9 explores the issues more thoroughly.
	HOW SHOULD	
4.1	How should virtual teams be structured in a multicultural environment?	Qualitative analysis in Chapter 9.
4.2	How should virtual team members be prepared for working in this way?	Literature study in Chapters 5 and 6 and qualitative analysis in Chapter 9.
4.3	How should the lecturer, facilitator or researcher interact with virtual teams?	Literature study in Chapter 7 and qualitative analysis in Chapter 9.

4.4	How should a university decide which courses it offers via telematic education?	
4.5	How should contact sessions in conjunction with telematic education be structured?	Questionnaire 4 provided some of these answers but Chapter 9 explores the issues more thoroughly.

Cross reference between questions in questionnaires and research questions

Collaborator's opinions . . . .

Date . . . .

Research questions / Questionnaire 1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5
When did you first register at the University or Pretoria?					1	1		1		1	1			1		1	1					1	
How many of your courses did you pass in the last year in which you registered?													1	1									
4.4.26 How many courses did you register for in the last year in which you registered? (If you officially cancelled a course do not count it.)													1	1									
Have you been registered for this course (INF....) before?													1	1									
Have you ever used e-mail?												1		1									
Have you access to e-mail from home?												1		1									
Last year, appro1imately how many of the scheduled university lectures for the courses you were registered for did you attend?														1									
So far this year, appro1imately how many of the scheduled university lectures for the courses you are registered for have you attended?														1								1	
Is there a big difference in the number of lectures you attend for some university courses compared with other courses?														1								1	
What is your home language?					1	1			1	1				1									
Which lecture group are you in for INF152?													1										

Questionnaire 1 — Research questions	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5
What factors influence whether you attend lectures or not? (You make mark more than one option for this question.)														1							1		
Do you enjoy doing team work as part of your studies?								1	1	1	1												
Have you obtained good results when you worked in a team before?								1	1	1	1												
Are you confident of your ability to pass the courses you have registered for this year?												1	1										
How good are you at communicating verbally in a group of four or five people? (You may mark more than one option for this question.)														1									
How good are you at communicating in writing (not essays but short friendly notes such as e-mail)?		1												1									
How good are you at communicating by telephone? (You may mark more than one option for this question.)		1												1									
Which way do you prefer to study?														1									
Choice of study option												1											
TOTALS	0	3	0	0	2	2	0	3	2	4	4	3	4	17	0	1	1	0	0	0	1	3	0

Questionnaire 4 — Research questions	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	Val
GENERAL																								
When you had to choose one study option (lectures, co-present teams or virtual teams) did you clearly understand the purpose of the research?																				1				1
Did you clearly understand how the study option(s) you chose would work?																				1				1
What is your home language?				1	1			1	1					1										
Which study option did you use for assignment ?														1										

	Research questions	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	Val
Questionnaire 4																									
Which study option did you use for assignment 2?															1										
Did you have access to a copy of the book prescribed for this course when you needed it?													1												
Was the prescribed book:													1												
Was the course:																							1		
Did you complete assignment ?														1											
Was assignment :														1											
Did you complete assignment 2?														1											
Was assignment 2:														1											
Did you choose to take this course (module) or was it a fi1ed and mandatory part of the degree you are taking?																									
	motivation leads to success leads to effectiveness																								
TOTALS		0	0	0	0	1	1	0	0	0	1	1	2	4	3	0	0	0	0	0	2	0	1	0	2
Questionnaire 4 - LECTURES																									
Whatpercentageofscheduleduniversitylecturesforthiscoursedidyouattend?														1											
Didyoufindthelecturesuseful?														1	1										
Didtheresearchprojectaffectyourstudies?																									1
Weretherediscussionsduringthelecturesthatthestudents participatedin?														1				1							
TOTALS		0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	1	0	0	0	0	0	0	1
Questionnaire 4 - CO-PRESENT																									
Did your group meet sufficiently often?								1	1																
Did everyone in the group take part in discussions?									1		1														

Questionnaire 4 / Research questions	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	Val
Did team members get on well with each other?								1		1														
Did you know the other team members before you worked together in the team?								1								1								
Do you consider people who were in your team to be friends who you will try to spend more time with in future?								1																
Where did your team meet?												1		1										
When did your team meet?												1		1										
How successful were you at communicating in the group?									1															
Was there a research observer at your team meetings?																					1			1
Were you satisfied with the standard of the assignments that your team submitted?								1	1		1	1	1											
Were you satisfied with obtaining information and studying for the e1amination from the te1t book only?												1												
Were the contact sessions between lecturer and student useful?																		1		1		1		
What do you think the best feature of the team work was?								1	1				1	1			1							
What was the worst feature of the team work?								1	1				1	1	1	1	1							
What improvements can you suggest for contact sessions?																		1		1		1		
Do you think you did your fair share of the work?								1									1							
Did most of the team members do what the said they would do and when they said they would								1																
behave in a friendly way								1																

Research questions Questionnaire 4	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	Val
discuss work during the meetings rather than chat								1																
prepare for these meetings by studying the tet book								1																
contribute to the team effort satisfactorily								1	1															
pay attention (listen carefully) to what other people were saying, particularly if they did not agree about an answer or how the assignment should be done									1															
When teams do not work together successfully how do you think the problem should be solved?								1	1	1	1									1				
Did your team ever need to address a problem concerning the way people worked together?								1	1	1	1									1				
If the answer to the previous question was yes, how did the team attempt to solve the problem and how successful were they?																	1			1				
How did you decide who you wanted to be in a team with?																1								
TOTALS	0	0	0	0	0	0	1	16	8	4	3	5	3	4	1	2	4	2	0	3	3	0	2	1
Questionnaire 4 - VIRTUAL																								
What language did you use as a team for e-mail?										1	1								1					
Where did use email?												1												
Did your group communicate with each other via e-mail sufficiently often?								1				1												
Did everyone in the group take part in discussions via e-mail?								1	1		1													

Questionnaire 4 / Research questions	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	Val
Did team members need to use means of communication other than e-mail (such as telephone or face to face meetings) in order to get the work finished?									1															
Did you know the other members of the team before the project?																1								
Do you consider people who were in the team to be friends who you will try to stay in touch with in future?								1																
Did the other team members respond to e-mail which was sent out?								1				1												
Did you have difficulty with e-mail?												1												
How successful were you at communicating in the group?									1															
Were you satisfied with the standard of the assignments that your team submitted?								1	1		1	1	1											
Were you satisfied with obtaining information and studying for the e1amination from the tet book only?												1												
What do you think the best feature of the virtual team work was?								1	1				1	1			1							
What was the worst feature of the virtual team work?								1	1				1	1	1	1	1							
Were the contact sessions between lecturer and student useful?																		1		1		1		
What improvements can you suggest for contact sessions?																		1		1		1		
Do you think you did your fair share of the work?								1									1							
How did you decide who you wanted to be in a team with?																1								

Questionnaire 4 / Research questions	1.1	1.2	1.3	1.4	1.5	1.6	1.7	2.1	2.2	2.3	2.4	2.5	2.6	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5	Val
Did most of the team members: a) Did most of the team members do what the said they would do and when they said they would?								1																
b) behave in a friendly way								1																
c) discuss work in their e-mail messages rather than chat								1																
d) seem to have prepared by studying the tet book								1																
e) contribute to the team effort satisfactorily								1	1															
f) pay attention to what other people were saying, particularly if they did not agree about an answer or how the assignment should be done									1															
When virtual teams do not work together successfully how do you think the problem should be solved?								1	1	1	1									1				
Did your team ever need to address a problem concerning the way people worked together?								1	1	1	1									1				
If the answer to the previous question was yes, how did the team attempt to solve the problem and how successful were they?																	1			1				
Do you think that you would like to work in a virtual team for some other university courses (not necessarily all)?													1											
TOTALS	0	0	0	0	0	0	0	15	10	3	5	7	4	2	1	2	4	2	1	3	2	0	2	0
TOTALS from previous table		3			2	2		3	2	4	4	3	4	17		1	1					1	3	
GRAND TOTAL	0	3	0	0	3	3	1	34	20	12	13	17	18	27	2	5	10	4	1	8	5	2	7	4