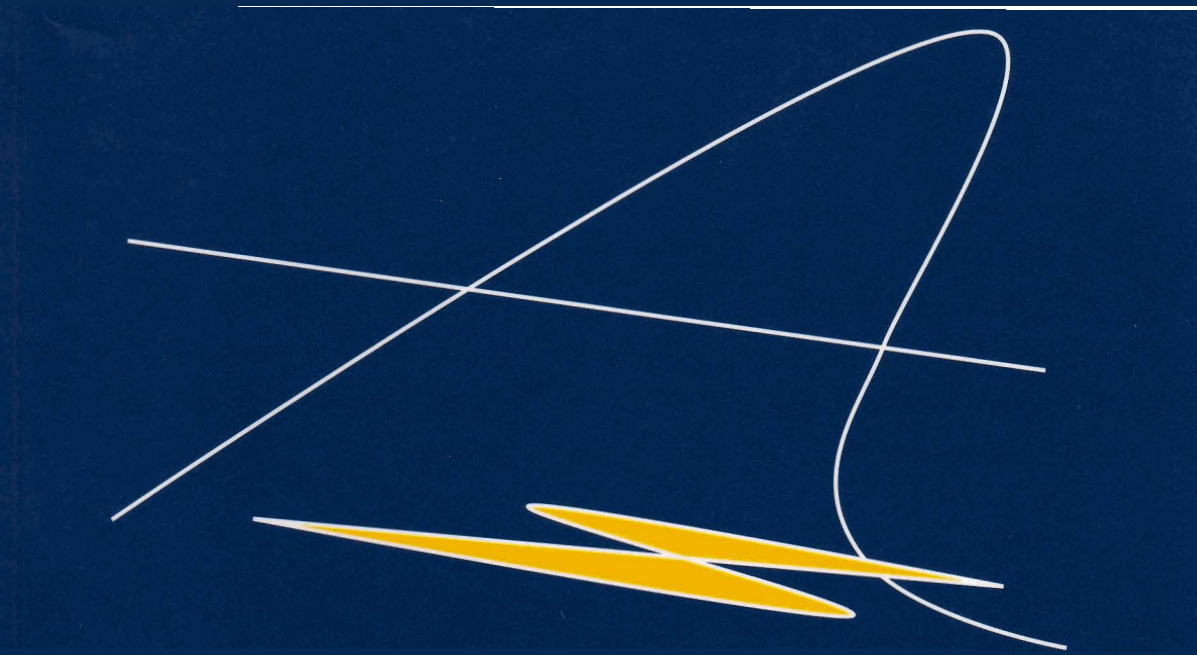
THE DEVELOPMENT OF MOTIVATIONAL COMMUNICATION IN DISTANCE EDUCATION SUPPORT



LYA VISSER

THE DEVELOPMENT OF MOTIVATIONAL COMMUNICATION

IN

DISTANCE EDUCATION SUPPORT

door

Lya Visser

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Alida Jacoba Maria Visser

Promotoren:	prof.dr. Tj. Plomp
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Lya Visser

Vernouillet (France), December 1998

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Chapter 1
Origins, Aims and Context of the Study

1.1 Introduction

Throughout the world learners are studying via distance education[1]. Distance education has become a major form of learning around the world. Many agree that it is one of the fastest growing instructional patterns in the world (Bates, 1995; Brown & Brown, 1994; Hawkridge, 1995). While the convenience of distance education, its independence of place and time, can be a benefit to learners, it also has its drawbacks in the form of high non-completion rates.

1.2 Origins and Aims of the Study

Handy (1992) describes learning as a wheel in which questions lead to ideas, which in turn lead to the testing of the ideas to produce reflections, which in turn lead to new questions. Handy's "wheel" has influenced this book and the ultimate goal of the study is learning. The principal question dealt with in this study is: *Is it possible to reduce the notoriously high drop-out rates of distance education students by extending existing student support with motivational communication*? The focus is thus on student support. The author of this study has herself done a variety of courses via distance education. Although many of these courses were instructionally sound, good course books and relevant reading material, student support was generally weak. The course materials were sent to the learner and the learner was expected to act and send in the required Tutor Marked Assignments (TMAs) and after having studied all the units, register for the examination. The difference between conventional education with a teacher and

[1] In this study distance education and distance learning will be used interchangeably

students who, as a group, work towards finishing a course successfully and the distance education student studying in isolation is often experienced as depressing. The author believes that the heart of distance education is student support. Thus if student support can be improved, the high drop-out rates of distance education students may decrease (Moore & Kearsley, 1996). The research presented in this study (1.4) is in the first place departing from a reflection on what, partly as a result of the researcher's own experience, could be done to keep the students motivated to stay in the course and secondly to look at ways to extend existing support systems with simple, practical and affordable student support. Research has indicated that lack of motivation is an important problem for distance education students and is often the cause of drop-out of learners (Rowntree,1992; Zvacek, 1991).The idea of the Motivational Messages Support System (MMSS) study is to assist the students in becoming and/or remaining motivated, so that they stay in the course and complete the course successfully.

Specifically, this study examined:

- To what extent motivational messages, based on Keller's ARCS model of motivational analysis, are effective in distance education courses?

- What the difference, if any, is in effectiveness and cost-efficiency between the personalized and the collective process of enhancing motivation through motivational messages?

The first two chapters discuss the context of the study and the characteristics of distance education. In Chapter 3, the role of motivation in education is discussed, while attention is also paid to how motivation itself plays a role in the development of motivational communication. Chapter 4 discusses the research design, while Chapters 5 and 6 look at the pilot study and the main research. As Handy (1992) argued already, reflections lead to new questions. The last chapter, Chapter 7, reflects on the outcomes of the study and looks at recommendations for further research.

1.3 Context of the Motivational Messages Support System (MMSS)

Interest in distance education is growing constantly. There is hardly a scientific journal dealing with instruction, learning or communication that fails to mention new ways of educating, learning and communicating. As mentioned in Section 1.1, drop-out rates in distance education can be worrying. According to Moore and Kearsley (1996) non-completion rates for distance education courses were formerly in the range of 30-50%; this figure should, according to these authors, be lower nowadays. They do not, however, refer to research data. Research on drop-out rates, carried out by Fritsch and Strohlein (1989) at the German Open University, shows that, of the 1900 students who enrolled in a distance education course, only 10% finally completed the examination. Dropping out of a distance education course does not only have a direct effect on the learners in that they might feel that they have failed, there may well be a long-term effect as it is likely that those learners will not turn to distance education again. This can have serious consequences, particularly in a time where careers are no longer for life and where lifelong learning has become an essential part of life. The MMSS study looks at ways to decrease drop-out rates in distance education. It will do so from the perspective of enhancing existing student support by attending to the learners' motivational requirements.

Non-completion and drop-out in distance education

A problem in analysing data on non-completion rates is that there is no universal agreement on what is understood by non-completion. Different institutions measure in different ways. Should a student who applied for a course, paid, got the materials, but never sent in any work and/or maybe even never started the course, be considered a non-starter, or a drop-out? Should the student who did the first of four course assignments and then wrote a letter to the providing institute that she had too much work and could not go on, be called a drop-out or a withdrawal student? In this study a student who enrolled, but never sent in any work, is considered a non-starter, a student who sent in work, but never completed the course is called a non-completer and a student who officially

notified the College[2] that s/he would not continue the course is considered a drop-out. It is recognized that there is some overlap between a non-completer and a drop-out, as the result in both cases will be that the learner does not continue the course and consequently does not complete the course. In the case of the programmes of the College, the non-completer has, during five years from the enrolment date, the right to be considered a student of the College and thus remains part of the student population and will consequently be registered as a drop-out only after five years. A student who writes a letter to the College that s/he cannot, or does not want to go on with a course is, from that moment on, considered to be a drop-out according to rules of the College. It may be significant that so few detailed data on completion of distance education courses have been published. Outcomes in completion rates are influenced by a variety of reasons. An example is the Dutch Open University, which as one of the staff members told the researcher, up to two years ago had a course completion rate of less than 20%. This may be influenced by the fact that the course materials can only be bought at the Open University itself, and are sometimes bought as reference materials only, not with the intention to do the accompanying course. Someone who does not plan to sit the examination, but uses the course in order to be better informed on a topic, has up-to-date learning materials for as little as $ 150.--. This system differs from that of the British Open University. Their learning materials can be bought at most academic bookshops and the British Open University thus “sells” only the courseware, some additional materials and the student support. Students who enrol in a course with this open university are thus more likely to have the intention to start and finish the course.

To know more about the reasons for non-completion and drop-out it is necessary to look at other reasons too, such as the quality of the course-materials and the quality of student support; both are important factors in completing courses successfully. Those institutes interested in finding out why students drop out, often only look at the quality of the course materials for answers, and not at other factors such as the quality of the student support. Chambers (1995) points out that considerable resources are invested in producing a range of courses of high

[2] The institute where the research takes place will be called the College

academic quality (author's emphasis). Moore (1995) notes that the focus of studies on learning is on the distance education programme, rather than on the distant learner. He continues: "Perhaps inevitably in an educational culture that regards every student as a fee paying customer who must above all else be satisfied, there are many studies of student satisfaction with courses..." (p. 35). This may be a consequence of the idea that in distance education the responsibility for learning is considered to be largely with the learner, while in conventional education the instructor still plays an, often important, role. In distance education offering quality learning materials is thought to be a sound basis for a learner to learn. In conventional education offering quality learning materials is thought to be part of a sound basis to learn; the materials are complemented by the instruction of the teacher/facilitator. If in distance education a high percentage of learners fail, or do not complete the course, it is generally considered to be the fault of the learners. If in conventional education a high percentage of learners fail, it is often thought to be, in part, the fault of the instructor. In this book it is advocated that the role the instructor plays in conventional education should, in distance education, be taken on, at least partly, by a form of student support which involves a tutor.

Lack of motivation: An important reason for drop-out

Although a number of reasons can be given for student drop-out, for instance courses that are too difficult or instruction that is inadequate, lack of motivation is considered to be an important reason (Wolcott & Burnham, 1991; Zvacek, 1991). Briggs wrote already in 1980: "Our theories and models of design do not take enough account of motivation, although we may acknowledge that motivation effects are stronger than treatment effects" (p. 49). Motivation is not often dealt with in literature on distance education and, if it is mentioned, it is mostly discussed in terms of instructional materials, such as course books and readers, and frequently excludes any other component of the distance learning system, particularly that of student support. Table 1.1. illustrates this point by giving an overview of the presentations that were offered at World Conferences of the International Council of Distance Education (ICDE) between 1980 and 1995.

Table 1.1 Overview of papers on motivation presented at ICDE World Conferences 1988-1995

Year	Country	Papers presented	Papers related to motivation
1988	Norway	102	2
1990	Venezuela	77	2
1992	Thailand	346	-
1995	England	276	2

The lack of attention paid to motivation as an agent of change, is also demonstrated In a recent collection of articles on distance education: “Open and Distance Learning Today” (Lockwood, 1995). None of the five contributions on Learner Support even mentions the word motivation.

Learners who enrol in a distance education course are often initially highly motivated. And when they receive the course materials with the accompanying audio and/or video cassettes, they can hardly wait to start. Somewhere along the road, however, quite a few distance education students seem to lose their initial motivation, slowing down or giving up altogether. Learners’ motivation can, among other things, be influenced by improving the motivational aspects of the instructional materials. The content of most distance education courses is, however, only reviewed and updated after the courses have been in use for at least five years as it is a very costly and time-consuming process. This study looks at another way of improving the motivation of distance education learners, namely by attending to the motivational needs of the learners via systematic motivational support. This is in line with Moore and Kearsley (1996), who state that tutors in distance education need to pay much attention to the feelings of distance education students, especially to their motivation.

The MMSS was set up to decrease the number of students who do not complete courses. Student support at the College is currently organized in such a way that there is hardly any contact (communication) between the tutor and the distance education student. The role of the tutor, who is the principal actor in providing student support, has been limited to marking assignments and giving elementary feedback. The MMSS aims at extending this role by involving the tutor in

(motivational) support and by making it possible for the tutor to assist the student through motivational communication, but also through advising on course problems, and general problems related to study methods, planning, course choices and so on. The MMSS as support system concentrates on the link student-tutor and tutor-student. It is in this area where motivational communication and motivational treatment take place. To study whether it is possible to design and develop motivational messages that are effective in reducing the drop-out of students, to find out whether the students appreciate the messages, whether the tutors could and would work with this extended support system and to answer questions on cost-efficiency the MMSS study was set up. The next section will look at the MMSS as a system.

1.4 The Motivational Messages Support System

The MMSS has to be designed as a subsystem of the College, this being the distance education system where the study took place. This study uses the concept of a system as defined by Romiszowski (1986): “A set of components or elements, interacting together towards a common goal” (p.5). Discussing the student support subsystem at the College, the components or elements of that subsystem consist of the tutor and the students, they are interacting via communication media, and their common goal is to decrease student drop-out. As a subsystem the MMSS is “embedded” in the College, but it is also influenced by other factors: the internal, psychological factors and external environmental factors such as the tutors and the institute (Keller, 1998). Before the MMSS was set up there was a deficient and limited interaction between the various components of the support system of the College which is visualized in Figure 1.1.

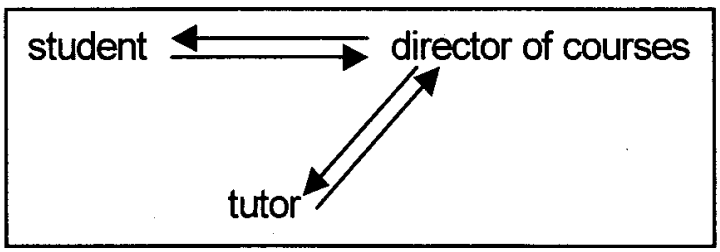


Figure 1.1 Traditional communication between students and tutor at the College

As is seen in Figure 1.1 there was no direct interaction between the students and the tutor. This lack of direct interaction does not encourage students to get in touch with their tutor, while also tutors are not encouraged to get in touch with their students. The MMSS, as a subsystem of the distance education system at the College, aims at improving the quality of the communication provision by establishing a direct interaction between the components of the system. In Figure 1.2 it is shown how a more direct and more efficient communication system, which makes interaction between the 'components' of the system possible, functioned during the MMSS study. The MMSS as a subsystem of distance education, is active in the dotted area.

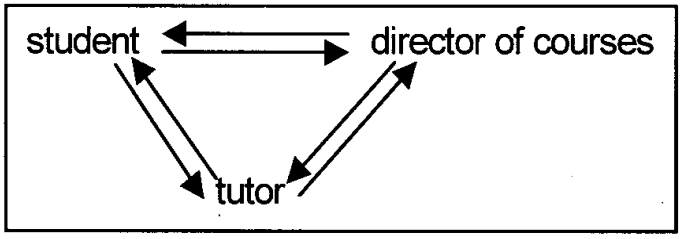


Figure 1.2 Improved communication between students and tutor as used in the MMSS

If student support is to be effective, there should be a direct communication link between student and tutor and tutor and student. By offering the possibility for direct communication, turn-around times should be reduced and interaction could develop. This new system may be a crucial condition for success, especially so in courses that still rely heavily on postal services. The enhanced communication makes it possible to extend the role of the tutor by offering possibilities for direct interaction, as learners now will have immediate access to the tutor and will have the possibility to build up a confidence relationship. In the improved system, student and tutor can work together towards a common goal: completion of the course. The MMSS also looks ahead. Interaction via e-mail is becoming more and more accessible and affordable, also in developing countries. This will change the face of distance education and reduce the 'distance' between tutor and students.

As will be seen in Section 1.4, the motivational communications are based on motivational needs. What motivational needs the learners may have is initially

seen by analysing the audience analysis and by paying attention to ‘signals’ from the student. This means that the new communication system (Figure 1.2) is a condition for motivational ‘treatment’. The link between tutor and student and student and tutor is not only expected to be an intensive one, it is an essential one.

As a system the MMSS uses a framework for its motivational communications. A defined minimum number of messages is to be sent to the students at regular times during the course. Although this is not a condition, the students are encouraged to enter in a direct communication with the tutor. How the motivational messages are designed and developed is discussed in Section 3.7. How the MMSS study is set up is seen in the Methods Chapter (Chapter 4), while the MMSS pilot study and the MMSS main study are discussed in respectively Chapters 5 and 6.

A characteristic of a system is that there is interaction between the various components, making them supportive of each other. In this way can the goal be realized. It has been difficult to come to such interaction during the MMSS study. To make it possible to implement the MMSS as a new subsystem at the College carefully planned integration is a basic condition. Chapter 7 discusses what the implications of using the MMSS at the College are likely to be, thereby focussing on the students, the tutors and the College.

1.5 The Purpose of the MMSS Study

In recent years, a number of authors have made efforts to understand and influence motivation (Brophy, 1983; Keller, 1979, 1983, 1994; Suzuki & Keller, 1996; J.Visser, 1990; Wlodkowsky, 1993). The study proposed here is in line with these efforts. It focusses on ways to attend to students’ motivational needs in a distance learning context. The ARCS model of motivation will be used. Drawing on a number of motivational theories, Keller (1983) has developed a model of motivation which defines four primary components of motivation: **A**ttention, **R**elevance, **C**onfidence and **S**atisfaction (ARCS). According to this model, the students’ state of motivation can be expressed in terms of their arousal in each of

these four areas. Students can thus be under-confident, over-confident or feel optimally confident, while at the same time their feelings of satisfaction may be somewhere on the continuum between under-satisfaction and over-satisfaction. Similarly students' motivation can vary between the extremes on the scales representing the other two dimensions. In the MMSS study the ARCS model forms the basic concept of a motivational intervention in the form of short written messages, which are sent to the distant learner during the course, and aim at maintaining or adjusting the learner's motivation.

The aim of the MMSS study is to enhance the motivation of distance education students to learn, through improving student support. The study investigates the effect of enriching student support with systematic motivational support in an attempt to decrease the drop-out rates.

Motivational communications

In this research two types of motivational interventions (messages) have been used: personalized motivational messages and collective motivational messages. The personalized message uses motivational strategies that are developed especially for the person who receives the messages. For example, if it is noted that a student lacks confidence, the message will use motivational tactics that strengthen his or her confidence. The collective motivational message is a motivational communication based upon an initial motivational needs analysis of the group of course participants. If the result of the analysis is, for instance, that students feel they need support in the area of confidence, the collective motivational messages will attend to this need. This approach is not on an individual basis, but through identical messages for all the course participants. There is, of course, a difference in cost between the application of personalized and collective messages. It is to be expected that designing, adapting or developing a message for a single person is more expensive than using one single message for an entire group of students. It is therefore important to investigate the difference in effectiveness between the collective motivational messages and the personalized ones. Figure 1.3 gives an example of a motivational message.

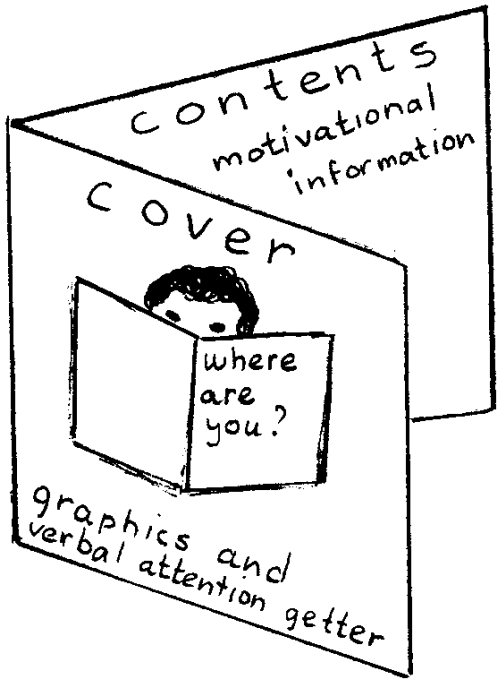


Figure 1.3 Example of a motivational message

These two approaches, the collective approach and the personalized approach to influencing the motivation of the distant learner have been translated into the following research questions:

1. To what extent are motivational messages, based on Keller's ARCS model of motivational analysis, effective in distance education courses?

2. What is the difference, if any, in effectiveness and cost-efficiency between the personalized and the collective process of enhancing motivation through motivational messages?

The first question deals with the validity and the effectiveness of the motivational strategy in a distance education context, while the second question compares effectiveness and cost-efficiency, of individualized and collective messages in the same context.

1.6 The Context of the Intervention

The research was carried out within the framework of a distance learning programme that prepares international students for a Diploma or MA in Distance Education.

The programme and the institute

The programme in question is offered by a well-known university in England[3] and carried out by a so-called lead college. This College has an impressive record of promoting the development of distance education, especially in developing countries. In practice this means that the British University trusts the College with writing the course, offering student support and carrying out student evaluation. Admission, examinations, accreditation and control of the academic content are responsibilities that stay with the University. In practical terms, the College has quite a lot of freedom, but is accountable to the University. In financial terms this means that 30% of the course fees go to the British University and 70% stay with the College. The cost of doing a Master's degree is about $ 10.000.--. This amount does not include any extra costs such as postage for the student, reference books etc. Learners can take a total of five years to obtain their degree. Although it varies considerably, about 50-70% of the students of the College come from developing countries. The limited access many students in developing countries have to computers and fax make the courses, which are still mainly print-based supported by audio and the occasional video cassette, are attractive for them. The drawback is that the students study in isolation and usually only have contact with their tutor when they send in assignments. This type of audience seemed to be perfect for the research on motivational messages, as the written motivational messages could alleviate the problems of studying in isolation and could be expected to help the learners in staying motivated. The Executive Director of the College agreed to the research and offered basic facilities such as payment of the extra costs involved in sending out the messages and permission to make it possible for the tutors involved in the research, to get into direct contact

[3] This university will from now on be called the British University.

with the learners and *vice versa.* The College is interested in the outcomes of the research as it is expected that the form of distance education they offer will still be used in the coming years, especially by developing countries. On-line facilities are scarce in many countries and can be very costly. If access to such facilities would become a condition for participation it would exclude a number of learners from doing an advanced degree via distance education. How serious the lack of access to fax is, was illustrated by a student who sent a fax stating: ” I have now access to a fax system which is 22 km away, but there is everyday contact with the Post-Office”. Attempts from the tutor to reach this student by fax failed, however, and in his second attempt to get in touch with the tutor the student concluded that it would be better if he would not do the course this year, but next year. “I do hope that even by then our correspondence might have come to within five days and not three weeks as your letter took to reach Ngora”.

The courses

The nine courses of the Diploma/MA in Distance Education, which was established six years ago, can be divided into two major parts. The first part consists of four compulsory courses, Courses A, B, C and D, also called Foundation Courses. Successful completion of these courses results in the award of the Diploma in Distance Education. To do the MA part a good pass in the Foundation Courses is required. The second part, the actual MA part, comprises five courses. One of these courses, Course E, is compulsory and requires the student to carry out a research project. Of the other courses, the student chooses two. Table 1.2 shows the course distribution.

Course A	**Course B**	**Course C**	**Course D**	**Course E**	**Course F**	**Course G**	**Course H**	**Course I**

Compulsory courses Electives

The minimum duration of one course is eight months, requiring between 10 and 15 hours of study per week, during approximately 32 weeks. The learning materials reach the learner by March 1 of the course year and the examination is at the end of October of that same year. Student evaluation takes place through so-called Tutor Marked Assignments (TMAs) and either a course project or, in most cases, an end of course examination. The course mark is based on continuous assessment through two assignments that have to be sent in (40% or 50%) and an examination or an extended essay (60% or 50%). If a learner fails or does not sit the examination, it will take another year before the examination can be done again. The student has the right to sit the examination once without paying an examination fee. The courses are organized in such a way that a student gradually moves to more independent learning in that choices between courses and between topics within the courses are offered. Course D has a disclosed examination, which means that the learner receives the examination approximately four weeks before the examination session and can prepare answers to the questions; no notes can be taken into the examination room. Course B consists of an extended essay, which encourages students to consult a variety of other sources and to show initiative. Most students take one, or sometimes two, courses per year. Completing an MA takes a student at least three years. The materials for each course consist of a course book, one or more readers and an assignment booklet. In most courses audio cassettes with interviews and or discussions, or other tutorial support are supplied. Sometimes, additional material in the form of articles or a video cassette is included.

The students

The approximately one hundred students currently taking courses with the College are all adults and come from more than thirty different countries. Over fifty percent of the learners are female. Their backgrounds differ considerably. Some students have finished teacher training courses, while others hold a BA or an MA. In order to be admitted into the programme, participants must have (the equivalent of) a completed bachelor degree and should preferably work, or have worked, in education and/or training. Work experience may be considered a substitute for academic achievement in those cases where students do not have the required

formal educational background. They will then enter the programma conditionally. A significant number of students have their course fees partially or in full reimbursed by either their own government, their employer, international organisations or the Department for International Development (DFID) in the UK. The reasons for the students to enrol vary. Some students are sent by their employers, especially now that corporate training often requires some background knowledge of open and distance learning, while others have a first degree from a local university and aim at getting a degree from the British University which, internationally, is renowned. The duration of the programme makes drop-out and non-completion more likely, as students may find another job where the qualifications they are trying to get are no longer important, or because they just do not manage to continue to study. Quite a few enrollees never even start the courses.

The learners study under difficult circumstances. They generally have no experience in studying via distance education, frequently use English as a second or even foreign language and may have to use poor postal and other communication facilities. It is not exactly known how many students have access to e-mail and/or fax. Some students do not have access to a computer or a typewriter and either send in handwritten assignments or pay someone to type their work. Lack of access to library facilities is another problem. The great distances that separate the course participants make it difficult for them to form study groups. In one of the courses involved in MMSS, the tutor sent the students a list with the postal addresses and fax and e-mail coordinates of their colleagues. Only very few students used the opportunity to get in touch with a colleague. Due to the definition of the tasks of the tutor, learners are not encouraged to have much contact with their tutors. Students who do not start, or do not finish a course in a particular year, have to enrol again the next year. In some cases, especially in the first two years the programme was offered, it was assumed that such students would be interested in continuing the courses and they were sometimes “automatically” enrolled by the College.

The tutors

Newly hired tutors sign a contract with the College. They receive the course materials, a list of names of and basic data on the students and are, according to this contract, not supposed to do more than mark the assignments and communicate to the College if, in their opinion, a student needs further help. Tutoring is based on eight hours assistance, this being the time students “buy” when they take out the course, according to one of the staff members of the College. The eight hours of assistance, are based on the students sending in four assignments. Marking one assignment is expected to take two hours tutoring time. If, what most of the time happens, a student sends in two assignments, coming down to approximately four hours, there is thus four hours tutoring time left over. Tutors get paid per assignment. At the beginning of the course year the tutors have to send out a letter to introduce themselves to the learners and to welcome the students to the course. Contact with the learner is mostly supposed to be through the College, although for this research it was agreed that the tutors involved could directly approach their students. Just like the learners, the tutor also suffers from isolation. A structured interview, involving the three tutors who assisted with the MMSS research, revealed that two of them wished that more attention would be given to the isolated position of the tutor, while the third one, who had started as a tutor that same year, had no opinion. All three mentioned that for them tutoring is more than correcting and marking assignments, while two out of the three tutors thought that the data they received on their students were insufficient to give personal attention to their students. About six weeks after the examinations, the College informs tutors which of their students have done the examination. Although the tutors had the task to assist the learner in the learning process by marking their papers and giving feedback, they are not involved in communicating the examination results to the students and do not normally send a letter of congratulations to those learners who have passed the examination, nor do they follow up with those who were less successful. It is the experience of the author, who has been a student in this programme, that communication of the examination results was never accompanied by any sort of personal note, neither from the College/the British University, nor from the tutor. A year ago, however, the College has changed this and has sent an official letter to the students who completed the course, to congratulate them.

1.7 The MMSS Study

The research method of the study

The main aim of the study was to develop motivational communication in student support. A flexible research method was chosen, which encouraged the development and the improvement of the product (the motivational message), focused on the process and assessed the validity, the practicality and the effectiveness of the product. For the main study a multiple-case design was adopted. This approach contributes to understanding, as it deals with operational links which are traced over time and thereby is sensitive to the diversity that is likely to be found in the given context (Yin, 1994). Chapter 4 will deal in more detail with the research design, the choices made and the research methods.

The significance of the study

It was anticipated that this study will contribute to the theoretical as well as the practical aspects of a motivational strategy, based on the ARCS model, which aims at enhancing the motivation of learners in distance education. The study examines motivational communications, used to influence the motivational levels of learners, thus potentially optimising learning. The research builds on the use of motivational messages in conventional education (J.Visser, 1990) and allows to draw conclusions as to the usefulness and usability of motivational messages. Discovering the effects of motivational messages as possible agents of change, should make it possible to decide whether the use of motivational messages is a recommended strategy for enhancing the motivation of distance learners. In addition, judgements will be made concerning which type of motivational message, personalized or collective, is considered to be the most cost-efficient, respectively, the most effective one.

The organisation of the study

In Chapter 2, a variety of aspects of distance education, such as the development of distance education, the “clientele” of distance education, and its possibilities and limitations will be discussed. Chapter 3 gives an overview of the main motivational theories, discusses two models of motivation and justifies the choice of the ARCS model of motivation for the MMSS study. Chapter 4 contains the design, procedure and methodology of the study. The pilot study and its results are presented in Chapter 5, while Chapter 6 deals with the main research. A summary of the study, conclusions, implications and recommendations for further research are given in Chapter 7.

Chapter 2
The World of Distance Education – Distance Education in the World

2.1 Introduction

Distance education, as it is now known, has its roots in teaching by correspondence. Delivering education through correspondence was a novelty in the nineteenth century. It could not have developed on such a scale if the industrial revolution had not taken place, as this form of education depends heavily on postal services. The interest in distance education is still growing and in the following paragraphs a short overview of the development of distance education, its worldwide use and the challenges distance education faces, will be given.

2.2 The World of Distance Education

The first well documented attempts to organise distance education courses were mainly in the field of extension courses and university correspondence programmes. Some of the institutes, which were pioneers in the field, are still active such as Wolsey Hall in Great Britain (1894) and Calvert School in the USA, (1897). At the end of the nineteenth century the first university correspondence courses were established by Queens University in Canada and some years later by the University of Wisconsin in the USA. The advantages and potential of this form of education soon became more apparent. The following decades saw more concerted efforts to offer correspondence courses. Initially it was mostly private initiative that encouraged the development of correspondence education, but the request of a group of parents in the Australian outback, who asked the Education Authority for the provision of primary school education through correspondence, changed this situation. In the 1920's government supported correspondence

education began to take off in many countries, such as Canada, the Soviet Union, Australia and the UK. Although educational broadcasts were established as early as the 1920's, it took more than a decade for the combination of written and oral material to be developed. Delivering education by radio and later by television became important, not only for school broadcasts, but also for adult education. A remarkable example is the radio schools, which were set up in the late 1940's in various countries in Central and South America. These schools, which mainly aimed at the rural population, have made an important contribution to human development in rural areas in a number of countries in that continent.

Gradually, distance education, as it came to be called, had also spread to the so-called developing countries. Distance education was attractive as it has the potential to be cost-effective, provided that it is well-planned and used for a considerable audience over several years. Many countries that had become independent in the nineteen sixties and seventies and were looking for ways to keep education promises, often made before independence, soon came to recognize that distance education was a suitable means for providing relevant education. This included teacher training courses and literacy courses. In the industrialized countries there was a shift in emphasis away from *teaching* and towards *learning.* Concepts such as “individualized learning” and “open and self learning“ were the subject of discussion among educationists and planners. During the 1960's a variety of means of instruction, such as print and broadcast and the possibility for face-to-face support, were combined into packages of study materials and sent to the students. These packages were used for the first time on a large scale by the British Open University. The establishment of the British Open University at the end of the nineteen sixties, and later on other open universities in various countries and continents had a great impact on traditional and on distance education. The same holds for the the founding of the National Open School in India and for a variety of other distance education activities, both in formal and non-formal education in many countries. Distance education, with its independence of place and the possibility to study at a pace convenient for the learners, was more and more considered to be a valid alternative. Gradually individual learners took distance education courses to adapt themselves to new situations in their environment or to facilitate career changes. The corporate world

entered the distance education field by providing courses and training for their own employees and lately for others as well.

The development of distance education technologies

The development of distance education has been greatly influenced by an "explosion" in the types of technologies that are currently available. Bates (1995), as shown in Table 2.1, offers the following data when he discusses the development of new technologies in teaching up to 1980.

Table 2.1 The development of new technologies in teaching up to 1980

Development	**Years in operation**
Teacher (face-to-face)	3000
Book (text)	500
Postal services	150
Radio	60
Film	50
Television	20

Source: Bates (1995:29-30)

It should be noted that the typical classroom model is, in fact, mainly a result of the industrial era. To this table can be added, among others, audio and video cassettes, computers, e-mail and other Internet based technologies. Very soon educational radio and TV programmes via satellite may cover the whole world. According to Bates (1995) the development of technologies shows a roller-coaster pattern.

It is expected that the recent developments in media and technology, which offer increased interactivity, will contribute to important changes, not only in distance education, but in all kinds of education. Although there is consensus that these new technologies are a promising means to deal with the enormous problems education faces today, there is still a number of hurdles to overcome of which

cost-efficiency is an important one. Evolution rather than revolution is the watchword according to Brown and Brown (1994). This does not mean that traditional media such as text, radio, audio cassettes and the tutor/teacher should be abandoned. Questions about which media should be used when, where, why and how are relevant and should be considered every time courses are set up. The current shifts in the labour markets, such as the increase in the service sector and the, in some cases, rapid development of developing countries, are important factors that will influence the way distance education will develop (Longworth & Davies, 1996). Bates (1995) stresses that educational technology applications should be driven by our vision on education and training. Important, not only technological, but also political decisions will have to be taken to establish organisations that can meet the needs of a society about to enter the twenty-first century. Figure 2.1 shows that present day distance learning ranges from print to multi-media and from postal services to satellite services.

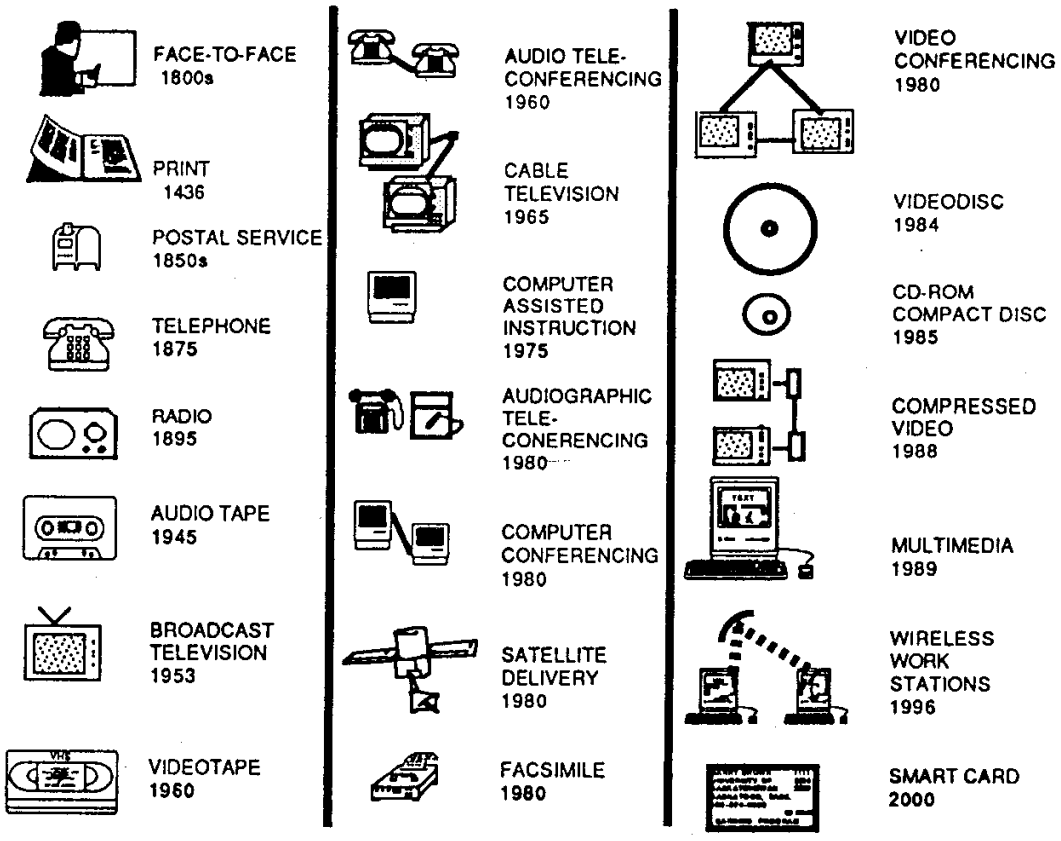


Figure 2.1. A chronological continuum of devices and modes used to deliver learning to students distant from traditional sources of instruction (Brown, 1992b).

2.3 Distance Education in the World

To give an idea about what is going on in the world of distance education the following data, adapted from Brown and Brown (1994), may suffice. In Africa around 90 major institutions provide distance education; although the programmes are still mostly based on print, audio cassettes and face-to-face support offered at local centers, this is rapidly changing. In the Asia-Pacific region more than a hundred major institutions are serving this area and are making more and more use of computer communication. In Asia, Australasia and the South Pacific, many open universities have been established catering to millions of students. Extra-mural services provide courses for a variety of clients, catering to farmers and housewives as well as to budding entrepreneurs. The National Open School in India is a good example of how secondary education students have successfully been helped to enter university courses. The University of the South Pacific has set up a quality university with centers in nine regional countries. In Australia most universities are now working in the dual-mode; they offer conventional and on-line courses and students can easily mix and match. In the Middle East, where in some countries women are not allowed to be taught by men, universities have solved this problem by offering courses via closed circuit television. The fear of civil unrest can also be a reason to promote distance education, as offering education this way avoids students getting together. This has been the case in Turkey and in Iran. North America has experienced an unprecedented growth in distance education, with Canada in the forefront. The United States and Canada are testing the technology of distance education in numerous, independent, initiatives.

Universities now incorporate on-line courses in their traditional face-to-face teaching. They do not only use them to give students a chance to study courses in the evening or whenever convenient, but also to familiarize students with the medium. The programmes are so numerous that it is difficult to choose which ones to highlight. An important initiative has been the STAR school programme, created by the Congress of the USA in 1988. It develops multi-state, multi-institution education, ranging from elementary to secondary school level. Central and Latin

America have a rich experience with distance education through the Radio Schools, which were established in the late nineteen-forties. These are community-based and cater to hundreds of thousands of students. Mexico is successfully offering distance education at secondary and university levels, while many extension courses offer opportunities for people of all kinds of backgrounds to become more knowledgeable about their own communities and the world. The commercial enterprise Multi-Rio, established by the city of Rio de Janeiro (Brazil) to supply distance education to millions of people, is offering numerous courses to learners, even in remote areas of Brazil. WorldSpace, a commercial enterprise which has created its own non-profit extension, will, from October 1998, offer an international direct broadcast capability to 4.6 billion people of Asia, Africa, the Middle East, Latin America and the Caribbean. A certain percentage of the channel capacity will be used to serve specific developmental needs. Most European countries now have an open university, while a myriad of other, often private, institutes provide distance education at various levels. Europe is currently facing the challenge of offering cross-border distance education courses, which are recognized in the whole of Europe and benefit from a collaborative development of software and networks. While it is recognized that the above information on the development of distance education in the world touches only upon some of the most important events that took place in the area of distance education in the last five decades, it is, nevertheless an impressive record.

According to the Ad hoc Forum of Reflection on UNESCO's role in the last decade of the 21st century education is at crossroads: "Education is increasingly necessary and less and less possible, due to its cost". The world is looking at alternatives and is exploring ways to pull down the barriers that prevent so many people from having access to education. Under influence of problems of economics, pressed by problems of access and encouraged by success, developing and industrialized countries alike, are looking for solutions to address the demand for all kinds of education. Distance education is increasingly seen as a possible solution to attack the tremendous problems education is currently facing.

2.4 The Characteristics and the Role of Distance Education

The characteristics of distance education

Although many definitions of distance education have been given, the basic idea is a simple one: learners and the teaching source are separated by distance and often also by time. Moore (1973) defines distance teaching as: “The family of instructional methods in which the teaching behaviours are executed apart from the learning behaviours” (p.76). Eastmond (1994) defines distance education as: “The organisational framework and process of providing instruction at a distance” (p.88). Communication between the teacher and the learner takes place via print, electronic means or other ways. This is different from how, for quite a few people, the transfer of knowledge has taken place until the beginning of the industrial era. A learner was often “taught” by a scholar or a governor/ness who, in a one-to-one situation, helped the learner to acquire solid knowledge and to obtain those skills that made it possible to become a “worthy” member of society. In parallel, mainly because of reasons of cost-efficiency a group of learners were put into a classroom and the teacher talked to them, asked questions and answered questions from the students. Learning had become an “industrialized” instructional process with the responsibility for learning mainly resting on the shoulders of the teacher. How well a teacher performed, was, and still is, often measured by the success of the students; if the marks are not very high, or if many students fail, the teacher is seen as not having done his/her task well. Distance education, on the contrary, puts the responsibility for learning largely with the learner. It is more learner centered than traditional education. Distance education is not only different in that there is a physical distance between learner and tutor, but there is, according to Moore and Kearsley (1996), also a distance of understanding and perceptions caused by geographic distance; these two types of distance have to be overcome by learners, teachers and educational organisations if effective and planned learning is to take place. Procedures that can contribute to overcoming the distance are instructional design and interaction procedures such as student support.

The role of distance education

In the past, traditional education institutes have often played a role in providing learners with the opportunity to study via distance education. Institutes developed their own courses, purchased courses or adapted existing courses from conventional education by adding text related questions and/or by providing extra written guidance. Distance education institutes are characterized by the absence of teachers, classrooms, libraries, schoolcafe's and/or recreation places and by the presence of a printing department, material production units and often a large, warehouse and mailroom. Distance education institutes may show some of the characteristics of a factory: planning, production, and distribution are important departments. For many years, most distance education institutions have been autonomous, meaning that they controlled their own programmes' finances and staffing and support services. In numerous institutions the learning materials consisted and still consist of print and audio cassettes while in addition some form of tutoring is offered. Sometimes distance education institutes are only carrying this label as it may be convenient in certain circumstances. Research carried out in Zimbabwe in 1993, involving Zimbabwe's largest private institute of distance education, revealed that most of the teaching was in fact done in the face-to-face mode, but that the institute was called a distance education institute in order to be exempt from government rules concerning sanitary facilities and fire-prevention rules (L.Visser, 1993).

The founding of the Open University in the UK in the 1960's, followed by the establishment of an impressive number of other open universities world-wide, have increased demand for distance education. The increased competition has positively influenced the quality of distance education. Many institutes now work with staff employed on a permanent basis; contracting not only instructional designers for the development of courses, but also graphic artists, audio and video programmers and sometimes full-time support staff.

A recent development is that a number of conventional institutions have set up distance education departments and have become dual-mode institutions. Today more and more distance education institutes are becoming aware of the fact that

they must carry out research on the quality of their programme, their courses and the performance of staff and students, if distance education is to be considered a valid alternative to conventional education. Distance education, especially where it uses electronic technology, is being carefully examined by the education community. Although the quality of the instructional materials is considered important, there are many studies suggesting that student support is crucial for the successful completion of a distance education course (Coopers & Lybrand, 1989; Moore, 1995; Threlkeld, 1992a). Studying student response to an electronic classroom project, Moore, Burton and Dodl (1991) found that the role and the performance of the facilitator was a major factor in determining the success of the electronic classroom class. Threlkeld (1992b), in his case studies of rural distance education, also emphasizes that student support is critical to the success of distance education programmes.

It is often asked whether distance education meets the standards of traditional education and if it is less costly (Threlkeld & Brzoska, 1994). Although it is beyond the scope of this study to discuss these questions in detail, the following data are important, as they relate to this study. The most common outcome of comparisons between traditional education and distance education is that there is no significant difference between instruction through media and face-to-face instruction. This outcome relates to the findings that the medium does not have much effect (Russell 1992b). An important observation is made by Clark (1983), who notes that: “The best current evidence is that media are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition...only the content of the vehicle can influence achievement” (p.445). Distance education is not inherently cheap. It can be very expensive, especially in those cases where technologically advanced media are used. Much depends on economies of scale. Threlkeld and Brzoska (1994) note that distance education, when delivered to large numbers of students and employing limited interaction, can be cost-effective. However, one area where one should not try to economize is the support system (Rowntree, 1992). Standard distance education courses cannot offer an individualized learning system for distance education students. To assist with differences in background, ability, and motivation, learners need the help and support of “a

human element" in the form of a tutor. Reports on The Open Tech Programme (Tavistock, 1987) and the Coopers and Lybrand (1989) report on open learning in industry, confirm this view. In summary, the following results from research and evaluation studies can be given (Threlkeld & Brzoska, 1994):

- The medium is not as important as learner characteristics and motivation;
- There is little empirical evidence to support the drive for live and interactive instruction;
- Student support is considered to be very important and
- Findings are mixed regarding the cost-effectiveness of distance education.

2.5 What Kind of Students Engage in Distance Education?

One of the important advantages of distance education is that it facilitates access to learning. People can learn at home, they can learn in the evenings and weekends and they can often start a course without having the required entrance certificates. The 'market' is becoming increasingly diversified: more and more groups of people opt for distance learning. These markets differ considerably in terms of educational background, age groups, experience, social background and income. Speth (1991) noticed that the literature in distance learning has paid an inordinate amount of attention trying to construct a profile of the typical distance learner. She believes, however, that gathering large samples of distance education learners and trying to mix them into an average distance learner, produces an illusionary typical learner, failing to show the great variety that exists in the student population. Speth, Poggio and Glassnapp (1991) note that individual differences between learners might affect their response to instruction. They regret the lack of research along those lines. Thus, instead of looking at the typical distance education learner, it is more useful to concentrate on their differences. It is therefore highly recommended to do an analysis of the potential audience before courses are developed or, should courses have already been developed, before the courses start. This provides the institute and the tutor with information about the learners, including demographics, motivation, personal and cultural background, reasons for taking the courses and possible financial problems. In

this way, course designers and course writers are better prepared for their tasks, while tutors can be more effective in their task of tutoring individual students.

The reasons why students participate in distance education are numerous and varied. For some students it is the flexibility that is appealing; they might be working full time and have limited free time and want only to, or can only, spend some evenings and/or their weekend on a course. Other reasons can be the lack of specialized courses in the vicinity of home or work, lack of possibilities to participate in conventional education, as there may be only a limited number of places available, such as is the case in many developing countries, or just the wish to study at home. Another important reason may be that students do not have sufficient qualifications to enter the conventional system, but have work experience or practical background knowledge that makes it possible to successfully follow and complete courses (Threlkeld & Brzoska, 1994).

In the preceding paragraphs it was seen that it is not easy to give a general picture of distance education students. Traditionally, there were students who learned via conventional education and who learned via distance education. The latter group was also called the “second chancers”. It was conveniently forgotten that many of those, defined as belonging to this group, never had a first chance anyway. The different characteristics of distance education students should be reflected in the instructional design of the courses. Processes that foster an early detection of instructional and motivational problems could help reduce student drop-out and non-completion.

Distance education learners world-wide

It has been seen that it is not easy to determine who the distance education learners are. In Malawi, for instance more than 20.000 secondary school students are working towards Junior Certificate via study groups. Less than one third of them are females (Warr, 1991). In Pakistan at the Allama Iqbal University, which also offers extension courses, seventy percent of the students are between 21-30 years of age, with around 40% females (Sargent et al, 1989). Other students have to take one distance education course while they are working towards a degree at

a conventional university, as is the case in some universities in the USA, where a compulsory on-line course is included in the academic programme in order to prepare students for lifelong learning. Furthermore, there are those professionals who must update their knowledge regularly, as is seen in medical professions and who do this via distance education. An increasing number of distance education students are women, who interrupt their career to take care of their children for some years, but who, during these years, prepare themselves for re-entry into the workforce. Other students work in educational institutions where distance education is going to be introduced. Next to these, there are the people who cannot continue in their profession and have to change careers in order to stay employed. In general, it can be said that the average distance education student is over fifteen years old, and works full time or part-time. In developing countries more male than female students participate in distance learning, while in most industrialized countries the ratio female/male is about 50/50. It would be useful to carry out research which concentrates on individual differences between learners and their impact on the learning process (Threlkeld & Brzoska 1994).

Distance education is generally thought to be ill-suited to young children. They need the social environment that schools provide. They should have the opportunity to mix with other children to learn social skills. A mix of distance education and face-to-face learning, which enhances the learning environment, has been used in the Interactive Radio Instruction projects aimed at primary school pupils, offering promising results (United States Agency for International Development, 1990).

2.6 Student Support in Distance Education

Student support in distance learning usually refers to the help distance education students receive in addition to the learning materials. It can be given in a variety of forms and may be organised support or informal support. It may be given by tutors, trainers, colleagues and/or family members. It may reach the learner through different means such as face-to-face contact in study centers, by telephone or through electronic and postal services. Although the interest in student support is increasing, it has, up to now, not received as much attention as

other aspects of distance education like the development of instructional materials. Robinson (1995) suggests, among other things, the following reasons for this lack of attention:

- Student support may be a less glamorous activity than some other activities in distance education;
- Student support is often considered to be peripheral to the “real business of developing materials”.

Another reason, derived from the researcher’s personal experience, can be added. To most of those working in distance education student support is a need they have heard of and learned about, but they have not themselves been in the position of distance education students who lack confidence and wonder whether they are capable of finishing the course successfully. They have even less an idea of what it is like to be a distance education student in a country with poor communication facilities, far away from the providing institute. Hence, it may be difficult for tutors and others involved in distance education to understand how important student support can be for the learner studying in isolation.

The aim of student support

Student support aims, in sharp contrast to the learning materials which are mass produced and mass oriented, at the individual learning of the student. Stone (1990) is of the opinion that the need for live, interactive instruction is not supported by research, but that high quality learning can occur as long as students have access to some form of interaction with a tutor. Student support is an area that is likely to be highly influenced by cost-efficient and cost-cutting measures. The cost of tutoring is a variable cost: the cost increases with student numbers. According to Bates (1995), in institutes like the British Open University and the Open Learning Agency (Canada) the part-time tutor system constitutes at least twenty per cent of all operating costs. Increasing the number of TMAs from two to three per course, might increase the percentage of the operating costs with some ten percent, while reducing the assignments to one per course is an important cost-saver. In practical terms, it means that there is not much room for extra

attention for those students who have more problems than others in doing a distance education course. Those learners may not receive the extra attention they so badly need. This may easily contribute to motivational problems.

Most student support has looked at the following three areas:

- Academic support (feedback on work submitted);
- Administrative and methodological guidance;
- Support related to lack of motivation to continue with the course.

The last item should be considered the most important one, as was seen in Section 1.2. Zvacek (1991) says that: “The role of motivation in distance education cannot be overstated...the traditional motivational forces active in “traditional “ classrooms such as group pressure, a familiar learning situation and social factors are often absent in distance education settings” (p.40). It is thus important to include mechanisms for enhancing student motivation in the student support system.

The role of the tutor in student support

The tutor is an important element in student support; the word “tutoring” reminds one of the old and reassuring times when a tutor was still a guardian, someone who looked after the pupil[1], often hired to teach in a private setting. Later on, for instance in the United States, tutors were hired for remedial instruction. Unfortunately, in distance education tutors frequently do not belong to the staff of the distance education institute. Most tutors have a tutor contract, which stipulates their tutorial duties. These duties are mostly limited to marking assignments and making suggestions to the learners on how to improve their work. Many tutors are teachers in conventional education settings or are working free lance, and take the tutoring as an additional source of income and have not received any training in accompanying distance education learners. Tutors are, however, in many distance

[1]Latin: tueri: to look after, to guard (Webster’s dictionary, 1985)

education courses the only persons a student has ever contact with; they form the link between students and the distance education institute. Having tutors in a distance education system can greatly improve student completion rates and achievement, although such outcomes depend on the course, the tutor and the student (Moore & Kearsley, 1996). Unfortunately, tutoring is mostly poorly paid. According to a tutor of the British Open University, she received £ 10.--. (before tax withholdings) for marking an assignment, which takes between one and a half and two hours. It is thus not surprising that tutors generally are not keen on investing any extra time in tutoring.

What do students expect of tutors? According to Moore and Kearsley (1996) students expect up-to-date information, guidance on how and what to study, opportunities to do something with what they learn (projects or assignments), feedback on their work, and help with administrative and/or personal problems. Most students also expect some kind of interaction with their tutor or, if possible, with fellow students. These expectations frequently exceed the support distance education institutes offer the learners. Many distance education students have no experience in distance learning. They are still looking for some kind of teaching and may find it very difficult to study in isolation. They often want to share their problems with the tutor, as the student in one of the courses involved in the MMSS wrote: “I need support/motivation. It’s good to have someone continuously asking about my progress”. Most students, however, need even more. They are looking for some kind of personal assistance and for individual support, rapid feedback, and advice and encouragement (Rowntree, 1994). Although the term encouragement is rather vague, it certainly refers to the field of motivation. The MMSS study investigates how tutor support can be used to help learners to maintain optimum levels of motivation along different dimensions. Chapter 6 discusses what the learners of the distance education courses participating in the MMSS research, expected from their tutors. Their answers confirm Rowntree’s findings (Section 6.3).

Moore and Kearsley (1996) state that tutors in distance education courses need to pay a lot of attention to the feelings of the students, especially to their motivation. Ways of providing the structural and motivational support that help students to

continue with their studies have to be found. In many distance education courses, as has been mentioned before, the task of the tutor is to “check” that learners show that they have understood the text and can apply what they have learned. Tutors are normally not the ones who have had a say in the preparation of the learning materials; their task is limited to feedback. There are, however, also other forms of tutoring. Some institutes, like for instance the British Open University, use study centers where groups of learners can meet with a tutor. Some courses require students’ physical presence in a summer school. The British Open University recently experimented with on-line participation of those students whose professional or personal circumstances make it impossible to participate in summer school activities. Other institutes include tutoring that involves group sessions in regional centers, as is the case in Indonesia and in England where students can learn from and with colleagues. Another form of tutoring, which occurs more often nowadays, takes place through telephone contact, fax and/or e-mail. This, according to Rowntree (1992), can help students as “distance education students need to converse regularly with a tutor, either by correspondence or on the telephone” (p.55). This kind of face-to-face tutoring is also more motivating for the student as it provides opportunities for real guidance. It comes closer to the expectations of tutoring held by many distance education learners, as was seen earlier in this section. In order to design adequate learning materials and to offer effective tutoring it is important to know the learner. A learner analysis should therefore be conducted. This should give information about the reasons for taking the course, the learners’ motivational state and their educational and cultural backgrounds.

2.7 Problems in Distance Education

Although distance education may offer a valid alternative to face-to-face instruction, it still faces the problem of having high drop-out and non-completion rates. Drop-out rates have been a problem for distance institutions all over the world. Several studies have tried to explain this phenomenon, especially with a view to improving future developments. Evans (1995) compares drop-out research to airplane crash investigations: the benefit comes to others from the tragedies of

those who have already gone. Hence, it is research after development and implementation.

Lack of study skills and tutorial assistance

In most distance education courses and programmes enrollment is voluntary and often a high percentage of students who begin courses do not complete them. In some cases, students do not seem fully aware of the extra effort involved in studying via distance education. A lot of discipline and perseverance has to come from the learner. Many learners embark on distance education courses without receiving any assistance in planning their work or in developing study skills. Rumble (1993) states that although generally the drop-out rate is higher in distance education systems than in traditional education systems, distance education students who are motivated to learn and are helped to do so, can achieve results as high as those of traditional students. Important in Rumble's observation is the emphasis on the need for help for distance education students. This is also mentioned by Moore (1989) who suggests that students should be supported by, among others, orientation programmes, active tutorial assistance and study skills acquisition. In conventional education the motivating, steering and persevering forces are generally controlled by the teacher. Distance education students, on the contrary, have to take most of their learning in their own hands. According to Cropley and Kahl (1983), the ideal distance education learner would not only possess the prerequisites for distance education, but would also be well equipped for face-to-face education. The result is that those traits that are merely desirable in face-to-face education are indispensable in a distance education setting.

It is of the utmost importance that distance education accepts the challenge and comes to a point that it is no longer looked upon by the public as an add-on. The changes in job profiles and the technological changes in the workplace increase the need for lifelong learning. The role distance education can play and is often already playing in training and retraining of the workforce is an important one. Education and training are core elements in ensuring a successful workforce, but may be very costly and even difficult to realize as the following example shows: if

every worker currently in the workforce was sent back to college for three months training every five years (a conservative estimate of the job-based training that is required) the established post secondary education system in Canada would have to increase by more than 50 percent (Bates, 1995).

2.8 Cost-efficiency and Cost-effectiveness in Distance Education

The driving force behind the establishment of distance education systems is often the desire to provide education to a population in the least costly fashion (Threlkeld & Brzoska, 1994). Distance education courses vary greatly in number of students involved, quality and variety of courses offered, learning materials used and support-staff employed. The Allama Iqbal Open University in Pakistan currently has over 100.000 students; Wye College in England has less than a thousand students, while the College has just over a hundred students. Even if an institute has 100.000 students this does not mean that all students take the same course; there might be courses that have only 200 students. The number of students in a course has a direct impact on the basic cost of the course development. If, for example, a distance education course is written by a course team and only forty-five students take the course, the course may well be much more expensive per student than its equivalent in conventional education which likewise also attracts only forty-five students. If, on the other hand, a course is taught to eight hundred students, via conventional classroom teaching in groups of, at the most, fifty students, and if its equivalent in distance education attracts eight hundred students, the distance education version is likely to be cheaper, especially if the course is repeated twice a year. An example is an engineering and a leadership class given to officers in the US Army Reserve for which the initial costs of teaching the courses via distance education (computer learning) were comparable to the classroom version. The repeat costs of the distance learning version were considerably less (43% after five iterations). The more often the course was given, the greater its cost-effectiveness. It was also found that the two courses were equally effective in terms of student achievement (Phelps et al, 1991).

Cost components in distance education

Bates (1991) lists three main cost components in distance education:

1 Delivery: the cost of getting the materials to the learners. This includes transmission costs, telephone costs, mailing etcetera;
2 Production: the costs of designing and producing the teaching materials. Included are costs of the course producers, audio and video production, and other media production costs;
3 Support: the additional costs involved, which ensure the system works successfully: the cost of the administration (enrolment and exams), cost for the tutoring and coordination and overhead costs such as study centers.

Rumble (1992) argues that the establishment of dedicated distance learning institutions is the most cost-efficient and cost-effective way to provide distance education, on condition that these institutions offer only a limited number of courses to a large number of students. If, however, the number of courses increases and therefore, most likely, the number of students per course decreases, the economy of scale that supports the institutional model breaks down. It can thus be concluded that, generally, in distance education if the number of learners increases the cost per student decreases. This holds, however, only if there is limited interaction. The cost per student for student support in the form of tutoring will roughly stay the same per student and is virtually independent of the number of students in the course. In contrast, the cost per student for instructional materials does not vary much if the number of students increases from, for instance, 500 students to 1.000 students. The tutoring costs, however, are likely to be twice as much if the number of students doubles. And these costs would again double if the number of interactions between students and tutor becomes twice as high. A problem that complicates cost analysis in distance education is that many educational institutions do not have experience in quantifying educational outputs and lack uniform ways of calculating such major expenses as overhead (Threlkeld & Brzoska, 1994).

The following cost function is widely quoted in the distance education literature, for instance in Rumble (1988). This cost function can be generalised as follows:

$$TC = F + VS$$

In this formula TC is the total cost, F is the fixed cost and V is the variable cost per student, S is the number of students. The greater part of the variable cost is taken up by the fees for the tutors and communication. It is thus understandable that an institute will not be interested in increasing tutorial support as this increases the variable costs of a course significantly.

An element of distance education that is much more difficult to quantify is the value-added aspect of distance education. What is the added value if students have discovered that, for instance, employment possibilities have increased, now that they have “learned” to learn via distance education courses, or if someone finds out that learning can be fun if you can do it at your own pace and at your convenience. Another example is the MA programme the British University offers in a number of areas. It makes it possible for international students, who otherwise would never have had a chance to go back to school as they have entered the workforce and have family responsibilities to take care of, to get an MA from a well-known university. It is, however, disappointing that so few students succeed in getting their degree and that so many do not finish. The use of motivational messages may be a low cost addition to student support. The research on the two different types of motivational messages, the personalized and the collective approach, also takes into consideration the additional costs as regards extra time involved in the tutoring process.

2.9 Distance Education and the Future

In general terms, the practice of education is still the same as it was 150 years ago. Papert (1993) uses the following parable. In an earlier century a group of surgeons and another of schoolteachers are time travelling. Each group is eager to see how much has changed in their profession during more than a century. Imagine the time travelling surgeons landing in an operating theater in a modern

hospital. Although they might recognize what kind of operation is carried out, they do not recognize the instruments, scanners and monitors. The time travelling teachers land in a modern classroom of a modern elementary school; although they see a few things they may not recognize immediately, they fully see the point of most of what is being done and could quite easily take over the class.

Many people go to school, go to evening classes, to university or to professional training schools during a period of their life. They may have the opportunity to use some educational technology such as television or computers. The main source of information, however, continues to be the teacher and the textbook. An increasing number of people such as those who did not have, or did not take, the opportunity to attend conventional education or who for professional reasons need additional qualifications, turn to distance education. Those people have the advantage of experiencing change in the delivery of education and learning. The number of strategies available for the delivery of instruction to the distant student is fast increasing. An increase in the interaction between teacher/tutor and student and a growing desire world-wide to access information, have been the stimulating forces in developing new technologies to support the goal of learning at a distance (Brown & Brown, 1994).

In a number of countries, radio, television and computers are no longer an add-on, but the pillar of the teaching and learning process. This development is likely to have important implications for learning. Learning will become more and more independent of place, time, and age. Learners will be able to use a great variety of sources. The greater availability of opportunities to learn are influenced by the needs for economic development. Governments all over the world are taking steps to offer more learning opportunities because of changing patterns of work and the consequent need for continuous learning, training and retraining. Important social and economic changes are taking place. Some developing countries change rapidly from a predominantly agricultural society to a (semi) industrialized or service society, as is the case in, for instance, Indonesia. Labour markets in industrialized countries show changes from full employment to part-time employment, from being employed to being self-employed and last but not least, from manufacturing to servicing. The just-in-time principle, which is increasingly

practised, will also influence the labour force. Just-in-time learning and training will become important as people might have to change careers a number of times during their working life.

Over the next decade education is likely to undergo a fundamental transformation as teaching and learning at a distance become at least as important as the traditional classroom approach, which has lasted for over a century (Moore & Kearsley, 1996). These words reflect an optimism about the possibilities and the growth of distance education that is felt by many distance educators. It is an exciting time for distance education. The emergence of communication technologies, such as the Internet, which were not widely available a decade ago and are becoming more affordable and accessible, will most likely greatly influence the development of distance education. Distance education could soon be in the forefront of innovative learning.

The future of distance education in developing countries

What place do the developing countries have in all these predictions? As was seen in Chapter One, the developing countries have taken a wide interest in distance education the last decades. Interesting is that, from the industrialized world an increasing interest is shown to contribute to solving the educational problems of the developing world. The following examples may suffice:

- From 1998 a geostationary satellite will transmit digital audio, data, text and images directly to (inexpensive) portable radio receivers in Africa and the Middle East. This will be a very cost-effective means to improve health, agriculture and education (WorldSpace Foundation, 1997).
- A variety of countries such as Egypt, Brazil, South Africa and Malaysia are setting up ambitious institutes for on-line education, for teacher training and for informatics programmes.
- Global organisations have been set up to encourage contacts between students from a variety of countries, at different levels and with different social backgrounds through, for instance, computer conferencing

- Universities from industrialized and developing countries are joining forces and are producing learning materials using a World Wide Web (WWW) Internet site (http://online.kennis.org)
- Many enterprises in the corporate world see an emerging market and, in their capacity of education providers, link up with Ministries of Education.

There are also drawbacks to these developments. Communication is still expensive and creates problems, even in the industrialized world. Warren (1997) notes that in some secondary schools in England, the cost of communication is so high that limits on the use of, for instance, the WWW had to be imposed. Some countries forget to include the cost of communication in setting up projects for computer use in schools, as was recently seen in Mozambique, where in the budget for installing computers in a number of secondary schools so that learners could access the Internet, no provision was made for locally and internationally very high communication costs. As many schools in that country already work with a near zero budget, omissions like these can have important consequences. Access to means of communication is also still very limited in many parts of the world.

Against the backdrop of the problems discussed above, it is likely that for many students, especially in developing countries, the “traditional” distance education setting will, for the coming years, continue to be written materials, audio/video cassettes and correspondence tutoring. Thus, in spite of modernization, in many such cases developments will continue to take place within the framework of a course, course materials and someone to accompany the student at a distance.

Chapter 3
Motivation in Education and More Specifically in Distance Education

3.1 Introduction

A variety of authors have stressed the important role motivation plays in successful completion of courses. Briggs (1980) is of the opinion that our theories or models of design do not sufficiently take motivation into account, even though we may acknowledge that motivation effects are stronger than treatment effects. Bohlin (1987), is convinced that motivation is the backbone of effective instruction. According to Keller (1998) motivation is one of the main influences on performance. Zvacek (1991) says that the role of motivation in distance education cannot be overstated; she is supported by Moore and Kearsley (1996) who state that tutors in distance education need to pay a lot of attention to the motivation of students. The study described in this book deals with learners' capacity to set and maintain their motivation at appropriate levels. In this context the main theories of motivation will first be highlighted. Then, two models of motivation will be discussed. One of them, the ARCS model, has been chosen to guide this research. The chapter ends with a discussion on potential ways to apply the ARCS model to student support in distance education courses.

3.2 The Main Theories of Motivation

Graham and Weiner (1996) define the study of motivation as the study of why people think and behave as they do. Motivation does not refer to what a person can do, but to what a person will do. Keller (1983) looks at motivation in the following way: "Motivation, by definition, refers to the magnitude and direction of behaviour. In other words, it refers to choices people make as to what experiences or goals they will approach and the degree of effort they will exert in that respect"

(p.389). Looking at completion rates of courses in education, and in the case of this study, focusing specifically on distance education and trying to answer questions about why some students successfully complete a difficult task under difficult circumstances and why others give up whenever the task is going to be a little difficult, it is not easy to find an answer. Scientists who have looked at questions of motivation have tried to develop a general theory which provides insight in, and explains why, behaviour takes place the way it does, how it began, how is it maintained and how is it directed. They thus looked for a theory that is applicable across many domains of behaviour. In the following paragraphs a short overview of the five main theories of motivation is presented. Use has been made of Chapter 4 in the Handbook of Educational Psychology: Theories and Principles of Motivation (Graham & Weiner, 1996).

According to Weiner (1992) theories of motivation can be divided into two major streams:

a) The mechanistic theories, which explain motivation as a result of needs, drives and instincts. These theories use models based on drives and instincts, and do not take into consideration that humans are aware of their own actions. Most of these models are based upon experiments with animals.
b) The cognitive theories, which are based on beliefs that are the results of information acquired. These theories focus on perception and thoughts that are related to action.

Mechanistic Theories

The Drive Theory

The drive theory was formulated by Hull (1943), an engineer in the field of robotics, and was partly derived from the laws of learning. Up to the early nineteen thirties motivational behaviours were mostly grouped under the term “instinctive”: inner urges which strived for expression. Hull suggested that it was a need, a state of deficiency, not an instinct, that caused organisms to initiate certain behaviours.

These behaviours then resulted in the need. There must be an unsatisfied need which then, in turn, would provide a drive to action. A need is thus a physiologically unpleasant state which would incite behaviours that would turn it into a pleasant state. Research related to the drive theory resulted in studies which related the levels of anxiety to learning. Anxiety, just like need, was considered an aversive stimulus. Spence et al (1956) found that there is an interaction between the drive level and how easy or complex tasks are performed. When an easy task was given learners who were high in drive (anxiety) could be expected to perform better than those low in drive. The reasons are, according to Spence et al, that a simple task is one in which the correct answer is dominant in the person's response theory. When they were given a complex task, however, those who were high in anxiety could be expected to perform worse. The reason is that in a complex task there are many competing response tendencies, which are all relatively weak in habit strength.

An important result of the empirical studies conducted by Spence et al (1956), was that general laws of motivation, which up to then had been based on animal research, were now applied to predict human learning. Another impressive contribution of the drive theory was that its approach was very methodical, almost mechanical. Drive theorists carefully identified the determinants of behaviour, specified their relations, and created a mathematical model. They deducted predictions from this model, which were carefully tested. The drive theory is no longer dominant in psychology, mainly because it neglects cognitive processes and adheres an almost robotical view of humans (Weiner, 1992).

The Field Theory

Lewin's field theory (1935) incorporates some of Hull's tension reduction theories, but these are embedded in a more cognitive notion of behaviour. Lewin's theory was mainly derived from the principles of the *Gestalt* psychology (Wertheimer, 1912). The Gestalt psychology states that comprehension of perceptual phenomena is not possible if observations are broken down, or analyzed, in component parts. It is the whole, the total situation as perceived by the person, that is significant. The whole is often different from the parts (Weiner, 1992).

Gestaltists were particularly interested in perception, but also expressed interest in learning. The type of learning they investigated can be seen as a subset of perception and stresses the importance of the psychological field and the interrelationships among the parts of the field (the context / the circumstances / the environment). As to motivation they argued that in the behavioural field, as in the perceptual and the physical fields, the organism seeks a particular arrangement.

Field theory takes the position that behaviour is determined by the field as it exists at a certain moment in time. The following example, given by Weiner (1992), illustrates this: compulsive behaviour, such as washing hands unnecessarily frequently, would be explained by a psychologist adhering the historical approach by looking at the person's past history. Lewin, on the contrary, would look at those forces that are present at the immediate moment, like a wish to avoid dirt, or the pleasant smell of soap. The field theory does not consider the past an essential part of the possible reasons for the exhibited behaviour, but looks at the immediate determinants of the behaviour, in this way incorporating the past as well as the future. Field theory thus stresses that an analysis of a certain behaviour must consider the whole behaviour.

Lewin and Hull both argued that the goal of motivational theory is to identify the determinants of behaviour. Field theorists are, however, almost exclusively concerned with complex human behaviour, as opposed to the behaviour of non-human organisms, which up till then had been dominant. They are interested in developing the broader goals of a theory of motivation and want to know what determines motivated behaviour: needs of a person (drive/tension); and properties of the goal object (incentives).

The theories of motivation that have been discussed up to now, classified as mechanistic theories, all have in common that some kind of intra-personal dynamics, such as drive, tension or need is involved. According to Weiner (1992), the mechanistic theories can still be found in the contemporary study of human motivation, but their influence has been greatly reduced. They also have a common deficiency in that they have not been able to give adequate, clear, and

measurable observations of events. The achievement theory partly makes up for this deficiency.

Cognitive Theories

The Expectancy-Value theory

In motivational theories the concept of expectancy, what will follow if and when a particular response is made, gradually began to replace the concept of drive. The field of motivation shifted from what turns organisms “on” or “off” (the mechanistic theories), to the choices made. There was growing interest in, and more attention for expectancies and incentives as determinants of motivation. This resulted in the expectancy-value theory, developed by Atkinson and Rotter in the nineteen sixties and seventies. The basic assumptions of the expectancy-value theory are that the kind of behaviour that is undertaken depends on the likelihood that the behaviour will lead to the desired goal, but also on the subjective value of this goal. It is furthermore recognized that people, at any possible moment, are faced with a number of alternative goals. People are, according to Schunk (1989), “motivated to act when they believe that action will lead to positive outcomes and when they value these outcomes” (p.16). The Expectancy-Value Theory, which is mainly represented by Atkinson’s Theory of Achievement Motivation and Rotter’s Social Learning Theory, strongly influenced the study of motivation from the beginning of the 1960's till the beginning of the 1980's. We will now look at these two representations in more detail.

The Theory of Achievement Motivation

The achievement theory is among others based on work done by McClelland et al (1953), who carried out studies of personal motivation related to achievement. It is seen that some people show a high need to achieve, to be successful and to excel, while others show a tendency to be afraid of failing or have an indifference toward excelling and consequently show a low need to achieve. Atkinson (1957), built on this work in the late nineteen fifties and sixties by elaborating the idea that personal differences play an important role. They are, in fact, considered to be the

determining factors for human motivation. In his theory of achievement, persons considered to be high in achievement motivation will most likely display a different risk-taking behaviour than persons who are considered to be low in achievement motivation. Research indicated that those who score a high need for achievement, tend to be high achievers and moderate risk takers, while the low need achievers, on the other hand, often try to do tasks that are either too difficult or too easy. McClelland and Burnham (1976) state that our need to achieve is related to our upbringing and to the provision of an environment where a high value for excellence is found. The achievement theory aims at self-understanding and self-realisation.

The Social Learning Theory

The social learning theory by Rotter (1954) is concerned with the choices people make when they are confronted with a number of alternative behaviours and outcomes (Weiner, 1992). According to Rotter people engage in those actions expected to bring the most rewarding goal; thus expectancy is considered to be the key concept in Rotter's theory. It is related to Tolman (1932), who, twenty years earlier, stated that the behaviour of human beings is not only based on stimuli and related needs and drives, but is largely determined by the expectancy of a reward and by the value attached to that reward. Keller (1983), whose model of motivation is discussed in the second part of this chapter, based his model on Tolman and Lewin. Rotter's theory classified people according to their tendencies to ascribe failure and success to internal or external causes. He introduced the concept of locus of control. Locus of control refers to the belief that a response will or will not influence the attainment of reinforcement. For that reason, locus of control is seen as one determinant of the expectancy of success (Weiner, 1992). Locus of control is not an expectancy, which relates to a special type of reinforcement, but rather a generalized expectancy which is problem-solving. It addresses the issue of whether behaviours are perceived as instrumental to goal attainment, regardless of the specific nature of the goal or of the reinforcer. People with an external locus of control feel that they have little control over their fate and find it difficult to perceive a direct cause-effect relationship between actions and consequences. People with an internal locus of control, however, think of

themselves as keeping their fate in their own hands; they assume there is a connection between effort and reward. How people see their behaviour is of great influence on the efforts they will develop to achieve their goals. Learners who see that they themselves are responsible for their success and not the teacher or mere good luck, will work harder. Working hard and achieving success in turn increases their confidence in their own abilities. In Chapter 2 we have seen that one of the problems distance learners face is that they must take the responsibility for their learning partly into their own hands. This is often contrary to their experience of learning in conventional education. In this respect Rotter and Atkinson's theories offer interesting thoughts.

The Attribution Theory

Heider (1958) laid the foundation for a systematic motivational theory which is partly based on the work of Tolman, Rotter and Atkinson. Later, Kelley (1967) and Weiner (1985, 1986), contributed to this theory. Heider's point of departure is that people, especially in the field of achievement, ascribe their successes and failures to internal or external causes. Thus internally oriented people attribute their failures and successes to their own effort or ability, or to a combination of the two. Externally oriented people attribute their successes and their failures to factors beyond their control such as a task that was too difficult or just bad luck, or a task that was too easy or good luck. To give an example from the distance education field: it can thus happen that student A fails the first of the two assignments in his first distance education course and decides to drop out, while student B fails the first of her two assignments in the same course, writes a letter to her tutor for extra help and additional reading material and increases her effort. Student A, who has done well in conventional education, attributes the failure to lack of ability to study independently and to the system, student B, who has also done well in conventional education, attributes her failure to lack of knowledge about how to study independently and is hopeful that in the future she will do better. She overcomes a blow to her self-esteem and stays optimistic that she can do it. Student B's thoughts result in new strives for success and in an increased motivation to perform better next time. Recognition of an increasing number of

cognitive determinants of action and the emphasis on the important role of emotion in motivation, are some of the main contributions to the attribution theory.

Conclusions

As can be seen from discussing the principal theories of motivation, no general theory of motivation could be given. Weiner (1992) doubts that such a theory will be formulated soon. Motivation researchers must find ways, according to Graham and Weiner (1996), to distinguish their constructs better, in both the theoretical and the empirical field. Up to now not enough replicable empirical relations have been found and not enough research has been done in the field of cognitive processes. Although a number of relations have been addressed, a solid common ground has yet to be found.

Due to the limited scope of this study, an overview only was given of the five main theories of motivation. The subject has been dealt with in a limited way, omitting differences between people and their motivation. Little has been said about the possibility to change the motivational disposition of the learner. Graham and Weiner (1996), however, mention the importance of increasing success expectancies and altering the perception of ability, so that ability is seen as a varying condition during the learning process instead of a static one; it may then be considered as a way to enhance motivation. In summary, a number of different approaches can be distinguished. One can look at motivation as a general state necessary for learning to be effective. This approach is used in motivation workshops or motivational training interventions (McClelland & Steele, 1972; McCombs, 1984). They assume that people can create their own motivational state. This is also an area prone to cultural differences in motivation. Another approach is that motivation is considered to be a set of continually changing factors that influence the behaviour of the learner. This approach aims at using strategies which set the motivational factors at appropriate levels so that optimal learning can take place (Keller, 1987a; Wlodkowsky, 1993). There is evidence that both approaches have positive effects (J.Visser, 1990). The two should probably be seen as complementary rather than as opposing. The motivational interventions used in this research are based on the second approach: How can

distant learners be helped to overcome motivational restraints? It builds on research carried out earlier by Keller (1987c), by Suzuki & Keller, (1996) and by J.Visser, (1990).

3.3 Models of Motivation

Models of motivation are derived from one or more motivational theories. Models are useful to ensure a systematic approach. A systematic approach implies the logical sequence of orientation, design, development and evaluation (Plomp, 1982, 1992). Wlodkowsky (1985) developed a Time Continuum Model of motivation, while Keller (1983, 1984) developed the ARCS model of motivation. Both models analyze the motivational requirements of the learners in terms of components. This section will deal with both Wlodkowky's and Keller's model.

Wlodkowsky's model of motivation

Wlodkowsky's model focusses on adult learning circumstances. He analyzes, just like Keller (1983), the motivational needs of the learner in different components. Wlodkowsky (1985) distinguishes six motivational factors: attributes, needs, stimulation, affect, competence and reinforcement. All of them influence the learning process in its different phases in a fixed sequence.

Every learning sequence has a number of principal activities to increase learning. The instructor has to consider six basic questions: (Wlodkowsky, 1985)

1. How can I establish a positive learner attitude for this learning sequence?
2. How do I best meet the needs of my learners through this sequence?
3. What in this learning sequence will continuously stimulate my learners?
4. How is the affective experience and emotional climate for this sequence positive for the learners?
5. How does the learning sequence increase or consolidate learner feelings of competence?
6. What reinforcement provides this learning sequence for the learner?

The learning sequences are divided into a time continuum: a beginning, a middle and an end. In each of these periods of instruction Wlodkowsky distinguishes primary motivational conditions. The Time Continuum Model of motivation prescribes effective actions that may be undertaken to enhance motivation in each of these situations. In the model, there are three critical learning periods and for each critical period there are two major factors of motivation that serve as categories for strategies. Figure 3.1 shows how Wlodkowsky indicates the periods and the factors of motivation.

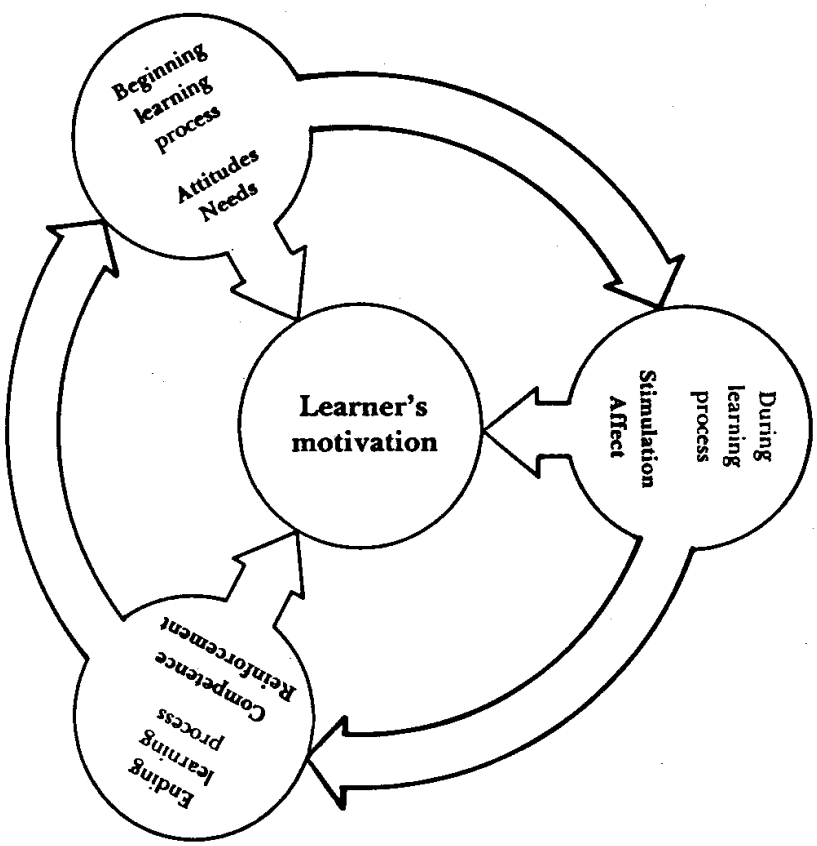


Figure 3.1 The Time Continuum Model of Motivation

The Time Continuum Model of Motivation analyzes the motivational needs of the learner. Wlodkowsky's model includes problem-solving activities, is meant to fit the actual process of instruction and motivational strategies must be planned for each factor in order to come to a continuous and interactive motivational dynamic. Overall, however, Wlodkowsky's model can be characterized as being primarily a prescriptive model as it defines conditions and associated learning situations.

Keller's model of motivation

In his search to come to a model of motivation, Keller (1987c) has explored two specific questions:

> "First, is it possible to synthesize the many concepts and theories of human motivation into a simple, meaningful mode or schema that would be useful to the practitioner. Secondly, is it possible to develop a systematic, as opposed to intuitive, approach to designing motivating instruction?" (p.1)

Keller states that people will be motivated to undertake action if it gives them personal satisfaction and if they have a chance to be successful. The following three assumptions underlie systematic motivational design (Keller, 1998):

1. People's motivation can be influenced. Effective teachers/tutors can inspire motivation by their motivating feedback, their individual behaviour and their role modeling.

2. Motivation in relation to performance is a means and not an end. Optimal motivation for performance means that people derive feelings of challenge, satisfaction, competence and so on.

3. Systematic design can predictably influence motivation.

Keller's ARCS model, which is a systematic approach to conceiving motivational interventions follows a general problem solving and design process. Four major components contribute to the interest and efforts a student puts into a course: **A**ttention, **R**elevance, **C**onfidence and **S**atisfaction (ARCS). The main benefits of the ARCS model are that motivational problems are viewed from a holistic systems perspective. The solutions are usually multidimensional as they include elements related to all major influences on motivation. The systematic motivational design process has proven to be practical and widely applicable. It is being used in at least 25 countries and has withstood the test of cross-cultural application well (Keller, 1998).

Now let us turn to the components of the ARCS model of motivation. These components are based on the theories discussed in the preceding sections. Attention and Relevance come together in the value term of the Expectancy Value Theory of Motivation (Tolman & Lewin); Confidence is related to Rotter's Social Learning Theory and Weiner's Attribution Theory, while Satisfaction is based on the Expectancy Value Theory, taking intrinsic and extrinsic motivation into consideration. To use the ARCS model successfully an audience analysis should be done to identify the motivational objectives. These will be based on the motivational requirements (needs) of the audience. Definition of the motivational objectives will lead to motivational strategies. Each of the four categories, Attention, Relevance, Confidence, Satisfaction, includes strategies that can help course designers and instructors to locate and solve motivational problems. Although the ARCS model primarily addresses the motivational needs of the learner in a specific lesson or course, its flexibility allows it to take into account more long term motivational goals. This may, in the end, be more lasting as the motivational outcomes relate to changes learners have brought about themselves. Keller's model of motivation can be described as an analytical model: it builds on the results of a motivational analysis and it analyses possible solutions, but it does all this in a systematic way by following the components of the ARCS model.

3.4 The Choice of Keller's ARCS Model of Motivation for the MMSS study

Keller's ARCS model emphasizes the importance of a problem solving model that uses a flexible, but systematic approach. The audience analysis serves to detect motivational requirements using only four factors: Attention, Relevance, Confidence and Satisfaction. Wlodkowsky's Time Continuum Model of Motivation, like Keller's ARCS model, analyzes the motivational needs of the learners in terms of six components. In Wlodkowsky's case these are: Attributes, Needs, Stimulation, Affect, Competence and Reinforcement. Keller's four factors are not linked to particular phases in the learning process; in fact, the emphasis may shift during the learning/instructional process. This is important in distance education where it is likely that certain strategies, such as getting the attention, are much more difficult to use and may not be as important as confidence strategies which are easier to apply and are likely to be needed more to motivate the distant

learner. The ARCS model is geared towards a systematic approach to motivational interventions, which follows a general problem solving and design process (Keller, 1987b). The first part of the process is undertaking an audience analysis which forms the basis for the formulation of motivational objectives. The objectives in turn guide the design, development and the implementation of motivational strategies. Bohlin (1987) stresses the “adaptability to a wide variety of teaching methods and processes” (p.14) as an important strength of the ARCS model. He claims that this is especially vital in situations where an “extreme variance in classroom processes is encouraged to accommodate a wide range of learning styles and to develop individuality”. The target group in this research consists of learners from many different social and cultural backgrounds, whose educational backgrounds vary and who use different learning strategies in a distance education context. They may already have studied the course, but may never have submitted work. The goal is not only to help the students to finish the course successfully, but also to aim at longer lasting effects. The ARCS model has been field-tested (Keller, 1987) in conventional education, but has, as far as is known, not yet been researched with a view to how it can support the learner in distance education courses. Its systematic approach gives the distance education tutor a way to monitor the motivational state of the learner and help the learner attain and maintain adequate levels of motivation. In Section 1.3 it was argued that it is difficult and expensive to rewrite the instructional materials; without rewriting it would be difficult to motivationally enhance them, taking into consideration the four components of the ARCS model with the objective to maintain and or increase the motivation of the learners. In addition, motivational conditions are not uniform for all learners, and it will therefore be difficult to address them adequately through course materials that are prepared in advance. The MMSS will try to improve student support, which, as was seen in Chapter 2, is often considered to be the core of distance education, by using motivational messages that are based on the four components of the ARCS model. An additional advantage is that this research builds on research done in the field of motivational messages in a conventional learning situation (J.Visser, 1990). Its flexibility and the longer lasting effects and the systematic approach of the ARCS model are considerations that led to the decision to opt for the ARCS model of motivation in the study to be carried out.

3.5 The Application of the ARCS Model of Motivation in the MMSS Study

Now that it has been established that the ARCS model will be used to assist the distance education learners, who feature in this study, in obtaining optimal learning results, it is relevant to discuss the model in detail. The four categories shall thus successively be explored.

The four components of the ARCS model of motivation

The major components, or as they are also called categories, represent the most important dimensions of human motivation. The categories will be discussed in detail in this section in the following way: each category will first be discussed using the main ideas of Keller, which then will be followed by suggestions for the application of the category in distance education. This will lead to a framework serving to indicate how the four components of the ARCS model can be used in the MMSS study. It should be noted that, next to the four major categories which represent the major dimensions of human motivation, there is also a number of subcategories covering the primary elements. The number and content of the subcategories is influenced by circumstances (e.g. Keller, 1987a; Keller & Burkman, 1993). Annex 3.1 gives a detailed, adapted, overview of motivational factors and subcategories. A number of subcategories is used in this section in the suggestions on how to apply the ARCS model to student support in distance education. Some of them will be seen again in the implementation of a mini motivational systems design in Section 3.7.

Attention

Getting the interest and the attention of a student is the first task a course writer, a teacher or a facilitator faces. The learners' focus on a learning task establishes the necessary conditions to learn. This is, in fact, not the most difficult part, as making a catching opening remark, or writing a provocative first paragraph is generally not too difficult. Keeping the attention (the momentum) throughout the whole teaching/learning process is more difficult. To help the designer/teacher, Keller (1987c) refers to Zuckerman (1971), who talks about responding to the sensation-

seeking needs of learners and to Berlyne (1965), who mentions the knowledge-seeking curiosity of learners. Recognition of these needs may lead to more emphasis on using varied learning materials, various media and different learning strategies.

Attention in distance education

It seems likely that in distance education it is more difficult to attain and hold the attention of the distance education student. Although there is mostly initial interest of the student when the new learning materials are received and when there is the challenge of starting a new course, this interest usually soon fades away. One tactic to sustain the attention of the learner is not sending all the materials at the same time, but only sending the next part of the course when the learner is about to finish the first lot. Using a variety of media also contributes to keeping the learners' attention, while offering the occasional encouraging letter, which focusses on the materials, or on the part already done (satisfaction). In those cases where it is impossible to deliver the materials in chunks, an additional text or paper could be used to help the learner focus. A challenging or even provocative message may be sent by the tutor to the learner in the first month of the course or, if necessary, during the course. The mere arrival of an unexpected message will stimulate attention of the learner. Other strategies are speedy feedback on an assignment, frequent short in-text questions, challenging statements that help the learner to reflect on the course content and showing real (and not fake) interest in how the learner progresses through the course.

Relevance

It is important for learners that the instructional materials of a course specify what learners can expect from a course and what is expected from the learners. It should be made clear to learners why the topic to be dealt with, is relevant and how a topic relates to the larger scheme of the course. In his early work, Keller (1983) refers to relevance as "value". He distinguishes three categories in which a task can be seen as relevant: the personal value, which satisfies particular needs, instrumental value, which refers to its role as a condition to do well in subjects, and

cultural value which refers to social context. Exercises should be set that relate to the learners' daily (work) circumstances and that take the relevance of the task into consideration. The personality of the learner should also be considered. Some learners enjoy working in groups, while others need to build their self-confidence and self-esteem by showing individual achievement. Relevance is also culturally determined. Students in The Netherlands, for instance, will most likely be expected to study the history of management when taking a Management course, as is seen in the Management courses the Netherlands Open University used to offer, while for students of the Management courses at a university in the USA, the history of management is apparently considered irrelevant in their Management courses and the topic may be offered as an option. Course writers and course facilitators must be prepared to deal with these differences. Keller (1987c), gives a number of relevance strategies. For example, stating explicitly how the instruction builds on the learner's existing skills and how it relates to future activities of the learner. It is also important to encourage students to relate the instruction to their own future goals. It should be borne in mind that relevance can also come from the way something is taught; it does not only have to come from the content itself.

Relevance in distance education

Just like in conventional education, distance education providers should indicate in detail what learners can expect from the course and which other services are offered, such as tutoring and library facilities. Students should also be informed about what is expected of them. Although there is little actual face-to-face teaching in distance education, there often is extensive feedback on assignments students have submitted. This feedback can very well be used to relate the course content to the students' goals. There will likely be a variety of reasons why students take a certain course, such as the prospect of a more interesting job in the future or a promotion. For many students, however, doing a course is not immediately relevant. Learners should be helped to get an idea on how the courses they are doing can contribute to solving the (professional) problems they are facing, or how the courses can enrich their performance. Motivational tactics that may be used include asking the learners, after they have sent in their first assignment, if they feel that the initial part of their course work has contributed to their performing a

better job than before. As most distance education students struggle with conflicting interests, much like quite a few of their colleagues in conventional education, they should be helped to define priorities and to manage time. Extra help could be offered in the form of sending the students samples of model assignments. Relevance could also be stressed by giving examples, especially in the feedback on assignments, that relate to the students' daily circumstances. Explaining in detail why a learner has to do certain things, is another motivating tactic.

Confidence

To combat the possible fear of failure, it is important to help learners to create confidence in themselves. As was seen when Rotter's work was discussed, people have a tendency to attribute their failures and successes to internal and/or external causes. Following success, expectancy generally rises: that is confidence increases. After failure or perceived failure, confidence drops. It is important to develop learning materials, plan classes and structure tutorial procedures in such a way that they contribute to the learner's faith in his or her success. Confident people rely on their actions to reach their goals (Bandura, 1977), while people who lack confidence are worried about the consequences of their actions and fear failing. In his earlier work, Keller (1983) refers to the concept of confidence as the concept of expectancy. Positive expectancy of success improves performance, which then motivates learners. Confident learners have matured through an earlier experience of success and perceive that they can control such success, while less confident learners lack experience with success (del Soldato, 1994). Keller (1987c) proposes, among others, the following strategies: incorporate clearly stated, appealing learning goals in the course materials and explain the criteria for successful performance, include statements about the likelihood of success and help students set realistic goals. A basic condition is that there should be a real chance at success, if students put in a real effort.

Confidence in distance education

Fear of failure is often strong in face-to-face instruction. It is, however, likely to be even stronger in distance education, especially in those students who take out their first distance education course, or in those who have failed before or have heard from someone in their direct environment who has been unsuccessful. Weiner (1992) notes that confident people tend to attribute their success to ability and effort, while this is not the case with insecure people. Students should be informed in detail about what is expected of them, not only by describing the objectives of the course/unit, but also by defining standards of performance as to, among others, the organisation of their assignments and the marking key. Measuring performance and grading the learners' work should be very clearly defined. Students should feel that they have control over the outcomes of the academic evaluation of their work. With this last observation we are already entering the field of satisfaction. Tactics to get the learners to plan their courses well and to send in their first assignment early in the course should be encouraged, as lack of confidence is often the reason for delays. Another useful strategy could be introduce feedback loops that allow students to catch up or to improve. Other strategies are stressing that they will succeed if they work hard, giving credit for even minor improvements and, if possible, relating encouraging data. Providing a variety of opportunities for students to be successful, increases the chance to show that they will be successful, while letting students know they themselves are, or have been, responsible for their success through their personal ability and effort also increases and builds confidence.

Satisfaction

Satisfaction comes from having done something in such a way that the results are positive. Learners who are satisfied, are in agreement with the expectations they had when they started the course. To allow a student to be satisfied, it is important that the task is carefully described and that the reward on completion of this task is stated. Although financial recognition often leads to satisfaction, rewards such as being able to apply what has been learnt is often also satisfactory. Learners should be able to see for themselves where the point of satisfaction is to be found.

A good way to assist learners in seeing that they are doing well, is dividing a large task into smaller chunks. This provides satisfaction every time a chunk is successfully completed and convinces the learners that they, themselves, have caused the success, and not something like good luck or easy circumstances. According to Wlodkowsky (1985), intrinsically motivated learning generally increases the desire to learn, while extrinsic motivation leads only to passing tests and exams but does not foster the curiosity to learn. Motivational feedback is important. Feedback in tutoring usually refers to the performance of the student. Keller (1987c) claims that effort rather than performance is most directly related to motivation, and that thus an intensive effort should be praised. The difference between effort feedback and performance feedback has also been stressed by Schunk (1989). Satisfaction strategies recommended by Keller (1987c), are, among others, verbally reinforcing a student's intrinsic pride when accomplishing a difficult task, providing frequent reinforcement when a student is learning a new task, and the scheduling of reinforcements in terms of both interval and quantity. Satisfied people feel good about what they have accomplished.

Satisfaction in distance education

In distance education, student support tactics should aim at making students feel satisfied frequently. The long term perspective of being happy and satisfied at the end of the course, if and when, successfully completed, is not enough. Frequent, timely and adequate, encouraging feedback is an important satisfaction strategy. Other satisfaction strategies include remarks like "you're one of the first ones to send in an assignment", or "this is a really interesting piece of work", or "you're on the way to becoming one of my star students" or similar personal satisfaction remarks. Another strategy may be to let the distant learners know how far they have already come, how near they are to being half-way, or that they are about to complete the course successfully.

Examples of the use of the four components of the ARCS model in tutoring actions

The four main concepts of motivation of the ARCS model in the context of learning in general, and of distance education in particular, have been explored in the preceding paragraphs. Learning via distance education is not an easy process, as was already discussed. Adjusting the motivation of distant learners using the ARCS model will, in the MMSS study where we leave the course materials untouched, take place via extended student support, that is, via the tutor and the tutoring. In a number of actions related to student support various strategies related to Attention, Relevance, Confidence and Satisfaction will be applied almost simultaneously. By way of conclusion, some examples of tutoring action where this may occur are given below.

Introductory letter

This letter may be used to draw the learners' attention to the learning materials and their relevance to their needs. The letter could build confidence by stating, for example, that the course in question has had the same completion rate as conventional education (provided that this is true) or that the tutor has successfully done the course him or herself (provided again that this is the case).

Feedback on an assignment

In addition to focussing on simply "marking" the TMAs, the feedback can be used to build confidence by carefully indicating what has been done well, however insignificant.

Overall tactics

There is a number of strategies which may be useful for distance education tutors in motivating their students. It is important to provide motivational support by establishing frequent contact with distance education students. All kinds of ambiguity should be avoided. The feedback on assignments should be given in a

pleasant way and should be clear. Remarks like “your conclusion is a bit of a let down” or “ you could have done better” should be avoided. This kind of remarks is demotivating and lacks any specificity that could help the student to improve whatever might be wrong. A student cannot be confident if she does not know why the conclusion was “a bit of a let down” or if he does not know how he “could have done better”. A newsletter could be a very practical and economic way of staying in touch with the learners and influencing their motivation.

These are just examples of what can easily be done to help the distant learner. The goal of the intervention on which this research is based is, through the systematic use of motivational messages, to allow students to keep their motivation at adequate levels. The ARCS model uses a systematic process. It is, however not mechanistic. Although the general approach for developing a motivational system can be used in almost any setting, specific models have to be tailor-made. This requires a great deal of knowledge about the individuals and their culture and an active and ongoing involvement of those who adapt, refine and use the models (Keller, 1998). The motivational design process, which is an important component of the ARCS model, will now be discussed.

3.6 The ARCS Model Motivational Design Process

One of the aims of the MMSS study is to develop and test a motivational system that is easy to use, flexible, uses a systematic process and has been proven to be effective. Keller (1987b) has developed an eight step design process, based on the ARCS model (Annex 3.2). This design, which applies to the development of motivational systems in work as well as learning settings, forms the basis of Figure 3.2 (see next page). In the adaptation, pairs of steps are combined.

In this design process, the first two steps produce information about the status quo and provide the basis for analysis of gaps and causes in step three and four. These analyses serve to prepare objectives for performance improvement, while the final design looks at acceptable solutions. Formative evaluation will be used to look at how integration of the MMSS into the existing support system can best be

realized. The eight steps return in the simplified-design for the development of motivational messages in the MMSS study (Section 3.7)

Step 1 and 2

Environmental and audience information:

Information on the courses, the course materials, the implementation processes, and the tutoring processes will be obtained. Detailed information on the international students as regards their social and cultural background, their reasons for taking the course, their expectations and the (motivational) problems they expect will also be obtained.

Step 3 and 4

Environmental and audience analyses

Based on the information collected, an audience analysis will be done, consisting of a socio/geographic and a motivational profile. In addition an analysis of the environment will be made. This will include problems and deficiencies of the courses and the College and problems and deficiencies in the students' environment.

Step 5 and 6

Objectives, measures and preliminary design

Information collected in steps 3 and 4 will be used to define the motivational objectives and the content of the messages. The motivational tactics will thus be need based. A first design which looks at a possible content of the motivational messages will be decided upon.

Step 7 and 8

Final design, development and testing

These steps include enhancing and sustaining tactics as incorporated in the motivational messages and integrating of them into the existing student support system. Finally, formative evaluation of the MMSS will be conducted.

Figure 3.2 Steps in motivational design in distance education support as used in the MMSS.

The importance of doing an audience analysis

Traditional education, like traditional industry, has for a long time been producer-centered. Institutions developed the product they considered necessary for the market and, strangely enough, there was, at least in the developed world hardly ever any shortage of customers (Rowntree, 1992). This changed some twenty

years ago. Production is now more customer-oriented; course development and course production have followed that same trend. The “market” has, also under influence of changes in the corporate world and industry, experienced important changes. Users and producers of learning materials have become more aware of the importance of effective and efficient learning materials, just-in-time training has become an important aspect of job-mobility and students (customers) needs can no longer be met by offering a package of courses without the possibility to make a choice. Learners are “shopping” for the best courses available. In addition, the need for lifelong learning is, as was argued in preceding sections, no longer an option to keep older and “bored” people busy, but has become necessary for survival in the rapidly changing labour markets of today. For distance education students it is not only important to enrol in the distance education programme that is most fit for their purpose, but getting the student support that is most fit for the circumstances of the learners has become equally important.

Keller (1987c) stresses that, if the ARCS model is to be used successfully, the first step to be made should be to classify the motivational problem(s). He states that if the problem is one of improving the motivation appeal of the instruction for a given audience, then it would be correct to use the model. In this case the ‘motivation appeal of the instruction’ has, for reasons given above and in the introduction of Chapter 1, to be substituted by the ‘motivation appeal of the student support mechanisms’. An audience analysis will have to be done in order to identify the motivational gaps. The audience analysis will be followed by defining the motivational objectives. Strategies must then be developed that will set the defined motivational factors at such levels that optimal learning can take place. Wlodkowsky (1985) and Keller (1983), both advocate that people are responsible for their own motivation. We can, however, influence learners’ motivation and thus make learning more effective and more pleasant.

3.7 Implementation of the ARCS model of motivation in the MMSS study

The ARCS model of motivation has already been implemented in many settings. As the ARCS model is a flexible model, it can be adapted to the requirements of a

given group. It has mostly been used in instructional design, such as a course or course materials.

In the case of the MMSS study the ARCS model will be used in a process in which motivational messages are being designed that should help the learners to stay in the course. In addition, these messages must adjust the learners' motivational levels so that optimal learning can take place. It thus means that there will be a continuous process of adaptation of the messages to the (motivational) circumstances of the learner. For the main study, which is discussed in Chapter 6, the design process of the ARCS model has been adapted, based on the outcomes of an initial questionnaire learners filled out before they started the courses (Annex 3.3).The questionnaire revealed that the most frequently mentioned motivational needs of the learners were in the area of Confidence. This is not surprising, as practically all learners have made a conscious choice to do the course and thus do not expect to have great difficulties in the Relevance area. It was, however, felt that the other areas, Attention and Satisfaction, will become more of a motivational need during the course and motivational strategies in these areas will thus be particularly attended to, alongside those in the area of Confidence. To use the model efficiently and effectively, a simplified design has been developed for the courses used in the main study. A short description of the audience will be given here to facilitate the discussion of the design.

Courses:	Four Foundation Courses in a Diploma/MA programme given via distance education and using written materials and audio cassettes.
Students:	63 students (excluding the control group) who, on average, have the equivalent of a BA.
Registration:	Once a year.
Duration of one course:	Eight months.
Assessment:	Tutor Marked Assignments and an exam/or a final project.
Tutoring:	No provisions have been made for any other form of tutoring other than marking assignments.
Completion rates:	Around 40% in the first year.

This simplified design, used in this study, is based on Suzuki and Keller's (1996), simplified design. In the case of the MMSS the simplified design has been based

Table 3.1 Simplified design for the development of motivational messages in the MMSS study

Factors	Attention	Relevance	Confidence	Satisfaction
Pre-course attitudes of students towards distance learning	New students strong in the beginning (new materials/new topic), diminishing as novelty wears off. Probably low level of attention for repeaters.	Decision to take the course is, most of the time, not imposed. No big problems expected in the area of relevance. May improve as learners apply what they have learned or decrease if not what was expected.	A very sensitive area as mode of instruction is new and unfamiliar. Generally satisfactory for experienced and successful d.e. learners. Repeaters anxious about pitfalls; newcomers uncertain.	Successful completion of the course is an important step in the direction of a degree. Lack of peer support my be a problem.
Midterm attitudes toward distance learning	Initially high attention, but curiosity wears off as courses are not really exciting and sometimes even boring.	Continuous to provide an interesting possibility to make a career move or to show what has been learned.	If they are confident in the beginning this wears off. Evaluation system is not very encouraging. No motivational support included in course. Very low level of confidence for beginners.	Reasonable, but dissatisfaction sometimes sets in. Repeaters and new students soon disappointed about the limited interaction and about studying in isolation.
Students' reaction to the course content	Initially high, but soon decreases due to lack of novelty and variation in content and learning strategies.	Course content is relevant, but too little interactive and varied. Some material is outdated.	Confidence that it can be done soon fades due to volume of work, lack of support and lack of opportunity to see growth and application.	Remains reasonable.
Characteristics of support during the course	Minimal, only contact is through feedback on assignments sent in.	Feedback is usually limited to the strict course content. No creative feedback to show connections to students.	Feedback is mostly worded in a positive way, but occasionally to general.	Low because of lack of meaningful and personal contact.
Summary	Initial attention is soon slipping.	Relevance continues through the course, although it becomes less important.	Confidence depends heavily on results, but is generally low. This area needs extensive motivational treatment.	Satisfaction is not a big problem or would not be if the other issues were resolved.
Examples of motivational tactics to be used in motivational messages	Bring pacing into the course and offer tutor's assistance. Reward early completion through complimenting learners personally. Send one or two extra articles to help students focus on materials during the course.	Provide occasional extra material such as a publication. Provide creative feedback and link feedback to learners' work and daily circumstances.	Emphasize that the learner can do it if effort is put into the course. Reassure the learners by showing personal interest and concern. Make them feel part of a group of learners who are all struggling to get it done. Show empathy. Provide encouragement and personal challenges at times that are know to be "low points"in the term.	Make turn-around time for TMA's short. Ensure that tutors are accessible. Refer to positive feelings a learner will have when the course is completed successfully. Reward early completion through complimenting learners personally.

on the outcomes of the pilot study and on research related to tutoring of distance education students. The advantage of using such a design is that it is simpler to use and more direct than an elaborated motivational design. The ARCS model is used as a basis and the main requirements of the model, such as doing an audience analysis, are included. The simplified design focusses on the basic motivational needs and avoids the problem of using too many tactics which can negatively influence motivational activities.

Discussion of the motivational systems design in the MMSS study

The steps in motivational design, as depicted in Figure 3.2 are recognizable in the simplified design, although they are not completely identical. It is thought that this, rather basic, design illustrates how the ARCS model can be used in a flexible and relatively simple way to contribute to solving motivational problems experienced by so many students. The analysis of the motivational problems is based on the pilot study and on the audience analysis, while also use has been made of Coopers and Lybrand's (1989) report on open learning in industry.

The first row in Table 3.1 deals with general information about the learners' attitude towards the courses. Pre-course attitudes of learners are important as they determine the learners' disposition when they start the course. In the courses of the MMSS, the learners themselves have taken the decision to follow the courses. Most of them have gone through the, often not easy, process of finding funding for the course fees. The audience analysis (Section 6.2) revealed that the reasons to take the course are mostly related to career prospects and the wish to be a better professional. In the area of confidence in the pre-course attitudes, it was found that almost all distance education students have been exposed to conventional teaching during the greater part of their lives. Less than 5% of the learners involved in the MMSS study had done courses via distance education before they enrolled in the programme. There are important and practical differences between distance education and conventional education. In conventional education there is, for instance, always the possibility of raising questions which are answered or dealt with almost instantaneously; there is always the teacher to turn to in case of doubt. Learners in the distance education

courses under discussion enrol, get the materials and are left on their own, studying in a new mode of education. They have to make sure that they get it done. On top of that, as most students are sponsored, there is more direct responsibility to someone else as regards the outcomes of the learning process. The great majority of the learners work in distance education institutes and are well aware of the problems distance education faces, of which high drop-out rates may be the most important one. The traditional structure of the College is not such that motivational support is included in the programme. Getting help and advice often takes weeks, as communication channels are limited and often ill-functioning. The need to get help in the area of confidence is well expressed by one of the students: “The silence of the course tutors depresses me”. Reassurance is often all learners need to keep them in the system (Rowntree, 1992).

The second row of the simplified design shows the learners’ attitudes in relation to the specific content of the courses and their doubts and needs (Steps 1 and 2). During the course changes take place. The attention, which was initially high, wears off. All units in the course follow the same pattern and there is very little interaction. The relevance of the course generally stays the same. In the area of confidence the midterm attitudes may be influenced by the first results of the TMAs. The marking takes place according to the British system in which 60% is still a B grade. For international students a score of 60% may be experienced as a low mark. It is nowhere explained how this marking system may be different from the system used in other countries. There is no institutionalized support for the student during the course except for one midterm letter from the Director of Courses. The lack of interaction between the student and the tutor, and the students, is likely to lead to a decrease in satisfaction.

The third row questions how the distance education courses will motivationally effect the learners (Step 3). The course may get boring as there is not much variation in learning strategies, while the media used are very limited (text and audio cassette and the occasional video). Students may also get a little annoyed (depending on the course) as some of the course material is outdated. As there is no pacing in the course, for instance no definite dates for sending in TMAs (except

for end of course deadlines), work may pile up which does not contribute to the learners' confidence that they can succeed. Lack of support and lack of opportunity to see growth, may strongly influence the learners' motivational disposition.

The fourth row looks at the characteristics of student support during the course (Step 4). As seen in the preceding paragraphs, there is only limited contact through feedback on the assignments sent in. If no work is sent in, there may be no institutionalized contact. If work is sent in, the feedback is mostly limited to the course content and is occasionally not very creative. The quality of the feedback depends very much on the person of the tutor. Some tutors are very encouraging in their feedback and respond in a positive way, other tutors miss the opportunity to make personal and meaningful contact with the student.

In summary it can be said that during the course the attention is waning, that the relevance continues during the course, but that it, due to negative experiences, may become less important, while confidence is generally low. Extensive motivational treatment may be necessary in this area. Satisfaction is not such a big problem, especially not if some of the other issues could be solved. This summary prepares the way for the motivational design that is required (Step 5).

Row six, the last one, looks at the motivational treatment that may be given: the motivational strategies. What suggestions can be made to solve motivational problems (Steps 6, 7 and 8). There is a number of motivational tactics that can be used in the messages to help the students to become or stay motivated. A general point is that it is necessary to have information on the learners and their circumstances. It is very important to make sure that learners know they can count on the tutor. If a learner has problems with the course content, if extra material is needed, the tutor should be there to help. As to the relevance area, it is important to provide creative feedback that relates to the learners' daily circumstances. It is no use telling the learner to visit a Website, if the learner has no access to the Web. As said before the confidence area is likely to be the most important one. Learners should be aware that they can successfully complete the course if they put effort into it. The tutor should follow up on TMAs with concrete suggestions on

how the learners can improve and, very important, show empathy. Even if learners are working on their own, it can be emphasized that they are part of a group all working towards the same goal. It is also important to keep an eye on students, especially in the early stages of the course, so that they do not get a chance to fall behind. In the satisfaction area it is important to make sure that the students have positive feelings about what they are doing. Rewarding extra effort is also important. Complimenting learners on how far they have come contributes to their satisfaction.

The use of the simplified-design for the MMSS study is different from the use of the simplified-design in conventional education. In traditional distance education, such as the courses discussed in this study, it is much harder to monitor the motivational needs of the learners than in conventional education, especially as most of the learners are not easily reachable. In the design of the motivational strategies a certain prediction will have to be included. This becomes explicit in the fact that in the above simplified-design the basic ideas of the ARCS model are incorporated, but that the specific steps have not always been incorporated. The strength of the ARCS model, its systematic approach, is considered important in the general design of the MMSS. A structured motivational approach, which strongly attends to those areas that have been identified as crucial, is needed. This will mean that in the motivational communications the areas of Attention (which is surely going to wane during the course) and Confidence (which is from the start already a problem area) might be more prominent than the areas of Relevance and Satisfaction. In our description of the motivational needs of learners and how to attend to them, we have not made a difference between students who are enrolled for the first time in a course and those who are repeating the course. It is possible that attending to the motivational needs of the second group is more difficult as students without support are more likely to delay completing a course (Rowntree, 1992). Furthermore, early completion of the first assignment and the interaction in the early stages of enrolment in the course are factors that affect later success or failure (Robinson, 1995).

Up to now both distance education and motivation have been discussed in detail. Chapter 4 will deal with the research design, the research procedures and the research methods. The pilot study is discussed in Chapter 5, while Chapter 6 deals with the main research. In Chapter 7 conclusions will be drawn and recommendations will be formulated.

Chapter 4
Design and Methodology of the MMSS Research

4.1 Introduction

In Section 2.5 it was seen that many distance education students enroll in distance education courses, but do not finish them. Figure 4.1 shows that, of the roughly 1900 students who enrolled in a course of the German Open University, less than 10% passed the examination (Fritsch & Ströhlein, 1989). Although the authors call this a “typical distance education course”, many other courses such as the ones offered by the Open University in England, rate a considerably higher output.

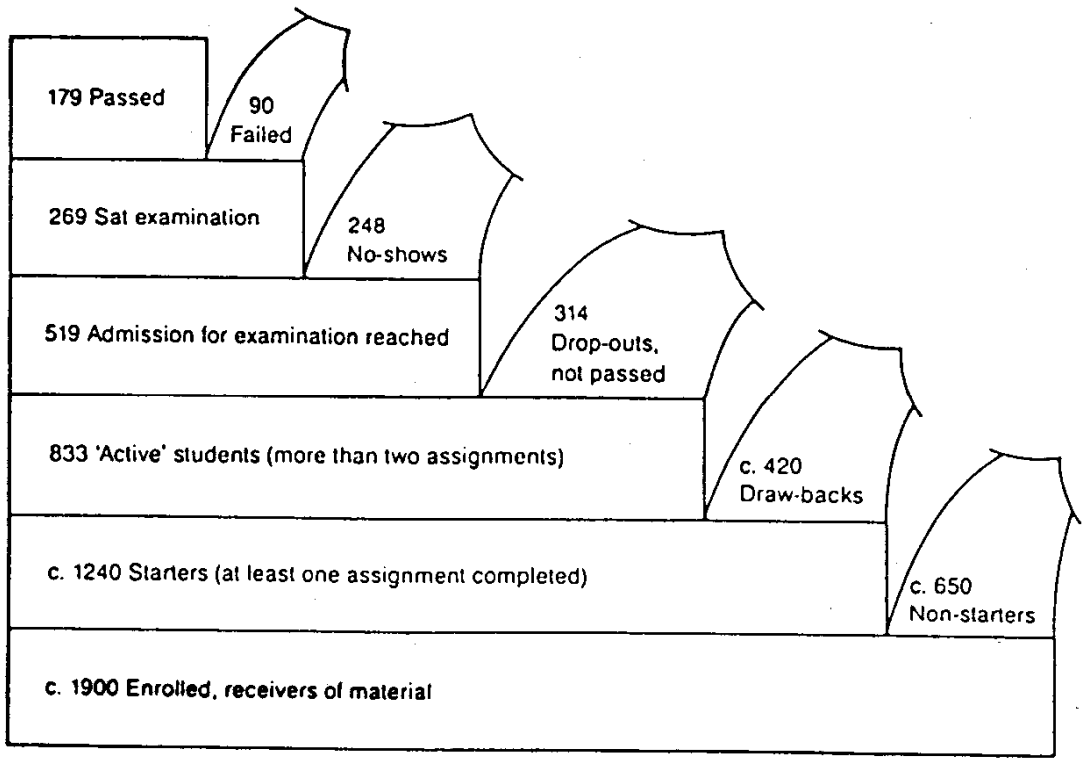


Figure 4.1 “Student completion rates in a typical distance education course“ (Fritsch & Strohlein, 1989)

As was discussed in Chapter 2, the focus of this study is on student support and on the question whether extending student support with motivational communications, based on the ARCS model, is an effective way to decrease student drop-out and to increase student completion rates. In Section 3.7 a simplified design, which proposes strategies to attend to the motivational needs of distance learners, was developed. No published research has been found dealing with the use of the ARCS model of motivation in distance learning. Zvacek (1991) has published a short article advocating the use of the ARCS model in distance education. She thinks that distance education planners should use motivational strategies and integrate methods to enhance learner motivation to increase course completion rates. She particularly stresses that in distance education the components of the ARCS model (Attention, Relevance, Confidence, Satisfaction) are factors that may determine whether a student successfully completes a course. She did not do any research in this area. There was, however, research done on the use of the ARCS model in conventional education (J. Visser, 1990). Visser has shown that learners benefitted from motivational interventions, so called motivational messages, as described in Section 1.3. The use of these motivational communications had a positive effect on the motivational disposition of the learners. J.Visser and Keller (1990) conclude that “The strategy has an interesting potential for the motivational enhancement of distance learning” (p.499).

4.2 The Approach to the MMSS Research

To answer questions on the extent to which the use of a motivational communication process used in a distance education context is effective, a study that does not only examine the design and content of the motivational messages, but also examines their effectiveness and the process of administering them, had to be set up. A research method was required that met the need for a gradual and evolutionary development of a product: the motivational message. The research had to answer questions on the validity, the practicality and the effectiveness of the Motivational Messages Support System (MMSS). The motivational messages should be seen as products under development, the content of which is influenced by factors like the motivational disposition of the learners, their academic results,

their social and cultural circumstances and, due to the international context, the language used.

The focus of development research

According to Van den Akker and Plomp (1993) development research is carried out to optimize and gain a sound basis for development activities. It is characterized by a twofold aim:

- Development of prototypical products; and
- Generating methodological directions for the development of such products.

This is in agreement with the description of development research by Richey and Nelson (1996). They distinguish two types of development research:

- Type 1 research studies, in which the product development process is described and analysed and the final product is evaluated; and
- Type 2 research studies, directed towards a general analysis of the design, development or evaluation as a whole, or towards any particular component of the research.

Type 1 and Type 2 studies both focus on product development. Driscoll (1991) refers to Type 1 research as *system-based evaluation,* while Type 2 research is referred to as *model development* and *technique development research.* At the University of Twente (Department of Curriculum of the Faculty of Educational Science and Technology) several development research studies of both types have been undertaken. A study by Van den Berg (1996) focused on the design and evaluation of specific learner and teacher/trainer materials and is thus a Type 1 study, while a study dealing with design standards in corporate education (Kessels & Plomp,1997) is an example of a Type 2 study.

The two types of development research as described by Richey and Nelson (1996) are found in Table 4.1.

Table 4.1 Types of development research (Richey & Nelson, 1996)

Factors	**Attention**	**Relevance**
Emphasis	Study of a specific product or programme design, development and/or evaluation projects	Study of design, development, or evaluation processes, tools or models
Product	Lessons learnt from developing specific products and analyzing the conditions that facilitate their use	New design, development, and evaluation procedures and/or models and conditions that facilitate their use
	context specific conclusions	*generalized conclusions*

The MMSS study falls into the first category of Table 4.1 (the shaded squares). The study describes and analyzes a product development process (design and development of a motivational support system) in a given situation (distance education courses) and evaluates the prototype product in a pilot study through formative evaluation and the final product in the main research through summative evaluation. The prototype, a preliminary version of the end-product, is revised and improved. Although Type 1 development research studies concentrate on product development, they may be seen as a combination of development and research. Activities included in Type 1 research are discussed in Van den Akker et al, (1996); Richey & Nelson, (1996); Walker & Bresler, (!993). They include:

- Front-end analysis to describe the starting situation.
- Prototype development, which includes the following activities:
  - an analysis of the state-of-the art knowledge, made explicit in a conceptual framework and included in the prototypes;
  - design and development of the prototypes;
  - formative evaluation of the prototypes.
- Summative evaluation of the final product when it is put to use.
- Reflection on the development research methodology.

(Nieveen, 1997)

In the MMSS study the front-end analysis was based on the assumption that motivational messages, which have successfully been used in conventional

education to adjust the motivational levels of students (J. Visser, 1990), could be used for student support in distance education. Chapters 1 and 2 in this study form the front-end analysis, while Chapter 3 deals with the conceptual foundations of the study by analysing the role of motivation in learning situations and by discussing two models of motivation, of which the ARCS model was chosen to serve in this study. That chapter ends by presenting a simplified design (Keller, 1998) for the development of motivational messages in distance education. This chapter deals with the research design of the prototyping stage and with the design of the main study. Figure 4.2 lists the development research process and the various sub-processes.

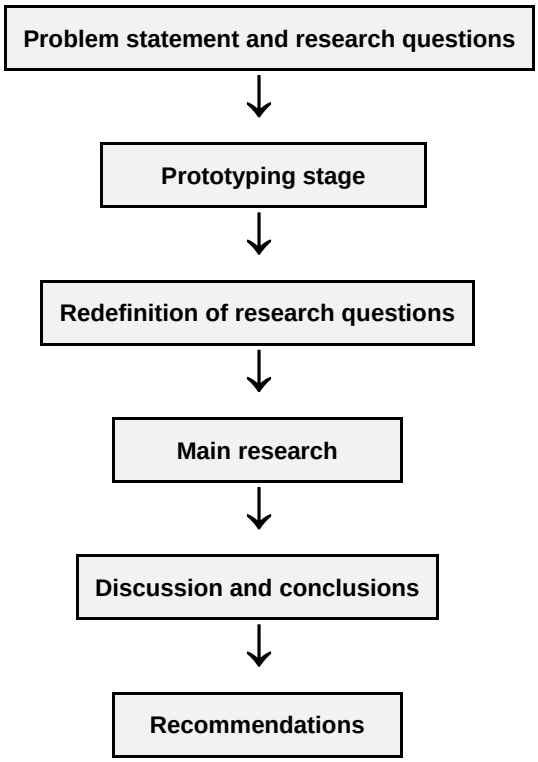


Figure 4.2 The research process of the MMSS study

4.3 The Research Design of the MMSS Pilot Study

The objective of the pilot study was to discover, through the use of a number of prototype motivational messages, whether it was possible to influence the motivation of learners in such a way that they would complete their course(s) successfully. The pilot study aimed at answering the following question:

What are the characteristics of motivational messages, based on Keller's ARCS model of motivational analysis, that appear to be effective in distance education courses?

The pilot study, building on the outcomes of the front-end analysis of Chapters 1, 2 and 3, can be summarized by stating that student support is crucial to the success of distance learners and that, within the area of student support, motivation through contact with the tutor is an important factor for success. Although the pilot study was to answer questions about the design of the motivational messages in relation to their effectiveness in distance education courses, it also served to give information on the validity and the practicality of the messages, as the aim was to design and to develop a quality product. In the main research, the effectiveness and cost-efficiency of the MMSS had to be studied. During the prototyping phase a number of messages were to be designed, which were sent to the course participants and subsequently improved on the basis of formative evaluation results. This process was to be repeated a number of times. In this way, validity and practicality could be tested, leading to a final quality product, to be used in the main research. Van den Akker and Plomp (1993) as well as Nieveen (1997) in their discussions on product quality, distinguish the following three criteria:

Validity — the degree to which the product is in agreement with state-of-the-art knowledge and is internally consistent;

Practicality — the degree to which the product is functional for the target group (in this case, MMSS tutors and students);

Effectiveness — the degree to which the product has an added value compared to already existing products. It looks at whether a product serves its goals (in the MMSS case, increased completion rates).

The first two criteria, validity and practicality, must be dealt with before the effectiveness of a product can be assessed.

The prototyping stage

Prototyping is an important facet of development research. According to Smith (1991), prototypes, which are preliminary versions of the final product, can be used in different ways: the evolutionary and the throw-away approach. The evolutionary approach uses the prototype, but fosters a continuous revision of the product till a final deliverable is ready, which can then be used in the summative evaluation. The throw-away approach also uses the prototype, but discards it after use and makes a new version that can be used in the next round. The pilot study of the MMSS opted for the first approach, the evolutionary approach. This choice was made taking into account that during the course year a number of motivational messages would be sent to the learners. Although the messages were refined during the pilot study, it was likely that the basic product, the motivational message, was to be maintained.

One of the important characteristics of the MMSS is that each prototype had to focus on the motivational needs of the learners at that moment in time and on attending to these needs along the lines of the ARCS model. The pilot study served to obtain information from the students on the content and lay-out of the messages, and on what kind of production process was efficient and effective. During this process, when the focus is on the development of the prototype, formative evaluation is important, as it provides insight in the shortcomings and the potential of the product and leads, if necessary, to revision or adjustment of the product. Monk et al (1995) note that involving users in the design of the product requires access to people typical of those who will actually use the system. Although users of the product were involved, a systematic formative evaluation was not possible during the prototyping stage. In a distance education course with a duration of eight months, with 19 students living in 13 different countries spread over five continents, most of whom could only be contacted through the normal postal services, the delay in response was too long and the process too erratic to make it possible to take comments immediately into consideration. They were, however, used in subsequent versions during the piloting stage. Colleagues and staff of the College did also respond to the motivational messages during the

course. These reactions, too, were analysed and have helped to provide a better product.

4.4 The Implementation of the MMSS Pilot Study

Adapting the messages and focussing on the motivational needs of the learners, as these became apparent during the course year, required a constant reflection on the part of the developer on how to adjust the motivational messages. A limited audience analysis of the course participants was done, based on data supplied by the College. It had to be limited, as the researcher in her function as tutor of the course, only received information on which students were taking the course, when the course was already in the second month. The data, that had been supplied by the College at the beginning of the course year, were taken into account when designing and developing the messages. An asset was that the researcher had done the programme herself, under circumstances not very different from those of most learners. This facilitated developing the prototypes in such a way that the characteristics of the distance education student, as user, stood central in the approach.

During the pilot study, more information became available on the motivational needs of the learners and, as the messages were being developed during the course, this information was readily used. As the MMSS aimed at an innovative expansion of student support, it was important to ensure that the prototyping stage was long enough to allow improvements to be shown during this stage.

Although it was felt that the characteristics of the motivational messages should grow and develop during the pilot study, it was thought advisable that the first messages should not be in a format learners were not accustomed to. It was decided to use a “normal” letter format for the first two motivational communications. Only after these initial letters had been sent out, more creative formats were used.

Two different types of messages were developed (Section 1.3; Annex 5.1):

- The motivational greeting card with text only;
- The motivational greeting card with text and graphics.

Format and content of the prototype messages were interrelated aspects that reinforced each other, and had to be dealt with simultaneously. In distance education, tutor and student do not know each other and have no ways to get gradually acquainted and build up trust, as in conventional education. This lack of personal contact made it important to make the best use of the possibilities the messages offered to build up a relationship of trust. Decisions were taken which led and influenced the development of the prototypes. For instance, the motivational messages were developed in such a way that they could serve for all the students of the course.

The use of a motivational strategy, like administering motivational messages, demands more of the tutor than just marking the assignments and giving feedback. It requires that the tutor is prepared to adopt, in addition to the role of tutor as defined in the contract signed with the College, the role of enhancer of the motivation of the students, thus being a motivational facilitator. This means that the tutor not only marked assignments and gave feedback, but, through more intensive contact, brought about by self-reporting of the learner and through closely accompanying the learner, carefully monitored the motivational state of the student. The messages were designed and developed during the course, and personal messages were added whenever the tutor perceived that extra motivational treatment should be given. In practice, it turned out that this was often the case. It was also decided that the distribution of the messages should be done by the tutor rather than by the College, as this emphasized that the “personal” tutor is there to assist the student in completing the course successfully.

During the prototyping stage, a process of adaptation of the messages to the motivational needs of the students took place. This meant that, although a number of messages had to be developed, motivational strategies often took only some, and not all four components of the ARCS model, into consideration. Which

component(s) depended on the motivational needs of the students. The prototyping research lasted the eight months of the course. The study was carried out with nineteen students in one of the Foundation Courses of the College. Eight of the students had been registered the previous year(s) and had either never started or, if they had started, not finished the course. The other eleven were newly enrolled learners. The prototyping stage was preceded by a limited audience analysis and concluded by qualitative and quantitative data from end-of-course student questionnaires and academic evaluation processes. During the pilot study the emphasis was on improving the validity and the practicality of the motivational messages through formative evaluation; that is, collecting data about the product during its development.

The results of the pilot study are discussed in Chapter 5. The conclusions that influenced the main research will be briefly discussed in this paragraph. The first conclusion was that using a greeting card format and reinforcing the message with graphics was, according to students' feedback, greatly appreciated. Secondly learners appreciated those messages best that reinforced their perception that they were able to complete the course successfully and that showed that they were part of a group of students, working hard to complete the course on time. The third conclusion was that the process of designing and preparing the messages during the course and sending them out with personal remarks, or the distribution of messages especially designed for an individual student, took up much time. As student support is already an expensive "commodity" in distance education, as was discussed in Section 2.7, questions as to whether this method of extra student support is cost-efficient were raised. This concern resulted in the decision to study whether the use of motivational messages, that had been prepared in advance and were based on the audience analysis and on available research data, but which bore no personal note from the tutor (collective messages), were as effective as the motivational messages with an added personal note (personalized messages), that had been used in the prototyping stage.

4.5 The Research Design of the MMSS Main Study

The main objective of the prototyping stage was to ascertain the validity, practicality and effectiveness of the motivational messages. Based on the results of the pilot study, it became clear that the Motivational Messages Support System (MMSS) was valid, practical and effective. The extent to which a less time-consuming support system, using collective messages was as valid, effective and cost-efficient as the personal messages remained to be investigated.

The main study addressed two major questions:

1. *To what extent are motivational messages, based on Keller's ARCS model of motivational analysis, effective in distance education courses?*

2. *What is the difference, if any, in effectiveness and cost-efficiency between the personalized and the collective process of enhancing motivation through motivational messages?*

The first research question, which was already explored in the pilot study, considers the validity, the practicality and the effectiveness of the motivational messages. These quality aspects were discussed in Section 4.3. The first research question is linked to earlier work in this field (J.Visser, 1990). It established evidence that in face-to-face instruction the use of motivational messages may be an effective strategy to overcome motivational restraints learners may have. The second research question looks at the optimal use of different types of messages. This research question has an exploratory character and resulted from the outcomes of the pilot study. It was not clear whether the personalized approach used in the prototyping stage had increased the effectiveness of the motivational messages or whether ways could be found that were as effective yet more cost-efficient. It will first be discussed what, in the context of this study, is understood by effectiveness and cost-efficiency.

Effectiveness in the MMSS study is shown when the main purpose of the study, decreasing drop-out and increasing completion rates, is realized. The desired level

of effectiveness is reached when a higher percentage of students than the years before complete the courses successfully. When the students testify that they enjoyed the course more than before this should indicate immediate effectiveness. Improved outcomes indicate the long-term effectiveness of the messages (Morgan, 1989).The pilot study showed that this has been the case. As the study is limited to improving the completion rates of course participants, possible academic accomplishments in the form of improved grades, do not form part of the study.

Cost-efficiency relates to the outputs that are realized (number of students who complete the course), compared to the corresponding inputs in financial terms (course materials, tutor time and overhead costs). It is likely that, when applying the MMSS strategy, the tutoring costs in terms of hours per tutor spent on a student, increase. As to the possible difference in cost, it should be noted that, as part of the enrolment package, a student is allocated eight hours of tutoring time for one course. It does not mean that this is strictly applied, but in the words of a staff member of the College, when discussing student support, “When students buy a course, they buy eight hours of my time”. Students who repeat the courses can thus be expensive for the College, not only because they might require extra tutoring time, but also because they will require extra time related to registering for a second or third time. Chapter 6 will show how much the increase in tutoring time is if the MMSS is used. This will be compared to the increase in percentage and in number of students who completed the courses. The cost-efficiency of the tutoring can then be explored.

The first research question

The first research question, which was already to be explored in the pilot study, reads:

> *To what extent are motivational messages, based on Keller’s ARCS model of motivational analysis, effective in distance education courses?*

The aim of the study was to reduce the drop-out and non-completion rates of distance learners by adding a component of motivational communications to the regular support services. The pilot study was instrumental in formulating four propositions and one exploratory question, to be addressed in the main study. The function of the propositions is to focus attention on what is going to be researched and to encourage formalization and systematization of the study (Miles & Huberman, 1994; Yin, 1994). Of the four propositions that were formulated, two relate to the first research question and two to the second research question.

The propositions related to the first research question

Regarding the first research question, the following two propositions were formulated:

Proposition 1

> *Motivational messages, designed according to the ARCS model of motivation and used as intended, are effective in the courses studied.*

Proposition 2

> *Motivational messages, designed according to the ARCS model of motivation and used as intended are, on first time use, likely to be more effective for students who are doing the course for the first time, than for students who have been enrolled before.*

The pilot study analyzed the feasibility of designing motivational messages that could be effective in distance education. In Section 4.3 it was argued that validity, and practicality are basic conditions for effectiveness. If the MMSS does not agree with the wishes and the needs of the students and/or the tutor cannot work with the MMSS, chances for impact are slim indeed. The pilot study concluded that, on the basis of observation, substantiated by the returned questionnaires and by self-reporting of the students, the motivational intervention through messages had been appreciated and that the MMSS had been valid and practical. The basic

condition for effectiveness, practicality, had thus been fulfilled. The question of whether the motivational messages had been effective is answered by comparing the courses without the motivational messages, with those where a motivational intervention took place. In the case of the MMSS study effectiveness is shown:

1. If, for course year 1997, more students than the average of the courses in 1995 and 1996 complete the courses successfully and
2. when the learners report that the messages have contributed to their staying in the course.

The second proposition limits the generalisation of the motivational interventions by stating that, when the messages are used for the first time, they are likely to be more effective with newly enrolled students than with students who are repeating the course.

This proposition is influenced by research, which has shown that it is important that learners send in their first assignment early in the course (Moore & Kearsley, 1966; Robinson, 1995), and data showing that student support is most needed in the early stages of a course (Reid, 1994a). Based on these research data it is likely that students who receive extended student support in the first stages of a course, which generally coincides with first enrolment, are likely to benefit more from the messages than students who are enrolled for the second or third time. In the simplified design for the development of motivational messages, based on the ARCS model (Section 3.7), the pre-course attitudes of students towards distance learning courses have been described. New students are generally interested in the course and eager to start working with the new course materials. The Open Training and Education Network did research in student support and concluded that learners without support are likely to delay completion of a programme or drop-out altogether (Rowntree, 1992; Garland, 1993). In practical terms it can be said that the student support provided by the College was very basic and almost non-existent. It is thus thought likely that students who are repeating the course will be more difficult to reach with motivational strategies than first time enrolled students.

As was seen in Section 1.5, practically all students who are enrolled with the College, work in education and training. In the courses of the MMSS study, all but one student, worked in education and most of them in distance education, which made the courses relevant. Students are initially also relatively confident and are aware of the fact that successful completion is an important step in the direction of a degree. Chances for successful completion of the courses are thus likely to increase considerably if students are accompanied by motivational guidance from the start. Before the implementation of the MMSS, there were no specific procedures at the College to increase the chances that learners would complete the courses and more particularly no motivational support was given. Motivational communications should help the learners to focus on the course. It should be emphasized that the learner can successfully complete the course if effort is put into it, while also stressing the positive feelings a learner will have when the course is completed successfully.

The pilot study has indeed shown improved retention rates. If, however, students have already been enrolled in the course once or twice before, their pre-course attitudes may have changed. On the second or third enrolment they might perceive successful completion of the course as more distant than the year before. The materials are no longer new. The study might still be relevant, but apparently not so relevant that students were motivated enough to start the course the year or the years before. In addition, repeaters are anxious about the pitfalls. It is also possible that students have been given other tasks in their work environment meanwhile and that the need, or the motivation, to do the courses has decreased. It is not impossible that a student, who has been enrolled in a course and who has not done much during a whole course year would, on second or third registration, have more problems completing the course, as fear of failure has set in. It is thus reasonable to expect that motivational messages are likely to be more effective with students who are newly enrolled in a course than with repeaters. By the same logic it is also reasonable to assume that it will be more difficult for students, who failed in a course in which the MMSS intervention was applied, to complete such a course upon subsequent enrolment, than it is for those repeaters who never received the MMSS support.

An exploratory question related to the first research question

In addition to the two propositions related to the first research question the following exploratory question has been formulated:

> *Does the confidence component of the ARCS model have a greater effect than the other components in the MMSS?*

This question is based on Keller's (1987c) assumption that not in all areas of motivation the problems will be of equal importance and on the idea that the motivational needs may shift during the course. This means that, for instance, more attention or more satisfaction producing strategies may be needed (J.Visser, 1990). When the simplified design process for the development of motivational messages was used to develop an outline for the motivational messages (Section 3.7), it was concluded that the initial attention of the student would soon be slipping, that relevance would continue, that the confidence area needed extensive motivational treatment and that the area of satisfaction depended on solving the other issues.

There are various reasons for the surmise that confidence is so important. First of all, for many students who enroll in courses with the College, this is the first time that they study via distance education. Secondly, it was likely that students know from their work in the area of distance education, what problems they may face. They would be aware of the fact that drop-out rates are usually high in distance education and that many students do not succeed in finishing their courses. As was seen in the simplified design, the conclusion that confidence is particularly important was based on a number of factors, such as predictions of the students' entering attitudes towards distance education. The outcomes of the pilot study also showed that students often lacked confidence (Section 5.4). In a study of adult distance students, learning through an audio-based system, those strategies that built the students' confidence and increased course relevance were found to be the most adequate ones (Wolcott & Burnham, 1991). It might thus be expected that the students' confidence levels will be relatively low. If motivational communication is used to reassure learners that they can successfully complete the courses if they work hard, to stress that they are not alone, but part of a group

of students all struggling to finish the course successfully, and if personal interest and concern is shown by the tutor, it is reasonable to expect that the learners can become more confident. It is likely that the increase in confidence also influences other components of the ARCS model, such as satisfaction, as confident students will study with more pleasure, but it is thought that the more prominent effect might be in the domain of confidence.

The second research question

The second research question looks at the use of the motivational messages in two different modes: personalized messages, adapted to the motivational needs of the individual learners during the course, and collective messages, based on the motivational needs of the learners as assessed at the beginning of the course.

> *What is the difference, if any, in effectiveness and cost-efficiency between the personalized and the collective process of enhancing motivation through motivational messages?*

To answer the second research question two more propositions were formulated, looking at the cost-efficiency and the effectiveness of the messages and the extent to which students would feel that they were more personally addressed when receiving personalized messages or whether the type of messages was not important. Both propositions look at an optimal use of the motivational messages.

The propositions related to the second research question

Proposition 3

> *Those learners who receive the collective motivational messages, will have less frequent contact with their tutor. This will influence the completion rates, which will be lower than those of the students who received the personalized motivational messages.*

Proposition 4

> *There will be a difference in staff time-related costs between the personalized and the collective motivational messages; the personalized method requiring approximately one fifth more tutor time than the collective method.*

Distance education has been described by Peters (1973) as an industrialized process of teaching. The collective messages have something reminiscent of the industrialised process. It could mean that students, who are comfortably working on their course and have everything planned, may get a message aimed at increasing their confidence. It is thought that the process of sending the same message to every student does little to suggest a personal relationship between the tutor and the student. This could hinder a motivational dialogue between tutor and student and *vice versa,* as the psychological distance between them might be perceived as greater. It may lead to less frequent and less involved contact and thus may make it more difficult to attend to the learners' motivational needs.

Differences between the two types of motivational messages can be summarized as follows: personalized motivational messages will either be adapted from a collective message by adding personal remarks, or will be developed especially for the particular student and occasion. Sending a personalized motivational message is thus the result of reflection of the tutor on the motivational state of the learner who, for instance through self-reporting, has provided clues that allow the tutor to conclude that there is a motivational deficiency, and the nature of the deficiency. The tutor thus takes action helping the individual learners to adjust their motivational levels. The estimation of the twenty percent more time that is thought to be involved in using personalized messages, is based on the time spent designing this type of motivational messages during the prototyping stage. Collective motivational messages, on the other hand, are pre-prepared and given to the tutor at the beginning of the course. The tutor sends the messages to the learners following a time-table that has been defined beforehand. This method is less expensive, but also less personal. The actual difference in tutor time will be discussed based on time recording by the tutors.

It should be noted that using the motivational messages as intended (Proposition 1) means that they are designed and developed in accordance with the parameters of the ARCS model of motivation, that they are sent out as planned and that care is taken to offer a quality product. The above propositions are not meant to state that motivational messages will work with all types of learners, tutors, and/or in all kinds of learning environments. They are likely to work with students studying under difficult circumstances, as has been the case in the research on motivational messages carried out in Mozambique (J.Visser, 1990). Distance learners of the College, who can neither make easy contact with their tutors and/or the College nor with their colleagues and who are often deprived of decent libraries, are considered to be studying under difficult circumstances and, for them, it is assumed that motivational messages will work. An explanatory remark must be made regarding the course completion rates.The College has the following rules for passing or failing an exam. A student needs a 50% score for a passmark to be allowed into the MA programme and a 40% passmark to get the Diploma. Taking into account that the courses involved in this study are all Diploma courses, a passmark of 40% has been used in this study as the overall criterion for successful completion.

The MMSS study - a multiple-case research approach

To answer the research questions, further insights into the effectiveness of the motivational messages and into aspects of cost-efficiency were necessary. It was decided to extend the study to a larger group of students than involved in the pilot study and to increase the number of courses to four. For the main study, a multiple case approach was used. The multiple case perspective of the study was chosen to strengthen the validity base of the strategy of using motivational messages to enhance motivation. Each course involved would be a case, where either the personalized or the collective motivational messages were used and researched. The characteristics of a case study conform to Yin's (1994) description of a case study as one which deals with operational links to be traced over time, rather than with mere frequencies of incidence. The main research consisted of four individual cases, each individual case to be studied and analyzed separately and then brought together in two multiple-case study frameworks: one containing data on

the personalized motivational messages and one on the collective motivational messages. Next to the distinction between single and multiple-case studies, Yin also distinguishes a holistic design *versus* an embedded design. In a holistic study, the global nature of a programme would be studied, while in an embedded study the analysis may include the outcomes from the pilot study or within case study. The MMSS study is thus a Type 4 study, as is shown in Figure 4.3.

Type 1 single-case holistic design	**Type 3** multiple-case holistic design
Type 2 single-case embedded design	**Type 4** multiple-case embedded design

Figure 4.3 Classifications of case study design: the MMSS study as a multiple-case embedded design.

The MMSS research design fits into this matrix in the following way: It is an embedded design as data of a previous case (the pilot study) are studied together with outcomes from the multiple-case study. Looking at the data analysis, the data that are collected for the present study are considered from a multiple-case perspective.

All four courses of the Foundation Programme of the Diploma and MA in Distance Education participated in the MMSS study. Course B, however, was divided into two groups of students: Course B1, which was to receive collective motivational messages and Course B2, which would receive personalized messages. Table 4.2 shows the courses involved in the 1997 research, the number of students involved and the type of messages used, while the relationship between the College and the tutor is also given.

Table 4.2 Overview of the courses involved in the MMSS study

Course code	Number of students	Type of messages	Designer of the messages	Tutor
A	18	no messages		external tutor
B1	13	collective	course tutor	external tutor (the researcher)
B2	14	personalized	course tutor	external tutor (the researcher)
C	18	collective	researcher with course tutor	staff member of the College
D	18	personalized	course tutor	external tutor

The three tutors who, aside from the researcher, accompanied the students of the Foundation Courses, had agreed by telephone that they were prepared to participate in the research. A letter was sent to confirm their preparedness. As seen in Table 4.2, Course A functioned as a control group: the tutor of Course A was only to write down the time spent on tutoring according to the tutor contract.

4.6 Implementation of the MMSS Main Study

Contrary to the pilot project in which the data collection had been the sole responsibility of the researcher, who at the same time also performed the task of being course tutor and motivational facilitator, the responsibility for implementing the MMSS in three courses was now a shared responsibility. The new communication pattern (Section 1.4), which was already established for the pilot study, allowing students to directly contact tutors, has been helpful in the communication with the students. The dates for the despatch of the motivational messages were based on data obtained during the pilot study and on a structured interview involving the tutors of the College. The following time and content tables (Tables 4.3A and 4.3B) were established in close cooperation with the tutors involved in the research. The MMSS used motivational letters in the first part of the study and motivational messages in the second part, hence the two different tables. The content is based on an analysis of the student questionnaires, which

were sent out at the start of the course year to students of the courses involved in the research and in the pilot study.

*Table 4.3A Time and content table for the despatch of motivational **messages** in the MMSS study*

Date and message code	**Justification**	**Content**	**ARCS component**
10/6 **A**	Reminder to return questionnaire.	Explaining that having information about a student is essential for relevant support,	AC
30/6 **B**	Reminding students that first assignment is due by June 30.	Sending a first assignment is always difficult; learners need courage to get it done. Learners will be reassured and encouraged.	AC
20/7 **C**	Getting first assignments and giving advice.	Alerting students to get in touch if they have problems. Set time aside for study. Indicate satisfaction. Stress cooperation student/tutor	CS
20/8 **D**	Preparation for the last work. Reminding students to send in two assignments.	Complimenting students on how far they have come and stressing that it requires only another two months of hard work to be ready for the exam. Point to expected success	ACS
25/9 **E**	Preparing students for the exam/mini-project.	Focus attention on mini-project. Offer help and stress working together and applying what has been learned. For exam course advice on how to sit the exam.	AC
10/11 **F**	Rounding off the tutoring.	Congratulations for those who have come so far and encouragement for those who have postponed sitting the exam.	ARCS

*Table 4.3B Time and content table for the dispatch of motivational **letters** in the MMSS*

Date and letter code	**Justification**	**Content**	**ARCS component**
10/4 **G**	First contact with learners after they have received learning material.	Introduction of tutor and some personal details concerning the tutor, particularly to allow students to identify with the tutor as role model.	ACS
10/5 **H**	Offer help in pacing with the course.	Offering help in pacing course work. Stressing need for contact with tutor.	AC

In order to establish habits and conditions for independent learning, the intervals between the motivational messages were gradually increased. This decision was based on Temple (1991), who argues that it is important to help learners become as independent as possible, instead of inducing them to accept as much support as they can get. Table 4.4 shows the interval in days between the messages.

Table 4.4 Framework for the despatch of the motivational communications of the MMSS

Code	**Interval in days between messages**	**# of days**
G-H	■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■	30 days
H-A	■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■	31 days
A-B	■■■■■■■■■■■■■■■■■■■■	20 days
B-C	■■■■■■■■■■■■■■■■■■■■	20 days
C-D	■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■■	31 days
D-E	■■■	36 days
E-F	■■	45 days

It will be recalled that communications G and H were in letter format, while communications A - F were in the form of a greeting card. During the study, from

March 1997 till the beginning of November 1997, the tutors of two courses (B2 and D) were to develop their own personalized motivational messages. For these courses, no fixed distribution scheme had been established as the tutors of these courses were to decide when they thought it necessary to send out motivational messages. It was, however, recognized that a basic framework for student support should be maintained, independent of the type and number of motivational messages the students would receive. It was agreed, that the following motivational messages, mentioned in Table 4.5, were to be sent out to all the students of Courses B, C and D.

Table 4.5 Basic framework for personalized motivational messages in the MMSS

Planned date	**Personalized messages**
7/4	Introductory letter
10/5	Letter to help students plan their course work
10/5-30/10	Number and frequency of motivational messages to be determined by tutor, depending on needs of students
10/11	Letter to round-off the course

In the main research the responsibility of the researcher for implementing the MMSS was, in practical terms, shared with two colleague tutors. The tutor of Course D had been a tutor for the College for some years, while the tutor of Course C (who was new) had done the MA in Distance Education himself. The researcher tutored Course B and had also completed the MA in Distance Education. Prior to starting the research, the tutors of Courses D and C and the Director of Courses of the College and his assistant, were visited in England for briefing. The Course A tutor, whose participation in the research was limited to registering the time spent on marking the TMAs in her course, was briefed by telephone. To help the tutors of Courses C and D in becoming familiar with the ARCS model and with the objectives of the research, as well as to facilitate the implementation of the MMSS, they received the following documentation:

- A number of articles on the ARCS model and its application (Keller, 1987c; J. Visser & Keller, 1990; L. Visser, 1995);
- A copy of an earlier draft of the pilot study (Chapter 5) ;
- A tutor guide (Annex 4.1);
- Logbook sheets (Annex 4.2);
- Time and content tables for the motivational communications (Tables 4.3A & 4.3B);
- A basic framework table for the despatch of motivational communications (Table 4.4).

Standard procedures for data collection were discussed in the tutor guide and during the briefing which took place before the MMSS main study was launched.

The instruments used in the MMSS study

A variety of instruments was used in the MMSS study. Initial and final questionnaires have been sent to the students, interviews took place with the Director of Courses, a tutor and two students. Logbooks were kept to record the motivational messages that were sent out and to record students' reactions. In addition, course completion records of the students have been compiled for 1995, 1996 and 1997, while in Course A time monitoring sheets were used. Furthermore, structured interviews took place with three colleague tutors. A description of the instruments and sources used in relation to both the students and the tutors is given in Tables 6.6 and 6.7.

In developing the instruments, the following two reasons for doing the multiple-case study formulated in the research questions were kept in mind:

1. Validating the use of motivational messages in distance education courses. This is accomplished by comparing quantitative data, such as the completion rates of the courses before the MMSS was implemented and after the implementation and by obtaining qualitative data. The latter data are obtained by asking the learners what they thought the objective of the motivational messages, referred to as little notes, had been, and whether the messages contributed to their finishing the course.

2. A study of the effectiveness and the cost-efficiency of the use of personalized messages *versus* collective messages.

Table 4.6 Student related instruments and sources

Student related instruments and sources	
Initial questionnaire	Before designing the motivational messages a questionnaire was developed, that was sent to the learners during the first month of the course. It aimed at getting information on: · The students' reason for taking the course (question 16) · The areas in which the students expected motivational problems and difficulties (question 17) · The expectations the students had as to help and support they would get from the College (question 18) · The expectations the students had as to help and support they would get from the tutor (question 19) · The students' personal and professional circumstances. (separate area)
Final questionnaire (Annex 4.4)	This questionnaire was sent to the students within three weeks after the course-term was finished and thus before course results were known. The questionnaire was of a mix kind: four-point scale and open questions. All questions invited remarks and/or observations. It consisted of three main parts: · The first part asked which messages the students liked best and why, and whether they liked the pacing letter which aimed at proposing the student to tell the tutor when TMAs were to be expected (questions, A, B, C) · The second part dealt with the messages and their relevance for the students (questions D, E, F, G, H, I, J) · The third part asked the learners why they thought they had received the messages (question K) The questionnaire was anonymous and could either be returned to the College or to the tutor. Although the motivational messages were specifically mentioned in the final questionnaire, this was done in such a way that the intended nature of the messages was not revealed. They were thus called 'notes'.
Telephone interviews	Two students were interviewed during the course. The first student, who worked for a British commercial firm, had been a reluctant enroller, while the second student was a fourth time repeater from Asia and did not work in education. Both were seen by the College as problem cases and it was thought that getting information on how they experienced the MMSS could help the researcher in the development of the motivational messages. These interviews can be found in the database.

Table 4.7 Tutor related instruments and sources

Tutor related instruments and sources	
Course Completion Records	The course completion records of 1995, 1996 and 1997 made it possible to compare the completion rates of the students before and after the motivational treatment was given. They can be found in the database.
Logbooks	They served to register the following information: · Time spent on marking assignments · Time spent on tutoring · Number of communications from tutor to student · Number of communications from student to tutor · Summary of the content of the communications from both students and tutors. The completed logbooks can be found in the database.
Time monitoring sheets (Annex 4.3)	These were used by the tutor of Course A, who registered the time spent on tutoring the learners according to the work description provided by the College.
Telephone interviews	These took place with tutors and staff, after the MMSS was finished. Involved were the Director of Courses and two tutors. The interview with the director had as principal aim to obtain information on how the implementation of the MMSS had been perceived by the College, while the interviews with the tutors focussed on what the implementation of the MMSS had meant for them. Summaries of the interviews can be found in the database.
Structured interviews	These were sent out to the tutors before the MMSS main research started and involved three colleague tutors. They can be found in the database.

While developing the instruments, an important concern was to make sure that triangulation would be possible. Triangulation can show that various individuals participated in the research and various methods of data collection were selected and applied such as interviews, and completion records, together with the unsollicited observations of the students, all within a multiple-case study. This variety of data is aimed at enhancing the reliability and internal validity of the findings.

A database was established which contains information on the completion rates of the learners, the communications that have taken place, the initial and final questionnaires (Annexes 4.4 & 4.5) and copies of the TMAs. Furthermore, files were established for each student which contain logbooks with information on the frequency and the content of communications from the tutor to the student and *vice versa;* and on the time spent on tutoring and marking. The database information is available for inspection under reservation of confidentiality.

Conditions to ensure the quality of the MMSS research

Lincoln (1990) states that good research should enhance the levels of understanding and sophistication. Marshall and Rossman (1995), discussing data quality control and data analysis, give a number of criteria in the form of queries, for assessing the value and trustworthiness of qualitative research. To judge the "goodness" of a qualitative study they propose to look for whether the method is explicated in detail, whether biases are stated, the research questions are stated and answered and if the study is reported in a manner that is accessible to other researchers and practitioners. These criteria are incorporated into the research. Where it was not possible to satisfy these conditions, this is mentioned in the constraints of the study at the end of this chapter. Based on Miles and Huberman (1994), four practical standards to judge the quality of the conclusions of case study research are discussed in the next paragraphs. These criteria should help to find answers to the questions and provide a type of quality control. Each of these standards will be discussed below and they will be followed by steps undertaken in this study to strengthen the quality of the study.

1. Objectivity

Although a researcher can never be completely objective, the objectivity issue may be framed as one of relative neutrality and reasonable freedom from unacknowledged researcher biases (Miles & Huberman, 1994). Lincoln and Guba (1985) argued that it should be clear whether the conclusions of the research depend on the subjects and the conditions of the inquiry, or on the inquirer. Levin (1990) states that ways to control

subjectivity are, among others, triangulation of findings and the sharing of ideas, outcomes and notes with people who can help the researcher to be objective by being supportive, but also by being critical.

The study data are retained so that they are available for re-analysis by others. Methodical triangulation is applied in using different methods of data collection, such as questionnaires and telephone interviews. Data source triangulation of the findings takes place, as the researcher is helped in the study by two tutors, who themselves have no interest in the result of the inquiry. The potential researcher's bias is discussed later in this chapter under the Limitations of the Study.

2. Reliability

According to Miles and Huberman (1994), the underlying issue here is whether the research is consistent and reasonably stable over time and across researchers and methods. In this connection they suggest a number of ways to verify the conditions for the reliability of the study such as:

- Are the research questions clear, and are the features of the study design congruent with them?
- Were data collected across the full range of appropriate settings?

In addition, Yin (1994) suggests that the reliability of the study can be checked if all data are filed in such a way that someone else could follow the chain of evidence and if data collection took place via a standardized procedure for each case.

The research questions are answered using propositions which directed the attention to what should be examined within the scope of the MMSS study. The data collection took place according to a standardized procedure for each case, and the database is available for use and inspection.

3. Internal validity

Marshall and Rossman (1995) state that a qualitative study exploring a process derives its strength from both internal and external validity. Discussing validity means that questions are being asked as to whether the findings of the study make sense, whether they are credible to the readers and to the people studied, or to the informants. Miles and Huberman (1994) propose queries such as:

- Are the findings internally coherent?
- Were any predictions made in the study and, if so, how accurate were they?
- Are areas of uncertainty identified?

Kvale (1989) sees internal validity as a process of checking, questioning, and theorizing; validity becomes the issue of choosing from among competing and falsifiable explanations. Lincoln and Guba (1985) consider internal validity by using a variety of research methods.

Different methods to ensure internal validity in the MMSS study have been used.

- The collection of the data used a standard procedure for all courses involved in the study.
- Triangulation is used (see objectivity).
- Respondents involved in the study gave feedback on their interpretation of the case study.

The MMSS study uses a variety of methods to assure internal validity. Triangulation has been applied in a number of ways. For instance different instruments like questionnaires and interviews were used to collect information. In addition to the researcher, other people gave their opinion (sollicited or non-sollicited), such as the Director of Courses, other tutors, colleagues in instructional design and students.

4. External validity

External validity asks whether the findings can be transferred to other people and/or settings, to what extent they can be generalized and whether they have any larger importance. A qualitative study's transferability may, according to Marshall and Rossman (1995) be problematic. Firestone (1993) discusses analytic generalization, meaning that links are made between cases and theories. Designing a study with multiple cases may greatly strengthen the study. Multiple-case studies may use the logic of replication and comparison to strengthen conclusions and to strengthen validity (Yin, 1994; Marshall & Rossman, 1995). Miles and Huberman (1994) raise a number of questions that could be asked about external validity, such as:

- Are the characteristics of the original sample of persons, settings and so on described in such a way that comparison with other samples is possible?
- Are the findings congruent with, connected to, or confirming prior theory?
- Have the findings been replicated in other studies to assess their robustness?

One of the strengths of the MMSS study is that links are made between theory and cases. Through its multiple-case study it uses comparison to strengthen the robustness of the case. The use of messages in more than one course aims at providing evidence of a broader utility. Prior research, referred to in this study in Chapter 5, has been carried out. The results of the main study confirms the findings of the pilot study. The results of the main study may be generalized to other situations, provided that they share the characteristics of the MMSS research and the prior research referred to.

In the case study three cases of students following courses involved in the MMSS are analysed in depth. The cases are:

- A female student from Africa; a repeater. She received collective motivational messages.

- A female student from Southern Africa. She received personalized motivational messages, did well during the course, but failed (the only student who failed in Courses C and B).
- A male student, first time enrolled, originally from the USA, but now living and working in Asia. He received personalized motivational messages.

The aim of studying these three cases is to understand more about the communication process between tutor and student as it evolved during the course, and to come to a greater understanding of the connections between the cognitive processes that took place during the course and the social communication relations that developed.

Data collection

The MMSS study, involving over eighty students, was carried out in the context of all four Foundation Courses of the College. In addition to the sources of evidence set up as discussed in Section 4.5., spontaneous and solicited remarks and observations made by the students were registered, which either appeared in the logbooks or sometimes, if it was a personal communication, in the form of a note in the file of the student.

4.7 Constraints and Limitations of the MMSS Study

In Section 4.3, the importance of ensuring the quality of the research was discussed while in Section 4.4 the various measures which were taken to ensure the quality of the research, reported on in this book, have been discussed. Notwithstanding these efforts, not all factors could be rigorously controlled and some might constitute threats to the quality of the research.

1. Language problems and cultural differences among the learners and between the learners and the tutors.

   As discussed in Chapter 2, the learners came from a great variety of different and sometimes opposing backgrounds. Their use of English as a

working language was of varying levels. They varied considerably in age: ranging from 28 to 58. This made it necessary to design the messages with great care in order to ensure that the learners understand them, using basic English, understandable humor and making sure that they are free from bias in such areas as religion, gender and culture. The researcher's long time international and inter-cultural experience has been an advantage. Many tutors, however, do not have such a background and this can make designing the messages more difficult.

2. The tutors' backgrounds and experience

The tutors also came from different backgrounds. None of the three tutors, who were using the messages in the main research, had received any training in tutoring. All three tutors had, however, done courses via distance education and were thus familiar with the kind of problems encountered by the distance learners.

3. The researcher's expectancy effect

The researcher's expectations may be a contaminating influence. The researcher was, as a tutor of Courses B1 and B2, at the same time also involved in the research. The researcher/tutor might have a biased attitude toward the research and possibly "work" towards a positive outcome of the MMSS study. The roles the researcher fulfilled as an ex-student of the courses and as a tutor, are valuable in gaining insight in the problem areas of the courses. The following precautions were taken to counteract possible influence:

- The research was carried out along the lines of the MMSS tutor guide (Annex 4.1).
- Four different groups of students were researched, involving two other tutors, in addition to the researcher.
- The three tutors collected their data independently (according to procedures defined by the researcher) during the study and the results were only communicated to the researcher after the research was

finished. As discussed in Section 6.2 the third tutor did not carry out the research as agreed.

4. The students' possible bias

Another contaminating effect that may threaten the quality of the study is, the subjects of a study realizing that they are part of a study: the Hawthorne effect (e.g. Cohen & Manion, 1994). Students might then give those answers they think will please the researcher. To counteract this possible effect it was never mentioned to the students that research on motivation was being carried out. In fact, the word motivation was never used. For the same reason, anonymous questionnaires were used both at the beginning of the course and after the examination.

5. Accessibility of the students

It may be difficult, during the pilot study, to apply structured and rigorous processes of formative evaluation as to the improvement of the message design and the distribution. The students in the various courses come from many different countries, and the distances involved may make it difficult to receive timely feedback on prototypes sent to the students. It is possible that, by the time a prototype has reached a student, the next one will have to be sent out as it will be difficult to wait for the (delayed) reaction of the student.

Chapter 5
The MMSS Pilot Study

5.1 Introduction

In order to assess whether it is possible to design motivational messages that could influence learners to the extent that they would successfully complete the courses, a pilot study was set-up. This study built on the front-end analysis of Chapters 1, 2 and 3, in which it was seen that student support is critical to the successful completion of courses. Within the area of student support, motivation was found to be a particularly crucial factor of success. The main aim of the pilot study was therefore to come to a valid, practical and effective version of the motivational message. In addition, it aimed at exploring if the use of motivational messages positively influenced the number of students who finished the course successfully, so that it could be seen whether the Motivational Messages Support System (MMSS) was effective. Furthermore, questions on design and distribution of the motivational communications had to be answered.

The design of the prototypes should be seen as part of a continuous search for a valid, practical and effective product. During the prototyping stage, the development of the product was carefully monitored. As it was not possible to do a complete formative evaluation, for reasons explained in Section 4.3, feedback and comments (unsollicited as well as sollicited) were used to improve the product and its distribution process. The research lasted eight months and aimed at answering the following research question:

> *Is it possible to design motivational messages, based on the ARCS model of motivational analysis, in such a way that they are effective in distance education courses?*

5.2 The Environment of the Study

Section 1.4 describes the environment of the MMSS study. The prototyping took place in one of the four Foundation Courses the College offers: Course C. Course C is based on printed course materials and two audio-cassettes and culminates in an exam. During the course year students must send in at least two assignments. The occasional contact between the course tutor and the students had always taken place through the College, as was discussed in Section 1.2. There was an initial problem when the researcher/tutor wanted to send out the letters directly to the learners. Fortunately this problem could be solved by agreeing that all outgoing mail and all incoming mail would be copied to the College. In the year of the pilot study, 1996, Course C had a total of nineteen students: eleven were female and eight male. Of these nineteen students eight were newly registered, while eleven students had been enrolled before (for some students it was the third time they were enrolled). Of these nineteen students, two learners who were enrolled for the first time dropped out during the course year; one because she was transferred to another project for which the competence she would acquire by taking the course had become less relevant and the other one because she could not cope with the combination of work and study. One first time enrolled student decided to postpone the course till 1997. Ages ranged from 28 to 51, with 40 as an average. Learners came from 13 different countries in five continents. Their previous education, which varied from some years of teacher training to a Ph.D., is shown in Table 5.1.

Table 5.1 Educational background of Course C students

Previous education	**# students**
Teacher Education	1
BA or equivalent	16
MA or equivalent	1
Ph.D.	1
Total	19

The researcher, who was the tutor of Course C, received the details of the course participants only after the course had already started, so that there was no time to do an audience analysis. To compensate, a profile of the students was compiled, based on data obtained from the College.

5.3 The Motivational Intervention

It was initially feared that the research would be hampered by the fact that no thorough audience analysis could be done. The academic and the (limited) personal data the College had supplied on the students were analysed, but it was felt that more information was needed. An extended telephone conversation with the student counselor turned out to be very useful. The main objective of the researcher was to gain information on the problems the College had encountered during the first years of the programme implementation, to learn what the College considered to be the main problems students faced and to determine whether a student questionnaire had ever been sent out. A student questionnaire had been sent out, but had never been analysed as the person involved left the College. The data from the questionnaire have been considered confidential and were not available to the researcher. The counselor had some information that was relevant and important for the research. She mentioned that many students, due to the fact that there were no deadlines during the course for sending in assignments, started the course late. She strongly advised calling the students' attention to the fact that they would be able to finish the course successfully, if they made an early start and thus sent in their first assignment on time. She furthermore indicated that, in her opinion, there was not enough contact between students and the College staff and virtually no direct contact between the students and the tutor, or the tutor and the College. Under such circumstances it was, of course, very difficult to get to know the motivational needs of the learners. After enrolment, the only institutionalized contact between the College and the students was a mid-course letter from the Director of Courses and a letter before the exams. Students were sometimes approached and prompted to send in work. However, this was only done on an *ad hoc* basis and not as part of a systematic approach. The student counselor also mentioned that one of the problems the College faced was the long turnaround time of the Tutor Marked Assignments (TMAs). This was partially due

to the fact that most tutors were staff members of the College. They were frequently engaged in international consultancies, or in setting up training seminars in different parts of the world, and thus were often out on missions. These problems have become less pressing lately, as from 1997 onwards more outside tutors have been contracted by the College.

Based on the data that were collected, a student profile, focussing on the motivational needs of the students, was made. As the researcher had been a student in the courses she now tutored, her experience was a valuable asset. During the courses the student profile was adapted as more information became available about the motivational needs and problems of the students.

The motivational letters and messages

The first motivational communication was a welcome letter (letter G), which the College required to be sent to the students. In this letter, the tutor gave some details on her academic and professional background, and provided initial advice on how to tackle the course and invited the course participants to establish contact. Based on research done in the field of student support, which had shown that student support is most needed in the early stages of a course (Reid, 1994a), it was decided to focus on building up a relationship of trust. In addition it would be stressed that learners could complete the course successfully if they worked hard, sent in their first TMA early in the course and focussed on the course. A practical problem was that the mail usually took very long. In 1996 there were only a couple of students who were on e-mail and all mail, such as TMAs and motivational messages, was sent via the normal postal channels. The reactions to the welcome letter were pleasing; five students responded directly to the tutor. During the pilot study the tutor had no direct access to documentation containing the reactions students transmitted to the College. This problem has been solved as the College phoned the researcher to transmit relevant information. An overview of the motivational letters sent out is given in Annex 5.1.

The second motivational letter, letter H (Table 5.2b), aimed at encouraging the students to plan their course work well and to share part of the responsibility for

managing their course work with the tutor. This letter proposed that the students make a timetable (a planning slip) for the TMAs and sent this to the tutor, who would then monitor the students' progress. The letter also contained some information about their colleagues in the course. Quite a few students registered late. At the end of the second month, the course consisted of only fourteen students. This meant that five students registered more than two months into the course. During the first two months there was still some uncertainty about whether the approach followed was the right one and whether it 'worked' for the students. The delays in communication made it difficult to be quickly informed on the reactions to the motivational letters. With the returning of the planning slip by ten students, however, things became easier, as students themselves showed that they were interested in communication by, for instance, adding a line to the planning slip, or by simply getting in touch themselves. As the messages were designed and developed during the course, the information that became available was readily used in the development of the messages. During the course, the motivational messages were developed further and took new shape. Many students communicated their uncertainties. For instance, fear of not having enough time for the course. A few examples are given: *"Tempus fugit"* or the fear of not being able to cope with the course: "I wonder whether I'll ever make it", but also a certain optimism in, for instance, "As for the grade, I just hope the next one will be better" or "Let's hope my TMA looks still good after you have marked it" and a certain enjoyment in the course "The distance form of education has given me a chance".

The above examples of unsollicited student remarks helped to decide on the content of the messages. The third motivational communication, message A, was sent only to those students who had not sent any reaction during the first two months of the course. It specifically asked the learner to get in touch. It was the first communication in the form of a greeting card, but did not yet have graphics on it. The fourth one, message B, however, had a drawing and so did the four subsequent messages (C,D,E,F), that were sent out during the course year. A summary of the motivational messages is given in Annex 5.2, while Tables 5.2a and 5.2b show an overview of the messages and letters sent out, as well as the components of the ARCS model used. It should be noted that the two letters were sent to all students, but not all the messages were sent to all students. To give an

example: students who had sent in their TMAs in time would not receive a reminder. In Table 5.2a those messages that were sent to selected students only, are grey-shaded.

*Table 5.2a Description of motivational messages (**cards**) sent to MMSS students in 1996*

Message code	**Month 1996**	**Cover design**	**Aims**	**ARCS components**
A	May	Text	Inviting to discuss problems, urging to send in pacing slip and assuring that students can complete course.	AC
B	June	Graphics and text	Reminding students to send in lst TMA now. Encouraging to work hard and stressing eventual success. Promising speedy feedback.	ACS
C	July	Graphics and text	Urging those who have not done so to send in TMA promptly. Offering help and stressing that they must give themselves a chance.	AS
D	August	Graphics and text	Indicating (reinforced through graphics) that they are well on the way, urging to send in 2nd TMA, explaining exam procedures and encouraging them to finish.	ACS
E	Late September	Graphics and text	Reassuring the students for their exams, giving hint on exams and congratulating them that they have come so far.	ARCS
F	First week November	Collage and text	Congratulations to those who have done the exam and encouragement to those who have worked hard, but will do the exam next year.	CS

*Table 5.2b Description of motivational messages (l**etters**) sent to MMSS students in 1996*

Letter code	**Month 1996**	**Cover design**	**Aims**	**ARCS components**
G	March start course	None	Welcoming students, advising on how to tackle course, aiming to increase confidence by encouraging them to take learning in their own hands by making a study plan. Emphasizing that they can successfully finish.	AC
H	April	None	Proposing pacing, stressing importance of sending lst TMA early, information on colleagues.	ACS

A number of students reacted to the motivational letters and to the motivational messages during the course year. These reactions are discussed in Section 5.4.

5.4 The Students' Appreciation of the Motivational Communications

The reactions received from the students will be discussed for the first two letters, while the other communications, all in the form of messages are summarized. It is noted that, as more messages were sent out, it became more difficult to obtain specific reactions from the students, as by then a more frequent correspondence had been established with most of the learners. It should also be mentioned that, although all 19 students enrolled in the course received the motivational letters and messages, five of them never reacted and nevthere were five students who never reacted to any of the messages. These same students neither sent in any TMAs nor did they contact the College or the tutor. They must thus be considered non-participating students. The unsollicted reactions, given in the following paragraphs, refer to the fourteen participating students.

Due to the delay in postal services, the reactions to the first letter came, when the second letter, which proposed that the students submitted a kind of pacing schedule, had already been sent out.

The welcome letter (G) *(Five reactions from students)*

The welcome letter aimed at influencing the motivational disposition of the learners by using the attention and confidence components of the ARCS model. The students clearly picked up on the confidence component. In three reactions the students mentioned that they found this first letter very encouraging (confidence), while one referred to the personal touch of the letter and another one thanked for the letter and gave personal and professional information on herself.

The pacing letter (H) *(Six reactions from students)*

The pacing letter focussed on attention, confidence and satisfaction. In their reaction to the second letter, two students also referred to the first one (confidence). Two other students mentioned that they appreciated the tutor's concern, while one thanked for the information (satisfaction). Another student mentioned that she was following the pacing advice also for the other courses she was doing (attention).

The reactions to the first two letters were important in the prototyping stage. It was obvious from the reactions that the attempt of the tutor to make contact with the students was mostly appreciated. The messages resulted in a more intensive contact with the learners. Students who had sent in their work in time would not receive a message that urged them to stick to the deadlines; those messages, that were not sent out to every student, are grey-shaded in Table 5.3. The delay in the mail meant that reactions were sometimes rather erratic and most of them did no longer refer to one specific message. These reactions have been brought together in Table 5.3. Some messages were strong indicators of what the students considered important, such as the student who extended the pacing proposal to her other courses, or of what the messages meant to them, such as "Thank you for your very encouraging letter... I plan to study..." (3rd time repeater, who finished the course).The reactions during the course, of which examples are given in Table 5.3, helped to steer the design of the prototypes, as such reactions

contributed continuously to updating the audience analysis during the course, which in turn influenced the prototype.

Table 5.3 Main reactions of students on the motivational messages during the course

Message code	**Remarks made by students related to message**	**ARCS dimensions**
A	·“Thanks for the encouraging note, I nearly decided not to continue with the course...Thanks for the confidence that note gave me”. ·“Now that I have your address I promise to be more present”.	ACS
B	·“Thanks for the novel reminder; I was both amused and pleased that someone cared enough to go to that extent”. ·“I realize how important personal contact between teacher and learner is”.	CS
C	No specific reactions	
D	·“Thanks for your encouraging message: I realized that I have four days left to send in my second TMA.” “Thanks for your interesting (*sic*) about my person.”	ACS
E	“Thanks for your very thoughtful card. I really appreciated it. With the kind of encouragement and support... I could have finished the MA course by this year”. (student enrolled for the first time in 1993). ·“Thanks, it gives me ideas and encouragement”.	ACS
F	No reactions received. The card was followed a week later by the final questionnaire	CS

When motivational message B, the first one with graphics and text, was sent out, only one student had sent in her first TMA. The results of sending out the message were encouraging: six weeks later ten students had sent in their first TMA. The Executive Director of the College also reacted: “I was delighted to see your little package that you have been using for your research. I love your sketches, especially the woman with her feet up waiting for an assignment to come”.

The students also spontaneously discussed the messages. The following remarks, made during an international telephone call, were noted:

A British student:	"The notes show warmth and care"
A Malay student:	"Without the personal approach through the messages I might have given up"

During the course, a total of 45 letters was sent by the tutor to the students, in addition to the motivational messages and letters, while also 45 letters from the students were received. The pilot study involved 19 students; this comes down to an average of 3.5 exchanges per active student, excluding the motivational messages.

Reactions from students contained in responses to the final questionnaire

When the course was over, but before the exam results were made public, a questionnaire (Annex 5.3) was sent to the learners to get their opinion on the MMSS pilot study. The questionnaire was accompanied by a letter from the Executive Director of the College, urging the students to return the questionnaire (Annex 5.4). Of the 18 students who received the questionnaire, 10 students sent it back (overall response rate 56%). None of the five students, who had not made any attempt to participate in the course, responded, while the three students who had either dropped out or postponed did not receive the questionnaire as they had not participated the full course year. Thus the ten "surviving" students all returned the questionnaire. This implies a real response rate of 100%.

The questionnaire was of a mixed kind. The five questions shown in Table 5.4 offered a five-point scale ranging from disagree strongly (1) via neither disagree nor agree (3) to agree strongly (5). Question 6 was answered by selecting the motivational message students liked best from an overview of all communications that had been sent out, while question 7 required an open response. When analysing the questionnaire it became clear that it could have been better formulated. Negative and positive statements were used, making the

questionnaire unnecessarily difficult for the learners, which was aggravated by the fact that some of learners were not proficient in English.

Table 5.4 The appreciation of the messages according to the final questionnaire

Question	Description	Agree strongly	Agree partly	Neither agree nor disagree	Disagree partly	Disagree strongly
1	The pacing letter encouraged me to make a good start.	5 x	2 x	3 x	0 x	0 x
2	I liked receiving letters more than notes.	3 x	1 x	3 x	2 x	1 x
3	The little notes encouraged me to go on with the course.	5 x	3 x	1 x	0 x	0 x
4	During the year I was looking forward to receiving the notes.	3 x	3 x	3 x	0 x	0 x
5	Without the little notes I would not have continued my course.	1 x	2 x	4 x	0 x	3 x

N=10

Question 6 asked the students, by presenting them with an overview of the notes they had received during the course year, which note they had liked best. Seven out of ten students preferred Note E (which showed them as a group), while one student thought Note B the best. One student thought that “All the notes were very encouraging and stimulating”.

Question 7 asked the students what they thought the purpose of the notes had been. Four of the ten students thought that the purpose had been communication and personal touch. Encouragement and motivation was chosen six times and a reminder of study commitments three times. It is seen that some of the ten students had given two options for question 7.

In summary it can be said that:

- Pacing was highly appreciated
- Communications had a strong, recognized, motivational component
- It was confirmed that motivational messages helped them to stay in the course
- Message E, which depicted the learners as a group, was the favourite.

From the summary given, it may be concluded that the motivational messages have been appreciated and, according to the students, have been effective in helping the learners to stay in the course. The next paragraph will look at whether this outcome is reflected in the completion rates.

5.5 Completion Rates of Students in the MMSS Pilot Study

The number of students enrolled in Course C in 1996 was the same as the number of students that had been enrolled in Course C the year before. In 1996 three students either dropped out of the course or postponed. As they had been enrolled in the beginning of the course year, they were entered in Table 5.4 which gives the completion rates of Course C students (newly enrolled and repeaters) in 1995 and in 1996.

Table 5.5 Completion rates of students in Course C 1995-1996

Year	Number of students	First enrolment	Passed	Second enrolment	Passed	Proportion of completers
1995	19	7	2	12	4	32%
1996	19	11	5	8	5	53%

5.6 Reflections on the Prototyping Stage

In the preceding sections aspects of the design, the content and the use of the motivational messages, that were used in the MMSS pilot study, were described. A first prototype of a motivational communication was designed and developed in its basic form: a letter with a motivational content inviting the learners to engage in an intensive tutor/student relationship. This prototype was revised by trying out a lay-out in the form of a greeting card to determine if it was more appreciated than a traditional letter format and whether graphics that reinforced the text, enriched the message. In Section 3.7 suggestions for the content of the messages had been made. The content was adapted during the course and revisions were made; the messages were enriched and a better integration of the components of the ARCS model was achieved. During the pilot study it was observed that motivational messages focussing on the course work, and concentrating on the area of attention, were less appreciated than messages that focussed on the affective needs, such as belonging to a group and emphasizing that the course could successfully be completed if the learners worked hard. The last message that went out before the exam, was message E. This message strongly emphasized the belonging to a group in the graphics. This was reinforced in the text: “You’re one of them” on the outside of the message (satisfaction), while the inside focussed on the course by giving hints on the upcoming exam. Although the message on the inside related to the area of attention and satisfaction, it might be that the satisfaction component, namely that the student would soon sit the exam, was strongly represented. The message furthermore stressed confidence in emphasizing that the students had learned a great deal during the course year and by congratulating them that they had come so far that they would sit the exam. It was returned by one of the students and had been coloured in. She wrote that she had put it on her desk and her child had taken it away and had “improved” it. All motivational communications sent out can be found in Annex 5.1 and 5.2, while motivational message E is reproduced below.

Figure 5.4 Motivational message E

You are one of the students of Course C who are going to sit the October 1996 exam. Congratulations that you have come so far. I wish you lots of good luck. Don't be nervous - just make sure that you plan your answers well and show the examiner that you have learned a lot this year. For those of you who are accustomed to using a computer, remember that handwriting is more time consuming. Good luck and you can do it!

This message was, in terms to the answers of the questionnaire, the most appreciated: seven of the nine students liked note E best.

As was mentioned in Section 5.1, the prototyping stage served to explore the following question:

Is it possible to design motivational messages, based on the ARCS model of motivational analysis, in such a way they are effective in distance education courses?

In Section 4.4 effectiveness was discussed. It was stated that effectiveness is reached when the main purpose of the study, to decrease drop-out rates and to increase completion rates, is reached. As was seen in Table 5.4, both the completion rates of students registered for the first time and of students who repeated the course, have increased compared to the year before. It can thus be concluded that the MMSS intervention as applied during the pilot study, was effective.

5.7 Discussion and Conclusions

During the pilot stage, it was seen that sending out motivational messages was the result of a process that consisted of doing an audience analysis, deciding on motivational objectives, designing the messages, getting them produced and finally sending them to the students. During this process, the changing motivational needs of the students also had to be monitored. In addition, producing the motivational messages and getting them to the students was complicated since office equipment like a computer and a photocopier was required. Tutors cannot be expected to have such equipment in their home offices. It was furthermore seen that the time elapsed from the moment that the tutor received a signal from the student that motivational treatment was required and the moment the student received the motivational communication, was too long to give adequate treatment. For example a student could write that she did not know how to get her course work organised in time. This communication from the student could easily reach the tutor ten days later; the personalized motivational message the tutor would then send to her, would likely take another ten days to reach the learner. By that time it was quite well possible that she had used a long weekend to catch up with her work, or had received back a TMA with a good mark and had completely forgotten that three weeks before she had been in low spirits. It was also possible that the tutor, noting that a student had a low mark for an assignment and, knowing the student's tendency to be depressed about mediocre

results, would send a motivational message. In the message the tutor would indicate that dedicating some more time would pay off and would express confidence that the learner would do better in the next TMA provided he worked hard. The student, however, was very relieved this time; he had found that part of the course difficult and the mark was higher than he had expected. When he received the motivational message he was confidently working on a second assignment and receiving a motivational message that likely will have no impact or possibly even a negative impact.

It was recognized that the ARCS model had mostly been used in instructional design in conventional education where it was used pro-actively. J.Visser (1990) had used the model in conventional education to monitor the motivational needs of students in Mozambique and had developed motivational messages during the course, thereby constantly monitoring the motivational needs of the learners. That was impossible in a course with international students, who were tutored via the normal postal channels.

The pilot study provided evidence that the use of motivational messages in distance education favourably influenced the completion rates, and that students appreciated the messages. The use of a greeting card lay-out, in which the text is reinforced by graphics, was preferred. It was also seen that those messages that emphasized that learners could complete the course successfully and that they belonged to a group all working towards the same goal, were more appreciated than messages that focussed the students' attention to the course. This is in line with the simplified design for the use of the messages as shown in Section 3.7.

The first research question for the main research was formulated as follows:

> *To what extent are motivational messages, based on Keller's ARCS model of motivational analysis, effective in distance education?*

The process of designing and preparing the messages during the course, and sending them out with personal remarks and the design and preparation of

messages that were custom-made for some students, had taken up much time. Research to determine whether a less complicated system of motivational support could be used, such as preparing the messages in the first month of the course and personalizing them with added individual remarks, was thus called for. Reflecting on how to simplify the design and the production of the motivational messages, it was decided that, for the main study, two different types of messages would be used: personalized messages which reflected the motivational needs of the individual student during the course, and collective messages which reflected the motivational needs of the group as an entity during the course. Both types of messages were to be developed early in the course. Their content would be based on the results of an audience analysis which was to be done in the first month of the course. The personalized messages would be based on the collective messages but be adapted to serve the learners' personal motivational needs or, if necessary, individual messages would be designed based on the learners' specific motivational needs. The decision to use two different types of motivational messages resulted in a new research question

> *What is the difference, if any, in effectiveness and cost-efficiency between the personalized and the collective process of enhancing motivation through motivational messages?*

Further insights were necessary. The MMSS pilot study was considered limited, not only in the sense of number, but also because it was carried out by the researcher, who was also the tutor of the course. It is possible that the person of the tutor in her role as researcher and tutor, might have influenced the outcomes. It was also seen that student support, carried out in the way as described above, took up quite some time. Although no time-monitoring was done by the researcher, the tutoring was experienced as an intensive and time-consuming way of serving the students. This was, of course, also influenced by the nature of the experience, which included the design and development of a prototype, the analysis of the reactions of the students and the monitoring of the students' motivational needs. This extra time, however, was well spent as it led to an improved design of the main research.

The research had to be extended, involving more students and more courses. A multiple case study was to be carried out to strengthen the validity base of the strategy of using motivational messages to enhance the motivation of the learners and more robust data should be presented.

It was proposed that three different cases should be researched in the main study.

- A first group of students would receive so-called **personalized motivational messages**, based on an initial audience analysis, the results of the pilot study and on monitoring the motivational needs of the students during the course.
- A second group of learners would receive so-called **collective motivational messages** based on an initial audience analysis and on the results of the pilot study. The messages for the second group of learners could be prepared in advance, so that during the course the only work involved would be sending them out according to an established timetable.
- A third group of students would serve as a control group and would thus receive no MMSS support. Students in this group would merely be tutored in accordance with the standard tutor contract. To allow comparison with the two motivational treatment groups, tutoring time was to be recorded

In the first two cases data should be collected on tutoring time involved, number of exchanges with the learners during the course, feedback from the learners on how the messages had influenced their motivation and, of course, completion rates.

In the above set-up it would be possible to decide which of the two types of motivational messages is more effective and which is more cost-efficient. The results of a more extensive study, a multiple case study involving four courses, will be discussed in Chapter 6.

Chapter 6
The Main Research:
Assessing the Effectiveness and the Cost-efficiency of the MMSS

6.1 Introduction

The previous chapters dealt with the preparation of the main research. To assess the effectiveness and the cost-efficiency of the Motivational Message Support System (MMSS), two research phases have been designed, as described in Chapter 4. The first phase of the MMSS study, the pilot project, took place in 1996 and focussed on the development of a prototype which, in its final version, was used in the second phase, the main research in 1997. In this chapter the main research is discussed and the database is analyzed, so that the following two research questions can be addressed:

1. *To what extent are motivational messages, based on Keller's ARCS model of motivational analysis, effective in distance education courses?*

2. *What is the difference, if any, in effectiveness and cost-efficiency between the personalized and the collective process of enhancing motivation through motivational messages?*

In this chapter first aspects of the design and the implementation of the MMSS study are discussed. Following this, the first research question is examined in the light of two propositions and one exploratory question. A discussion of the second research question, again in the light of two propositions comes next. The chapter ends with a summary and conclusions.

6.2 Implementing the MMSS study

In gathering and discussing the results of the study, an important concern is to argue that the goals set were indeed accomplished and to show how the obtained data contribute to the increase of knowledge in the area formulated in the research questions. By examining the actual results of the study, relevant aspects of the process of administering motivational communications during the implementation phase of the research will be described.

The framework

As is shown in Table 6.1, the main research involved four courses, one of which consisted of two groups. The main study involved 81 students who, depending on the course they were enrolled in, received either personalized or collective messages, or were in a control group.

Table 6.1 The courses involved in the 1997 MMSS study

Course	**Number of students**	**Motivational activity**
Course A	18 students	no messages : time registering only
Course B1	13 students	collective motivational messages
Course B2	14 students	personalized motivational messages
Course C	18 students	collective motivational messages
Course D	18 students	personalized motivational messages

As discussed in Section 4.5, Course B, having 27 students, was divided into two groups, B1 and B2, to allow the use of collective motivational messages in one group (B1) and the personalized messages in the other group (B2). To answer the first research question the students of Course B have been lumped together. Courses A, C and D functioned as undivided courses.

In the main research the responsibility of the researcher for implementing the MMSS was, in practical terms, shared with two colleague tutors. Standard procedures for data collection were discussed in the tutor guide and during the

briefing which took place before the MMSS main study was launched. Further details are given in Section 4.6.

The first motivational communications

In accordance with College rules, all tutors must send a welcome letter to the learners when these start their courses. It was agreed (Section 3.7) that the content of the letter in the courses actively involved in the MMSS study (Courses B, C and D), should be designed in such a way that two components of the ARCS model (attention and confidence) would be emphasized (Annex 6.1, 6.2, and 6.3). The letter was accompanied by an initial questionnaire, developed by the researcher (Annex 4.1). The questionnaire (an audience analysis) aimed at obtaining information on the daily circumstances of the learners, their academic background, and the time they thought they had available for their studies. Embedded in the questionnaire were five questions related to the difficulties students expected while studying for the course, the reasons for taking the course, and questions inviting the students to suggest what help the College and the tutor might provide. While tutors were waiting for the results of the initial questionnaire, the students received a letter proposing that they pace their course work (Annex 6.4, 6.5 and 6.6). Based on the information in the initial questionnaires, on the results of the MMSS pilot study and on the simplified design for the development of motivational messages (Section 3.7), motivational messages were designed and developed for Courses B and C (Annex 6.7 and 6.8).

When the MMSS study was in its fourth month, the tutors of Courses D and C were again visited by the researcher. The objective of this visit was to show appreciation on the researcher's part. The tutor of Course D mentioned that he was a little behind in sending out the messages, but he expected to catch up during the July holidays. Care was taken not to interfere in the tutorial process. At the end of the courses, just after the examinations and the final projects were handed in, the tutors sent a final questionnaire with an accompanying letter to the learners (Annex 4.2). This questionnaire asked the learners to indicate which messages they had liked most and why, and furthermore what role the messages had played during the course year. In both the initial questionnaire and the final questionnaire, care was taken to avoid asking the learners directly about

motivational problems and the effect of the motivational communications, this to avoid prompting responses that may not have been present spontaneously in the learners' minds. The last involvement of the tutors in the research consisted of returning the questionnaires and logbooks to the researcher.

Problems and dilemmas encountered

An important feature of the use of personalized motivational messages was that those tutors who used the personalized approach, should monitor the motivational needs of the learners and decide for themselves how many and what type of motivational messages were going to be sent (Section 4.5). The research had been designed in this way to see whether the MMSS could function under the direct responsibility of the tutor. While this worked out successfully in Course B2, it did not in the case of Course D. At the end of the MMSS research period it appeared that the tutor of Course D had only mailed the welcome letter, a letter promising the students help to stick to a timetable for work to be sent in (pacing letter) and one motivational message urging the learners to send in their first TMA (Annex 6.9). Although it had been agreed that a number of motivational messages would be sent to the learners of Course D, this tutor had to travel abroad frequently and did not manage to send any other messages to the learners. This was regrettable as promises to help the students in their planning of the course work were not kept. A consequence of the decision of the researcher not to interfere in the tutorial process was that, only after the research was finished, it was discovered that just one message had been sent out. It can thus be concluded that, in 1997, administering personalized motivational messages has not been carried out in Course D, and that Course D has not fulfilled a function in the research.

There was another distortion in the design of the MMSS study. It appeared that in 1995 a group of students from one African country, who were for the first time enrolled in Courses D and C, had received extra personal coaching from a tutor working in that country. Those students were closely helped through written as well as face-to-face support and through a workshop. This intensive tutoring and

support resulted in seven out of seven students finishing Course D, and eight out of nine students finishing Course B in 1995. This fact was only revealed by the College after completion of the research procedures. For Courses D and C the completion rates for 1995 will thus be given excluding this particular group.

6.3 The First Research Question

The first research question was already partially explored in the MMSS pilot study as was seen in Chapter 5. The first research question reads:

> *To what extent are motivational messages, based on Keller's ARCS model of motivational analysis, effective in distance education courses?*

For the first research question two propositions and one exploratory question had been formulated (Section 4.4).

The first proposition

The first proposition deals with the effectiveness of the motivational messages and considers the MMSS in its totality:

> *Motivational messages, designed according to the ARCS model of motivation and used as intended, are effective in the courses studied.*

The motivational messages, based on the ARCS model, were designed and developed by the researcher in close cooperation with the tutor of Course C. Use was made of the simplified design for the development of motivational messages which is given in Section 3.7, and of the results of the initial questionnaire to be found in the database. Attention and confidence were the areas primarily focussed on. When implementing the main research, it was assumed that the tutors of the courses involved (Courses C, B and D) worked along the lines laid out in the research design of the MMSS study. The tutors of Courses C and B carried out the MMSS intervention as planned and have, with the exception of an occasional delay of a week in the despatch of the messages, implemented the MMSS

procedures as shown in Tables 4.3A and 4.3B. The tutor of Course D sent off the first two letters and one motivational message.

In the case of the MMSS study, effectiveness is shown if:

1. For course year 1997, a greater percentage of students students than the average of the courses in 1995 and 1996 complete the course successfully and
2. The learners report that the messages have contributed to their completing the course.

The aim of the study was not only to determine if the MMSS had improved the support system, but also that this improvement was expressed in higher completion rates. The data recorded in Table 6.2 are based on information supplied by both tutors in relation to the students they had tutored, and by the College as to academic results which can be found in the database. In Chapter 6, shaded blocks in the tables indicate that MMSS treatment took place.

Table 6.2 Overall completion rates in the MMSS for students of Courses B and C in 1995, 1996 and 1997; shading indicates MMSS intervention

		1995	**1996**	**1997**
Course B	total number of students	12	30	27
	course completers	4 (33%)	11 (37%)	18 (67%)
Course C	total number of students	20	19	18
	course completers	6 (30%)	10 (53%)	11 (61%)

Summary Courses B and C 1995-1996-1997:

No MMSS	completion rates Courses C and B	**34%**	n=62
MMSS	completion rates Courses C and B	**61%**	n=64

The groups, which received the motivation stimulus have higher completion rates than the groups that did not receive the stimulus. Overall, this difference is statistical significant (Fisher's Exact Test, p=.003). For Course B and C, the p-values from the Fisher Exact Test are respectively .015 and .094, which means that when a critical alpha of .05 is applied, the difference is only significant for Course B. However, one might argue that we still can be quite confident that the difference for Course C is not due to chance fluctuations.

In Table 6.2 the course results are given separately for the years 1995, 1996 and 1997. In the summary, however, the courses have been joined as the numbers are low and, although it is recognized that the pilot study was slightly different from the main study in that prototyping was involved, the motivational treatment has generally been the same.

In Course D, which was supposed to participate in the MMSS study but did not, the completion rate in 1997 was 39%. Of the 18 students, seven finished the course, while in Course A, which also had 18 students, seven students finished, bringing the completion rate also to 39%.

In addition to the evidence presented above, which shows that the MMSS intervention was effective in that the completion rates increased considerably, there are other ways to get information about the effectiveness of the MMSS. The students reported in both the final questionnaire and during the course year that the MMSS was important for them. By way of example, a number of student observations follow. One student, who had been enrolled in 1996 in the course in which the MMSS pilot study took place, answered the question in the initial questionnaire on how she thought that the 1997 tutor could best help the students as follows: "Sending me those beautiful small notes with drawings on them". Another student, who was a repeater and had not received the messages before, wrote during the implementation of the MMSS: "Thank you very much for your ever encouraging messages". Yet another student, who had received the messages in 1997, sent the tutor of her 1997 course an e-mail in 1998, stating that she wished she would receive the messages again. The College also recognized the positive effect of the intervention. The Director of Courses, in a telephone communication with the researcher while discussing the MMSS just after the

examination results had come off, referred to the “marvelous results that had been obtained”.

To get a better insight in the process of the “working” of the motivational messages, the communication process of three students, as it evolved during the course year, is given on the next three pages.

The first case deals with a student who enrolled in the course in 1995, but had never sent in any work. She was enrolled in Course C in 1996 (the year of the pilot study). She completed that course successfully and in 1997 attempted Courses D, which she had failed in 1996, Course B and Course A. Of these courses she completed Course B and Course D. Within Course B she was part of Course B1 which meant that she received collective motivational messages.

The second case concerns a student who was for the first time enrolled in 1996, did no course work and enrolled again in 1997. She received personalized messages. She did well during the course, but problems in her work environment contributed to her failing the course. She has, however, again enrolled in 1998.

The student discussed in the third case was a newly (1997) enrolled student. On the initial questionnaire he had indicated that he did not want to engage in any contact with his colleagues. Referring to the help he expected from the tutor, he wanted to be informed about the weaknesses and strengths of his work. During the course he did, however, gradually get involved and close to the end of the course year, in September, he seemed to see the tutor as a friend: “The College was one of many demands on my desk, but the tutor was a friend”.

Case 1 Repeater

Collective Motivational Messages April-Nov. 1997

The first case to be discussed is a forty-six year old female student from Africa, Student X. She enrolled in the Diploma courses for the first time in 1995. Her background is in Teacher Training for Primary Education. She has 2 A-levels and a Trainer of Trainers certificate. Up to 1997 she has finished Course C (she was a student in the pilot study) and failed Course D. X’s reasons for doing the course

are that it is a challenge and that she would like to get an MA. She feels that she could do better than some of the people in her work environment who have higher qualifications. The College considers her to be a weak student. Her entry qualifications were, in fact, insufficient, but her sponsor, a British NGO, was very keen on her participation. She was enrolled conditionally. In the initial questionnaire she says that she needs communication: “The silence of a tutor depresses me”. Difficulties she expected were lack of time, lack of confidence and ”fear of failure”.

Although Student X received the collective messages, she interpreted them as being a personal message to her and responded to them in that way. Without any other personal comment from the tutor than the note of May, 7, 1997, Student X “replies” to the motivational messages and in doing so constructs her own dialogue. This is, for instance, seen in her communication of June 24, which is an answer to Message B, serving to remind her to send in her TMA in time. Although she has received the same format and kind of communications the year before, when she was a student in the pilot study, it does not seem to influence her perception of being personally addressed. Her answers in the final questionnaire are clear: “positively all notes gave me a boost”. The purpose of the little notes has been, according to her, to encourage, reinforce and support. She takes, however, credit for her own performance, as she only partly agrees that she, without the little notes, would not have continued the course. The motivational messages have clearly answered the need for communication and encouragement as is seen in her fax of December 15, 1997 and again in her fax of March, 30, 1998.

Transcription of X’s communication with the tutor and *vice versa*

Tutor’s messages and letters	**Student’s letters**
10/4 Letter G. Introducing tutor and course	**6/5** “I’m extremely excited to learn that you are my course tutor. I know I passed Course C [1996] because of your encouragement. I look forward to your help.”
7/5 Personal communication from tutor:”I’m equally excited and I am sure that we will have a good time together...I’m sure that you can finish this year.”	No response

10/5 Letter H. Encouraging student to propose schedule for sending in TMAs	**6/6** "I'm pleased that you are going to be my tutor...There were times, I was just about going under and then I heard from you, a fax message, a card and I would resurrect, for I know someone had hope in me. I was disappointed with the exam results of Course D [end 1996]. Anyway I'm positive that Course B and A are going to be different".
20/6 Message B. Reminds students to send in first TMA. Advice on how to tackle it and assurance that they will feel good and that early submission increases completion chances.	**24/6** "Sorry for the delay" [refers to a late TMA]. I have been bogged down with work and extra courses. Materials arrived late. This has not been easy BUT I'm optimistic."
20/7. Message C. Alerting students to get in touch in case of problems. Reminding student to send in first TMA, which is a step towards completing course work	**11/8** Thank you for the cards. I have also received the Newsletter. The information on the TMA was helpful for me...I find Course B very interesting and the TMAs quite difficult. I am working on my 3rd assignment."
20/8 Message D. Preparation for last leg. Praising the students for work done and reminding them to send in 2 TMAs	No response
20/9 Message E. Learners should be working on project. Reminding that learners can get advice. Explaining project is nice and let them apply what was learned.	No response
7/11 Message F. Thanking students for their messages, letters etc. Good luck for those who finish this year and courage for those who plan to finish next year.	**15/12** "It was great working with you throughout the year. Thank you for your great support. I can honestly count on your being there for my (*sic*) in my studies".
	30/3/98 "I have just received my results and would like to thank you for your great support".

Case 2 Repeater

Personalized Motivational Messages April-Nov. 1997

The second case to be discussed here in detail is a fifty year old female, Student Y from Southern Africa. Y is a repeater in the course and received personalized motivational messages. She has a BA in Nursing obtained via the University of South Africa (UNISA) and a BA in Education from Witwatersrand University (South Africa). She has also followed a three-month course in distance education in England. She enrolled for the first time in the programme in 1994 and in 1996 for the first time in Course B. Up to 1996 she had only done one course. Her reason to do the course is personal development, while innovative adult education delivery interests her. She would like to receive Newsletters and publications and asks the College to stay in touch with her “so that I realize I’m not forgotten”. As a final remark she puts on her initial questionnaire “I don’t intend dropping my studies”

Student Y had a rough time at the end of her course. She was invited for a workshop in the USA, but had still to finish her mini-project. She had, according to her, finished it and given it to someone at her office to send it off. This was not done, again according to student, because of problems at her work as she was the one invited to the USA. When the tutor discovered that her mini-project was not in, the tutor phoned the student in the USA. Y sent in her mini-project from a rough draft she had. It was insufficient and she was given a three-week extension to improve it, but to no avail as she failed. Looking at the student’s record it is strange that she did well with UNISA, which also offers very limited student support and had such problems with the College. From 1994 till 1998 she has only completed one course and failed one course. In a personal communication she said that she was nervous about the course work and always had headaches. During the course she did well, relying to some extent on the messages as she communicates on 30/7. She also looks for a more personal relationship, probably more in the sense that is provided in conventional education, by reminding the tutor not to forget her birthday and by sending a photo (tutor received more photo’s in 1998). Her failing the course is unfortunate. It was not necessary and is apparently partly due to problems at work, to a low performance of the student, but

also to lack of contact and the fact that the College does not provide a sample of what kind of project is expected, which makes that the student relies heavily on tutor for feedback. Y did not return the final questionnaire.

Transcription of Y's communication with the tutor and *vice versa*

Tutor's messages and letters	**Student's letters**
10/4 Letter G. Introducing tutor and course	No response
10/5 Letter H. Encouraging student to propose schedule for sending in TMAs	**2/6 "**Thank you for your ever encouraging messages. I will not abandon my studies this year-no room for that. Expect my letter, TMA soon."
18/6 Letter: "Thank you for lst TMA. You'll make it this year, I'm sure.	**24/6** Questions about course work and :"I've already started my Media assignment."
	30/7 Miss you and your correspondence. Got my TMA back-never thought of such a mark "B"-thank you. Greet your family
1/8 "Thanks for fax. By now you should have received another message: so don't worry they will come. You deserved your B mark so the thanks should come from me: you're such a good and prompt student".	No response
20/8 Message D. Preparing students for the last work. Reminding to send in two TMA's. Note: "You're doing very well, I'm sure you will be successful."	No response
2/9 Confirm receipt of 2nd TMA. "I can imagine that it is not easy to do the course, but you're going to make it this year. I'm proud of you!"	**9/9** "Thanks for your speedy fax. I'll be attempting TMA3. Don't forget my birthday 19/9. I'll depart for the USA [for 6 weeks}. Please print your address I'll love sending you my photo!"
23/9 Birthday message." Apologies for delay, could not get through. Assuring student she will be fine provided she works hard for the last 6 weeks."	
23/9 Message E. Encouraging students to work on mini-project. "You'll make it-I'm happy for both of us."	**25/9** "Please accept apologies for late project. I have had a lot of problems at work since my return from the USA."
10/11 Message F. Rounding off the tutoring. Congratulations on having come so far. Thanking students for messages and letters.	**December 1997** "Happy Christmas (photo enclosed of her and her daughter). Wish to visit you one day".

Case 3 1st Time-enrolled

Personalized Motivational Messages Apr.-Nov.1997

The third case to be discussed here in detail is the forty year old male North American Student Z. This student is a first time enrolled student in Course B2 (personalized motivational messages). He holds 2 BA's (religion and education).

In the information given in the initial questionnaire, Z mentioned that he wanted to take the course as he has to develop correspondence courses and he would like to understand the process of course development better. He is worried that he does not have enough time as he carries the "supervision of a church". Z has five hours a week to study, which is half the time the course requires. Answering to what kind of tutor help he would like to receive he wants to know about the strengths and weaknesses of the submitted work. He does not want to receive the names of other students in the course and does not want his name to be given to fellow students. In a way a student like Z is quite a challenge. Z lives and works in a country in Asia, where there is an excellent open university, offering myriads of courses. His wish to study on his own, without getting in touch with other students, had to be respected. Student Z completed the course successfully.

Although Student Z apparently was reluctant to engage in communication with his colleagues and with the tutor he gradually gave up his reserved attitude towards the tutor (communication 22/9). Answering the final questionnaire he says that he liked note C which stressed communication with he tutor:"Encouraged me to open up personal dialogue which I find difficult." The notes helped "to reduce stress and lack of confidence". He liked the pacing letter which forced him to "prioritize and set deadlines". He thinks that the purpose of the notes has been to develop a dialogue and to communicate support. Given Z's reluctance to engage in communication, the notes may have been an acceptable and encouraging way to get support without being forced in an open dialogue. The e-mail exchange and the faxes were "most supportive and helped to humanize the whole process" . "The College was one of many demands on my desk, but the tutor was a friend". A surprise was to receive a photo of himself and his family. Student Z thanked for the extra effort and time tutor has put into the tutoring.

Transcription of Z' communication with the tutor and *vice versa*

Tutor's messages and letters	**Student's letters**
10/4 Letter G. Introducing tutor and course	No response
10/5 Letter H. Encouraging student to propose schedule for sending in TMAs	No response
10/6 Message A. Encourages student to work together	No response
30/6. Message B. Reminds student to send in first TMA. Encouraging student to spend more than 5 hours (which he said he had available) on course. Advice: get 3x per week up earlier and you get it done. Request to tell about his work	**9/7** Thanks for letters. Apologizes for delayed response. Student presents schedule for sending in assignments (signed with name and clerical titles)
9/7 Comments on schedule. Good luck with TMA	No response
20/7 Message C. Focus on alerting student to send in first TMA before 10/8	No response
20/8 Message D. Preparing students for the last stretch of work. Reminding to send in two TMA's	No response
18/9 Fax to urge to send 2nd TMA. "You can still make it and I'm sure you will do well."	**22/9** "Thanks for the note and encouragement which I received this morning". .. "Desperation struck last night". (used his first name)
24/9 Answer to student's communication of 22/9. Good luck and tutor feels cheered up by fax	**25/10** Photograph of himself, wife and children
10/11 Message F. Rounding off the tutoring. Congratulations on having come so far. Expressing satisfaction that communication has been established.	**30/11** Final questionnaire returned with thanks for the extra effort and time.

In the description of the three cases use has been made of the logbooks, the initial and final questionnaires, data supplied by the College and the original

correspondence between tutor and student and *vice versa*. All these data are accessible in the database kept by the researcher.
Describing these three cases in detail gives an insight in the working of the messages. In this way, the process of administering motivational communications is highlighted. In selecting the three cases, it was thought useful to look at a case of a "success story" (Case One) dealing with a student who, having worked on the courses for two years already and having failed one of them, is encouraged to continue. Case 2 is a student who unlike most of her colleagues, has already done courses via distance education, and has been enrolled in the course before, starts again, but fails. Case 3 is a student, who has taken out a course from England, although he lives in Asia, in a country with an excellent open university. He has decided to do the course on his own, wishing to receive no names of the other students in his course.

In all three cases, the communication process that was instigated benefitted the three students. Setting up a communication pattern was the easiest with student one; she had previously been a student in a course where motivational communications had been used and she reacted immediately. Her correspondence with the tutor is one of being grateful for the help, and is related only to her course work. As is seen in this case, she easily sets up a communication pattern, responding to photocopies of messages and interpreting them according to her need. She almost seems to reassure herself: "BUT [student's emphasis], I'm optimistic". She thanks the tutor at the end of the year: "It was great working with you".

During the course, the other two students add a personal note to the communication. X, as was mentioned in the description of her case, said in the initial questionnaire that she wants the College to ensure that she's not forgotten. Z is almost the opposite; his "terms" of needing the tutor are related to feedback on the strengths and weaknesses of his work. He emphasizes the distance by giving his surname and clerical titles in his first letter to the tutor. Still, somewhere in the course, in a fax, he gives up this "distance" and reveals himself: "Desperation struck last night", using his first name to sign his fax. Y involves the tutor's family in the relationship "greet your family" and, by sending a photograph, her own family. Z, too, involves his family by sending a photo of himself, wife and children. The three students have one thing in common: they enjoy the

communication with the tutor and are helped by it. Y did not send back the final questionnaire, but mentions in the dialogue: “Miss you and your correspondence”, while Z thanks for the note and encouragement (22/9) and in the final questionnaire stresses the importance of communication:”Encouraged me to open up personal dialogue, which I find difficult”.

The messages are effective as part of a communication process. In that communication process, Students Y and Z show, like many of their colleagues in the cases not discussed in detail, also part of their private lives, just as they would most likely, have done in conventional education. People are different, students in a distance education course, too. The three cases reported on in more detail have, however, a common ground in that all three stress that the communication and the encouragement has been important. How that has happened, whether it was a funny message, a serious one, or a brief e-mail does not seem to be important, it was important that it happened.

In summary, the MMSS pilot study had shown already that the completion rates of students enrolled in the pilot course had increased considerably. The same conclusion can now be drawn for the MMSS multiple case study involving three different cases. This conclusion is substantiated by the data given in Table 6.2. It should be noted that in this Table all students who enrolled in Courses C and B are included: those who repeated the course, those who were newly enrolled in 1997 and four students who during the year either dropped-out or postponed the courses. Detailed information on the students’ academic performance during the course year can be found in the database. It can be concluded that the motivational messages have been effective in the courses studied and that Proposition 1 is sustained.

The second proposition

This proposition looks at whether the motivational messages have been differentially effective for those students who were enrolled for the first time in the courses, and for those who were repeaters in the courses. Proposition 2 relates to this question.

> *Motivational messages, designed according to the ARCS model of motivation and used as intended are, on first time use, likely to be more*

effective for students who are doing the course for the first time, than for students who have been enrolled before.

To see what happened in Courses B and C from 1995 till 1997 the completion rates of students who had been enrolled for the first time in the course, were studied, followed by an analysis of the completion rates of students who had repeated the courses. As the number of repeaters is rather small, second and third time repeaters were studied as a single group. The completion rates of first time enrolled students is given in Table 6.3, while the completion rate of repeaters is found in Table 6.4.

Table 6.3 Completion rates of (first time) enrolled students of Courses C and B in 1995, 1996 and 1997; shading indicates MMSS intervention

		1995	1996	1997
Course B	first time enrolled	4	25	13
	completed	2 (50%)	11 (44%)	10 (77%)
Course C	first time enrolled	7	11	11
	completed	2 (29%)	5 (45%)	9 (82%)

Table 6.4 Completion rates of repeaters in Courses C and B in 1995, 1996 and 1997; shading indicates MMSS intervention

		1995	1996	1997
Course B	2nd and 3rd time enrolled	8	5	14
	completed	2 25%	- (0%)	8 (58%)
Course C	2nd and 3rd time enrolled	12	8	7
	completed	4 (33%)	5 (63%)	2 (29%)

Course C, the course involved in the MMSS pilot study in 1996, had a somewhat lower completion rate in that year than in 1997. Of the 19 students who enrolled in 1996, 10 finished (53%), while in the same course, in 1997, 11 of the 18 students completed (61%). This difference in completion rate in Course C, may have been influenced by the fact that in the pilot study there were still uncertainties as to what kind of messages should be designed and how they should be delivered. There is,

however, some consistency in the 1997 completion rates of first time enrolled students in Courses B and C: 77% in Course B and 82% in Course C.

An overview summarizing the completion rates of Courses B and C during 1995, 1996 and 1997 and Courses A and D during 1997 is given in Table 6.5.

Table 6.5 Overview of the completion rates of Courses B and C 1995-1996-1997 and A and D 1997; shading indicates MMSS intervention

Year	Courses	Enrolment	MMSS	# students	# completers	%
1995/96 combined	B & C combined	first time	no	36	15	42
1995/96 combined	B & C combined	2nd+ time	no	26	6	23
1996/97 combined	B & C combined	first time	yes	35	24	69
1996/97 combined	B & C combined	2nd+ time	yes	29	15	52
1997	B & C combined	first time	yes	24	19	79
1997	B & C combined	2nd+ time	yes	21	10	48
1997	A & D combined	first time	no	10	5	50
1997	A & D combined	2nd+ time	no	26	9	35

Tables 6.3, 6.4 and 6.5 show that there has been an overall improvement in completion rates in first time enrolment as well as in second time enrolment in those courses that used the MMSS. It was furthermore seen that in Courses A and D, where the MMSS was not used in 1997, the overall completion rates were 39% for both courses (first time enrolled students and repeaters combined).

During and after the course, students gave their opinion about the motivational messages. One student from Zimbabwe, who had been enrolled on the course for three years without having sent in any work, wrote: “Without the little notes I would most probably have let time go by and find (*sic*) it difficult to continue”. Another repeater: “I will not abandon my studies this year... (name tutor) will not give room for that”. Then there was the reaction of the student from the North of Uganda (the

war zone), who mentioned that he had to travel 300 km to send a fax: “Thanks for all your encouraging messages, I just don’t want to give up”. In some cases, students lose all hope of getting started. An Indonesian student, for example, wrote: “I promised myself to finish the course because this is my 3rd year registered as a DE [Distance Education] student, but I...I am afraid thinking that nobody cares. I need support/motivation...Remind me! Thanks”. Students who had been enrolled for the first time also communicated their satisfaction: “The notes encouraged me to have a high degree of motivation” or, just in simple words: “The notes are stimulating”.

Table 6.6 gives an overview of the completion rates of first time and second time enrolled students over the years 1995-1997

Table 6.6 Completion rates of first and second time enrolled students; shading indicates MMSS intervention

Year	Ist time enrolled	Completed	2nd time enrolled	Completed
1997	24	19 (79%)	21	10 (48%)
1996	11	5 (45%)	8	5 (62%)
1995/96	36	15 (42%)	25	6 (24%)

Looking at this table it is seen that, if the years 1997 (MMSS) and 1995/96 (no MMSS) are compared the percentage of completers on first enrolment went up from 42% to 79%. It is also seen that, if 1997 (MMSS) and 1995/96 (no MMSS) are compared the percentage of repeaters who completed went up from 30% to 58%. During the years the courses have been operating the percentage of students who completed on first enrolment has been higher than on second enrolment (Table 6.5 and personal communication Director of Courses of the College: September, 1998). In summary it looks as if Proposition 2 cannot be sustained but, as the numbers are small, further research should be done to confirm this.

The exploratory question

The two propositions that have been discussed up to now, both dealt with the effectiveness of the motivational messages. In addition to these propositions the

following exploratory question, related to the first research question, was formulated.

> *Does the confidence component of the ARCS model have a greater effect than the other components in the MMSS?*

This exploratory question is based on Keller's (1987c) assumption that motivational problems will not be of equal importance in all areas and that they may shift during the course so that, for instance, more attention or more satisfaction producing strategies are needed (J. Visser, 1990). When the simplified motivational systems design was developed (Section 3.7), it was concluded that the initial attention of the students would soon be slipping, that relevance would continue, that the confidence area needed extensive motivational treatment and that satisfaction depended on solving the other issues. The initial questionnaire data, discussed in the next paragraph, showed a similar pattern. Confidence was generally expected to be the major problem area. There were various reasons for that assumption. First of all, there were the outcomes of the pilot study (Section 5.6), which indicated that confidence was a problem area, since it was for many students the first time that they studied via distance education and furthermore it was likely that the students knew very well what the pitfalls of distance education are, as they, themselves were working in that area. They would be aware of the fact that drop-out rates are usually high in distance education and that many students do not succeed in completing their courses. Many students indicated that they expected to experience time related problems and expressed their doubts about being able to combine a job, a study and a family. Furthermore learners in distant settings often lack the confidence that they have those learning skills that are necessary to succeed in an environment and a course setting they do not know.

To make it possible to answer the exploratory question, the information the students have given on their motivational needs, in terms of the ARCS model, will be discussed. In addition it will also be seen, by studying the final questionnaire, which component of the ARCS model the student has perceived as having been more prominent and more effective.

The initial questionnaire*:*

The design of the initial questionnaire was discussed in Section 4.5. The main objective of the questionnaire was to find out what the motivational needs of the students were. Their needs have been analyzed in terms of the four components of the ARCS model. It was recognized that the four dimensions of the ARCS model are more to be seen as a four-dimensional look at motivation and thus cannot be strictly separated; often indeed the categories go smoothly over from one dimension into the other. The questionnaire was designed in such a way that questions that would help to detect motivational gaps and needs, were embedded in the questionnaire. Care was taken not to mention possible motivational problems, in that way preventing problems and fears that may not have been present spontaneously in the students' minds from coming up. In fact the word "motivation" was never mentioned in communication with the students. The initial questionnaire also contained questions related to the daily work and personal circumstances of the students. This has been advantageous, as it brought the tutor and the institute in a better position to assist the learners. The initial questionnaire was sent to 43 students and returned by 36 students (response rate 84%).

The assessment of the students' motivational disposition*:*

The following questions, asked in the initial questionnaire, were important for the MMSS study. They are open-ended questions, allowing the learners to voice their concerns freely.

A)	Why are you taking this course?	(question 16)
B)	What difficulties do you expect studying this course?	(question 17)
C)	What can the College do for you to make studying easier?	(question 18)
D)	What sort of help from your tutor would be most useful?	(question 19)

The questions invited the learners to reflect not only on their possible motivational problems (Questions A and B), but also on possible solutions (Questions C and D). This is in line with the ARCS model in that motivation is not something that is done to the learner; the learner is helped to attain adequate levels of motivation. The answers pertaining to the area of motivation were analyzed in terms of the components of the ARCS model. It should be remembered that only motivational

problems the learners expected are included. It is seen that, for instance, the area of relevance is mentioned only twice in Question A; this is related to the fact that the learners mostly took the course to become better (distance) education professionals. Relevance is thus not likely to be a motivational problem. Confidence is an area where many problems can be expected, as was explained earlier in this section. Scoring was done by the researcher and by an outsider who had worked with the ARCS model of motivation. The colleague who did second scoring received the database with the results of the 36 questionnaires accompanied by a written request to denominate the answers in the questionnaire in terms of the ARCS model. An initial problem that came up was that in a number of cases students used the word 'motivation'. As students cannot be expected to answer a questionnaire in terms of the ARCS model, attempts were made to try to deduce from the context to which of the four components of the ARCS model the student referred when using the general term motivation. In a total of eight cases the researcher and the reviewer who did the second scoring, could not categorize 'motivation'. In consultation with the developer of the ARCS model it was decided to include a special category motivation. The eleven disagreements between the researcher and the reviewer were solved during a joint session. The results are shown in Table 6.7. All questionnaires can be found in the database.

Table 6.7 Analysis of the answers of the initial MMSS questionnaire in terms of the ARCS model

Course	Attention	Relevance	Confidence	Satisfaction	Motivation
Question A		2			
Question B	7	6	22	4	2
Question C	6		4		1
Question D			17		5

N = 36

Not all students who returned the questionnaire, responded to all questions. There were also students who made more than one suggestion, or gave more than one answer. In Question B in the area of confidence, the learners specifically mentioned "fear of failure, lack of confidence and lack of possibility to achieve", and also fear of not being able to manage compatible duties and interests such as

job responsibilities, study needs and family responsibilities. Answering Question C which asked how the College could help them, learners often mentioned “stay in touch” and “I need help” in the area of confidence and “provide extra information on the course”. It was difficult to decide whether these were needs related to the attention component of the ARCS model only, or were also related to the confidence area. Answers to Question D referred mostly to encouragement, sympathy and fear to drop-out, which resulted in remarks like “Just keep me in the course” or a straightforward “Give me strong motivation to do the TMAs”.

The final questionnaire*:*

The final questionnaire aimed at discovering whether the learners would testify, or mention, that their motivation had been positively influenced by the motivational communications during the course year and, if so, which areas had been important. A number of questions and statements were formulated, which were, just as in the initial questionnaire, part of a more extended questionnaire. For detailed information the database should be consulted. The following questions are relevant for the MMSS study. They are described in the context of the ARCS model in Table 6.8; they have been shortened for convenience.

Table 6.8 Overview of questions and their function in initial questionnaire in MMSS study 1997

Question number	**Summary of the question**	**Type of question**	**ARCS component**	**Reference in questionnaire**
I	Which note did you like best and why.	Choose from all messages received	depends on answer	question B
II	The pacing letter was helpful (encourages learner to take part of course responsibility in own hands through planning their TMAs and projects)	4-point scale	confidence	question C
III	The notes and letters encouraged to go on	4-point scale	confidence	question D

IV	The presentation of the notes was stimulating	4-point scale	attention	question E
V	During the year I was looking forward to the notes	4-point scale	attention	question F
VI	The notes contributed to my pleasure in the course	4-point scale	satisfaction	question I
VII	The notes made it easier to finish the courses	4-point scale	satisfaction	question J
VIII	The purpose of the notes has been to ...	open-ended question	depends on answer	question K

The four-point scale response options ranged from ‘completely agree’ (1) to ‘completely disagree’ (4). As outlined before and also applied in the pilot study, the motivational messages were called “notes”, this to avoid that the student would be led into mentioning motivation. The outcomes of the final questionnaire are discussed in the next section.

Outcomes of the final questionnaire:

The motivational letters and notes can be divided into two groups as to their content:

- The first group refers to cognitive needs and focuses on the course content and/or the examination (communications B, E and H). These are shaded in Table 6.9.
- The second group refers to affective needs such as praise, care, satisfaction, confidence and breaking the isolation (communications A, C, D, F and G).

Information about the despatch date, the code of the message, the content of the message and the ARCS component (s) involved, is found in Tables 4.3A and 4.3B. The main results of the questionnaire will be discussed in the next paragraph, while an overview of the answers is found in the database.

The appreciation of the communications*:*

The appreciation of the notes, as shown through remarks made on the final questionnaire, is shown in Table 6.9. The first column refers to the code of the message or letter, the second column refers to the ARCS component(s) targeted. The third column gives the remarks of the students, while the fourth column deals with the frequency of the observation and the ARCS component the student has identified. The analysis in terms of components of the ARCS model was done by the researcher and by an outsider who had used the ARCS model in his work. The categorizing of the answers was easier than in the initial questionnaire as the messages were more targetted. The only disagreement encountered related to notes B and G where 'motivation' was mentioned. It was decided to mention 'motivation' in note B as a separate notion and in note G to include it in confidence as both confidence and motivation were mentioned. Shaded notes focus on cognitive needs (course work, examinations).

Table 6.9 The students' appreciation of the MMSS according to the results of the final questionnaire

Code note	**ARCS component(s) targetted**	**Observation student**	**Collective or Personalized**	**ARCS component identified**
A	AC	tutor cared. gave strength to continue.	1x Collective 1x Personal. 1x Personal.	C C
B	AC	notes increased motivation.	1x Personal.	Motivation
C	CS	encouraged me to open a dialogue which I find difficult. helped me to get going.	1x Personal. 1x Personal.	C C
D	ACS	I felt part of a group. I was behind, it helped me.	1x Personal. 1x Collective	C C/A
E	AC	at that time I was frustrated (student had failed another course).	1 x Collective	C
F	ARCS	I was happy I finished.	1x Personal.	S

G	AC	was important for my confidence. built my confidence and strengthened my motivation. helped me to know my tutor. message was warm, encouraged and pointed out success.	1x Personal. 1x Collective 1x Collective 1x Collective	C C C CS
H	AC	brought me down to earth (student explained that note made him start)	1 x Collective	A

N = 25

As the number of answers per group is small, we will not focus on individual messages, but on groups of messages as discussed in the beginning of this paragraph. It is seen that the students preferred those messages which referred to affective motivational needs. This is not surprising: a student doing a course in isolation will most likely want to communicate on a more personal level. The structure of the course, using in-text questions, helps the learner to focus on the course, but the course does not show empathy or care. The students clearly identified the confidence treatment included in the messages. Table 6.10 looks at the effect of the motivational communications as found in the questionnaire.

Table 6.10 The effect of the motivational messages in the MMSS in 1997

Question number	**Description in summary**	**Agree completely**	**Agree partly**	**Disagree partly**	**Disagree completely**	**ARCS component**
II	Pacing letter was helpful	13	7	2	1	Confidence
III	Notes encouraged to go on.	14	8	2	1	Confidence
IV	Presentation was stimulating.	10	11	2	0	Attention

V	Looking forward to the notes.	7	11	4	1	Attention
VI	Notes contributed to pleasure in the course.	12	11	0	1	Satisfaction
VII	Notes made finishing course easier.	6	8	9	2	Satisfaction

N = 25

It is interesting to look at the answers to Question VII. Although most of the learners liked receiving the messages and concluded that they contributed to finishing the course successfully, the motivational communications have not made the course any easier. They have, however, made it easier to finish the course as was seen in the answers to Question VII. The notes have increased the pleasure in the course and have, according to the answers to Question III, encouraged to go on with the course. This is in line with the design of the messages. They were not meant to help on an academic level but, as was said before, mostly looked at the affective motivational needs of the learners.

The last question to be answered was Question VIII, asking what the students thought the purpose of the notes had been. The answers were diverse and can be found in the database. For convenience they have been grouped in terms of the ARCS model in Table 6.11. As has been mentioned before, students cannot be expected to think in ARCS components. Quite a few learners mentioned motivation as the goal of the messages. In the Table a fifth column is thus added for motivation. Students often gave more than one answer.

Table 6.11 The purpose of the MMSS in categories of the ARCS model according to students

Attention	Relevance	Confidence	Satisfaction	Motivation
6	2	12	2	11

N = 25

Students frequently made observations on their questionnaires such as “The notes encouraged me to have a high degree of motivation to continue” or: “The notes have built my confidence and motivation”, while another student wrote: “There were times that I felt I couldn’t go on...but these notes encouraged me to go on”. One of the tutors received a virtual greeting card at the end of the course which said “Thanks from the bottom of my heart for all the encouragement, support and motivation you have given me”.

The confidence component*:*

As can be seen, the questions in the final questionnaire have been designed around three components of the ARCS model: Attention, Confidence and Satisfaction. Looking at Table 6.10 which shows the effect of the messages, it is seen that in the area of confidence the scores in “agree completely” are higher than in the other areas; the same is the case in Table 6.11 when the students expressed that they thought the purpose of the messages was to give them confidence and motivation. As was explained, the answers contained in the category motivation, had too few cues or links to confidently transfer them to one of the ARCS components. It is likely that a number of these would, if more information had been available, belong to the confidence category. Coming back to the exploratory question which asked whether the confidence component has a greater effect on the students’ motivation than the other components of the ARCS model, this seems to be the case. Analyzing the questionnaires and the unsollicited remarks of the students there are strong indications that motivational messages have the greatest effect in the area of confidence.

6.4 The Second Research Question

The second research question has an exploratory character and resulted from the pilot study. It reads as follows:

> *What is the difference, if any, in effectiveness and cost-efficiency between the personalized and the collective process of enhancing motivation through motivational messages?*

To answer the second research question, Course B has been divided into two groups: B1, with 13 students who received collective motivational messages, and Course B2 with 14 students who received personalized motivational messages. The students had randomly been assigned to either Course B1 or Course B2. In the case of Course B2, the tutor who used personalized motivational messages, was expected to monitor the students' motivation in order to respond to changes in the motivational requirements of the learner. It required the tutor to have some basic knowledge of how to analyse the motivational needs of the learners and how to create and select motivational interventions, which meant that there would be close monitoring of the student. The personalized messages were pre-prepared, but were sent out with a personal note added by the tutor if this was thought necessary. In addition, individual messages were made on occasion. Collective messages, which were used in both Course B1 and Course C were also prepared beforehand, but did not get any personal touch. The tutor had only to send the messages out according to an established time-table as discussed in Section 4.5. In order to foster the idea of a personal touch, the tutor signed the messages. It still meant, however, that every student received the same message around the same time.

In addition to the first two propositions and the exploratory question, which referred to the first research question, two more propositions, referring to the second research question, have been formulated.

The third proposition

Proposition 3 looks at how learners perceive the motivational messages. It raises questions such as whether the learners feel personally approached when they

receive a collective message, or whether they feel that this is part of an "industrialized" process. They might see the collective messages as a standard procedure that has to be implemented.

> *Those learners who receive the collective motivational messages, will have less frequent contact with their tutor. This will influence the completion rates, which will be lower than those of the students who received the personalized motivational messages.*

In dealing with this proposition, it is seen that the research has been slightly hampered by the fact that the tutor of Course D had not administered the motivational messages. The initial set-up of the multiple case study was such that the personalized motivational messages would be used in two groups (Courses D and B2) and the collective messages in another two groups (Courses C and B1).

Many students, as was seen in Table 6.9 gave positive comments on the motivational messages. In the same table it was seen that students who received the personalized messages reacted more often than students who received the collective messages. Three students who received collective messages commented on the "industrialized" character of the collective messages in slightly negative terms.

A Namibian student: "I have met my tutor personally; I think it makes a big difference. It is better than fax, e-mail or little notes. I don't think adults need a lot of notes".

A Kenyan student: "The truth is I don't remember the notes, although they are all in my file".

A British student: "Whilst I appreciated the notes, they were not based on individual need".

The first student (Student X) discussed in the in-depth cases in Section 6.3 received personalized messages in the pilot study in 1996 and collective messages in the multiple-case study in 1997; she did not refer to experiencing the messages as different.

The messages themselves, whether collective or personalized, have certainly led to a more frequent contact between tutor and student. This increased contact

already gave a personalizing touch to the tutoring. If the frequency of contact between the student and tutor of Course A in 1997 is looked at, it is seen that there has been no contact between the tutor and her students (Annex 6.11). In a telephone interview the tutor spontaneously mentioned this as a disadvantage not only for the learners, but also for the tutor herself.

Table 6.12 deals with the frequencies of contact between tutor and student and student and tutor. In this table the average number of exchanges is given for active participants who were enrolled in the Courses B1, B2 and C. Thus those eight students who never reacted during the courses are not included in the averages. In addition the maximum number of exchanges is also given. It is seen that there have been, on average, more exchanges between student and tutor and tutor and students in Course B2 (personalized messages).

*Table 6.12 Overview of communications between tutor and **active** students and vice versa in MMSS; shading indicates personalized messages*

Course code	**Average # exchanges tutor/ students**	**Maximum # exchanges tutor/ students**	**Average # exchanges students/tutor**	**Maximum # exchanges students/tutor**
B1	2.8	6	2.6	9
B2	3.9	7	3.3	7
C	2.3	4	2.5	4

N = 37

The data in Table 6.12 refer solely to contacts either the student, or the tutor, initiated and the follow-up on these contacts. Motivational communications are not included. It can be concluded that in 1997 the students who received collective motivational messages had less contact with their tutor than the students who received personalized motivational messages.

The second part of Proposition 3 asserts that the completion rates of the students who received the collective messages are lower than those of the students who received the collective messages. Table 6.13 gives the completion rates for the students of Courses C and B1 combined (collective messages) and Course B2 (personalized messages).

Table 6.13 MMSS completion rates of students receiving personalized or collective messages in 1997

1997	Total # students	Completed	1st enrolment	Completed	Repeaters	Completed
Pers.	14	11	7	7	7	4
Coll.	31	18	18	13	13	5

Looking at the above data it is seen that the percentage of completers is highest for Course B2. It also shows that the percentage of repeaters who completed their courses, is highest in Course B2. It is seen in Table 6.13 that of the 31 students who received collective motivational messages in 1997, 18 students completed the course, which comes to 58%. If only the first time enrolled students are considered then it is seen that in 1997 of the 18 students who received collective motivational message 13 finished the course, which comes to 72%. All seven newly (1997) enrolled students in Course B2 (personalized messages) finished their course. There is thus a basis to suppose that the findings of Table 6.13 agree with Proposition 4. Further research is recommended. The number of students involved in the courses has been low; there is however an indication that the students who have received the personalized messages have had an advantage.

The fourth proposition

> *There will be a difference in staff time-related costs between the personalized and the collective motivational messages; the personalized method requiring approximately one fifth more tutor time than the collective method.*

As was discussed in Section 2.8, cost-efficiency is often the driving force behind distance education. An important cost factor is the cost of tutoring. This proposition looks at staff time-related costs that might be reduced by using a collective method of tutoring.

In Courses B1 and C, a total of eight motivational communications were sent out: two in the form of letters and six in the form of motivational messages as described in Section 1.3. In Course B2 a minimum of eight personalized

motivational messages was distributed, while a number of students received additional personalized messages. Examples of the personalized messages are found in Annex 6.10.

The tutors of Courses B and C had been using logbooks to register information about the tutoring process (Section 4.5). The difference between marking and tutoring has been discussed in Section 2.6, but is summarized in that marking is evaluating the students' work and giving hints for improvement, while tutoring refers to guiding the students through the course by supporting and motivating the students through, among others, indicating how the students can work best in order to be successful. The tutoring time and the marking time was extracted from the logbooks.

The time spent analyzing the initial questionnaires, designing the messages, preparing them and sending them out, had also been recorded and came to 63 minutes per student for the collective messages and 78 minutes for the personalized messages. With this information, it is now possible to give an overview of the average tutoring and marking time per course. Table 6.14 contains information on the number of exchanges between the tutor and the student and *vice versa* and on the tutoring time. The basic tutoring time in Table 6.14 comes from the information on the logbook sheets, while Column 6, which gives the "messages additional time" refers to the overall time spent on designing, developing and despatching the messages (respectively 63 minutes and 78 minutes).

Table 6.14 Overview of number of communications and tutoring time in the MMSS study; shading indicates personalized messages

Course code	**# of students**	**Average # exchanges tutor-student**	**Average # exchanges student-tutor**	**Basic tutoring time per student**	**Messages additional time**	**Tutoring time per active student**
A	18	0	0	-	-	-
B1	10	2.8	2.6	62 min	63 min	125 min
B2	14	3.9	3.3	106 min	78 min	184 min
C	14	2.3	2.5	101 min	63 min	164 min

It should be noted that seven students who either indicated that they wanted to postpone the course, or who dropped out at the beginning of the course, have not been included in Table 6.14. Although they were formally enrolled, they were not actively participating and there was thus no tutoring time involved.

Not all students passed the courses or even sent in the minimum of two assignments. All students included in Table 6.14 were, however, actively involved in the course. Some students sent in more than the minimum of two assignments. The tutor of Course C was new to the courses. This may have influenced the basic tutoring time for this course, which was more than the basic tutoring time of Courses B1 and B2.

According to the Director of Courses of the College, there is a total of eight hours (480 minutes) budgetted for tutoring and marking per student per course. The average marking time as given in the logbooks was the following

Course A	marking according to tutor contract	322 min. per student
Course B	marking (no tutoring time involved)	292 min. per student
Course C	marking (no tutoring time involved)	387 min. per student

It should be noted that in the case of Course A, where, according to the tutor only marking time has been spent on the students, some staff time of the College will have been involved in answering the occasional student question.

The tutoring time and the marking time for those students, who enrolled for the first time in Courses B1, B2 and C, is given in Table 6.15.

Table 6.15 Completion rates, tutoring and marking time of first time enrolled MMSS students (active students only); shading refers to personalized motivational messages

Course code	**# of students**	**Completers**	**Tutor time per student**	**Marking time per student**	**Hours spent per student**
B1	4	3	125 min	292 min	417 min: < **7 hours**
B2	10	7	184 min	292 min	476 min: **< 8 hours**
C	10	9	164 min	387 min	551 min: **> 9 hours**

In Table 6.14, the tutoring time for first time enrollment was given, as it was not clear how much time had been spent on repeaters the year before. It is thus seen that, with the exception of Course C, the tutoring and marking time stay within the eight hours allocated to each student. This means that extending the existing support system with motivational messages would not exceed the eight hours student support that have been budgetted.

Examining Proposition 3 it is seen in Table 6.15 that the average time spent on those courses that used the collective motivational messages, Course B1 and Course C, has been respectively 125 min. per student for Course B1 and 164 min. per student for Course C, while the tutoring time in Course B2, which used personalized messages, has been 184 minutes. The personalized messages took thus 59 minutes more per student, if compared with the collective messages of Course B1 and 20 minutes more if compared with the collective messages of Course C. The estimated time in Proposition 4, in which was stated that the personalized motivational messages required 20% more tutoring time, is considered to be on the low side.

6.5 Summary and Conclusions

In this chapter the two research questions have been answered through four propositions and one exploratory question. The first research question focussed on the design of the messages (validity and practicality) and on the effectiveness of the messages.

> *To what extent are motivational messages, based on Keller's ARCS model of motivational analysis, effective in distance education courses?*

Through the use of two propositions the first research question was answered. It was seen that the MMSS has been effective in the distance education courses. A greater percentage of students than before finished their courses and mentioned that they had studied the courses with more pleasure than before. The communication between the tutor and three students of the MMSS audience was looked at in more depth and insight was gained on how the communication process evolved. As to whether the effectiveness of the motivational messages was the same for first time enrolled students and for repeaters it was difficult to obtain an answer. The indication was that the effectiveness of the two types of

messages is not much different. For both repeaters and first time enrollees, the MMSS fulfilled an important function. In concrete results the difference between the success rate of first time enrolled students and repeaters was too small to be significant. Through asking an exploratory question more light was shed on one of the components of the ARCS model: confidence. In the study it was seen that, based on available literature, the pilot study and an audience analysis carried out at the beginning of the MMSS main study, lack of confidence is an important problem for students. The data obtained when dealing with the exploratory question confirmed this and it was seen that the learners had recognized that the MMSS had been concerned about possible lack of confidence of the students.

The second research question focussed on the use of different modes of messages and on implications of the use of messages as to effectiveness and cost-efficiency:

> *What is the difference, if any, in effectiveness and cost-efficiency between the personalized and the collective process of enhancing motivation through motivational messages?*

Of the two types of messages that were used, the personalized message was more labour intensive than the collective message. This was, however, not the most important problem. Preparing personalized motivational messages asks much more of a tutor, who has to design the messages (at least 8 for a course year), needs the equipment to produce them and has to send them off. In the Methods chapter (Chapter 4) it had been planned that the tutor of Course D and the researcher would work along the lines of the MMSS designing, preparing and using personalized messages. At the end of the research it turned out that the tutor of Course D, for a variety of reasons, had not implemented the research. As a consequence the personalized messages have been used only with one group of students (Course B2).

Although the outcomes of the MMSS study indicated that the personalized messages may be more effective, it was seen that the collective messages are more cost-efficient and that using them is more tutor-friendly and thus easier to implement in an already existing support system. The tutor of Course C, who received the prepared messages at the beginning of the course, implemented the MMSS without fail. It is likely that most tutors will be prepared to send out

messages if they are prepared in advance. It was also seen that designing the messages requires a tutor with experience in instructional and motivational design.

In this chapter the case has thus been made that the MMSS study has shown that the MMSS has been effective, cost efficient and affordable. The next chapter will look at the findings in more detail and, after discussing them, the study will be concluded by formulating recommendations.

Chapter 7
Summary, Conclusions and Recommendations

7.1 Introduction

This last chapter provides an overview of the Motivational Messages Support System (MMSS), and the research methodology used. It also discusses the findings, makes recommendations for implementation and indicates areas for further research. The basic question to be answered in this chapter is: Can what has been learned in this study be used by others and what is the meaning of the study for distance education students, for the College where the research took place and for the distance education community in general?

The MMSS was set up to contribute to solving the problem of, often high, drop-out rates in distance education. Many distance education students do not finish their courses; an important reason is that the learners gradually, and sometimes quite rapidly, lose their motivation. This study was primarily the result of a reflection on what could be done to keep students motivated to finish their courses. Contrary to conventional teaching/learning situations in which motivational problems can be detected by a teacher or trainer, the motivational problems of distance students often go largely undetected and there is thus no outside help for the students to increase their motivation. It is recognized that being motivated is an autonomous disposition, something that is done by the interested person him-or herself. This means that an “outsider” can only intervene in motivational processes as far as the other person will let it happen (J. Visser, 1990). This is, however, no reason to leave distance education learners on their own. The MMSS study was set up to find out whether extending existing student support in distance education with simple, practical and affordable support in the form of motivational communications would positively influence student completion rates. It built on research on motivation in conventional education (J.Visser, 1990). It was thought, based on the researcher’s experience as a distance learner and on research

regarding student support in terms of increased completion rates (Rowntree, 1992; Lewis, 1995), that increasing communication between the learner and the tutor and *vice versa* in a motivational way, could help the learners to stay motivated. Although the traditional isolation of distance education students may become less of a problem with the increasing possibilities for electronic communication to facilitate communication, it is seen that, especially in developing countries, e-mail and fax are currently out of the reach of many students.

The MMSS study seeks to answer the following two questions:

1. To what extent are motivational messages, based on Keller's ARCS model of motivational analysis, effective in distance education courses?

2. What is the difference, if any, in effectiveness and cost-efficiency between the personalized and the collective process of enhancing motivation through motivational messages?

7.2 The Motivational Messages Support System

The introduction of this chapter shows that student support is important in helping students to finish a course. Student support is often restricted to evaluating work students have sent in, to answering questions students may have, and to giving hints on how to improve. In many distance education institutes the tutor is someone who is contracted to do the marking of and feedback on assignments students sent in. It often happens that a student has no direct contact with the tutor during the course.

Communication of the students takes then takes place in the following way:

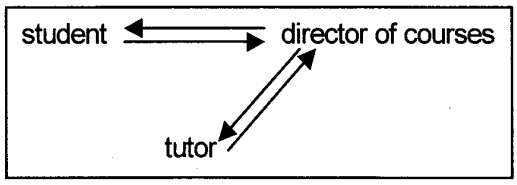


Figure 7.1 Traditional communication pattern between students and tutor at the College

In the MMSS study a more direct communication pattern was used:

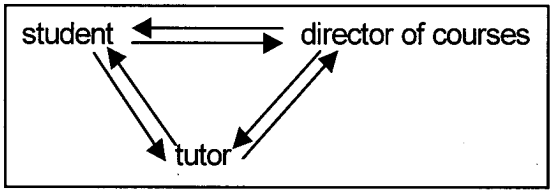


Figure 7.2 MMSS communication between students and tutor at the College during research

The MMSS study concentrates on the links student-tutor and tutor-student. It is in this area that motivational communication and motivational "treatment" took place. Through monitoring the motivational disposition of the learner, the tutor plays an active role in helping the learner to be or to become motivated. During the study, which coincided with the course year, motivational communications were sent by the tutor to the learners at regular intervals. Two different types of messages were sent out: collective motivational messages and personalized motivational messages. The collective motivational messages are based on motivational needs of the students as they become known from an audience analysis at the beginning of the course year and on earlier research done in the pilot study. Personalized motivational messages are based on the motivational needs as shown in the audience analysis, the pilot study and on detected motivational needs during the course year.

The MMSS is a subsystem of the distance education system of the College. As a subsystem it is "embedded" in the educational institution (Banathy, 1996), but is also influenced by other factors: the internal, psychological factors of the students and external environmental factors such as the tutors and the institute (Keller, 1998). It is a support system that looks at motivation in a systematic way. As a system it consists of people, such as tutors and students, and of an environment which offers tactics and strategies to help the learner to be motivated (motivational communications for instance). Motivation theories and motivational strategies, are discussed in detail in Chapter 3.

7.3 The Foundations of the MMSS and its Environment

The MMSS study focussed on extending existing student support with a structural motivational communication component. Distance education in general and the background in which the MMSS study took place are described in Chapters 1 and 2. The foundations of the MMSS can be found both in the literature on motivation as discussed in Chapter 3 (for instance, Keller, 1987; Weiner, 1996) and in the literature on development research as discussed in Chapter 4 (for instance, Van den Akker & Plomp, 1993; Richey & Nelson, 1996).

The use of motivational messages as a strategy to cope with motivational restraints acknowledges that the circumstances of distance learners are different from those of conventional students. Traditional distance education, as used by the College, does not only lack verbal contact, but also the possibility to use non-verbal cues, such as a wink, a puzzled expression or an encouraging smile. In fact, the communication process in the distance education courses of the College is limited to written communication. The MMSS had to operate within these limits. In its most basic form the MMSS consists of a number of messages prepared in advance, in the form of letters or messages (greeting card type) containing motivational communications, which are sent out to the students at regular times, based on the learners' perceived motivational needs. The structure of the motivational content of the messages is based on the ARCS model of motivation (Keller, 1983,1987c), discussed in Section 3.3.

In summary, the following six aspects characterize the MMSS:

1. The MMSS is based on the assumption that the motivation of students can be influenced.
2. The MMSS uses motivational communications as the main tool to help the learners to attain and maintain adequate levels of motivation.
3. The MMSS is based on perceived motivational needs of the students. An audience analysis is done to discover the specific motivational needs of the learners. Ongoing contact with the students provides further cues to adjust the motivational communication process.

4. The MMSS is an integrated and systematically performed set of activities, incorporating the tutors and all students of the course in which the MMSS is used.
5. The MMSS forms part of a student support package and requires an institutionalized framework for its implementation.
6. The MMSS needs the backing of the institute or college where it is used.

7.4 The Research Methodology Used in the MMSS Study

A development research approach has been chosen, as discussed in Section 4.2. In terms of Richey and Nelson (1996), the MMSS study was a Type 1 study. A succession of prototypes, such as different types of motivational communications, was developed and evaluated. The process of successive development, evaluation and improvement of prototypes led to a final product, which was used in the main research. Every effort was made to ensure that the MMSS would be *valid* (based on state-of-the-art knowledge and internally consistent), *practical* (meet the need and wishes of the target population) and *effective* (show improved completion rates).

Questions related to validity and reliability of the research

Underlying the various concerns that led the researcher to develop and apply the MMSS, is the recognition that social processes and learning should not be separated. The identification by many distance education providers and their clientele (the students), of the problems caused by the *isolation* so many students face, underlines the importance of the social dimension of learning. A recent publication of Shahanan (1998), pays attention to this problem when discussing the effectiveness and the limitations of tutoring in reading, and identifies tutoring as “an example of active social mediation of individual learning” (p.217). Social research, therefore, “if it is to provide a greater understanding of learning, ...will need to consider the connections between cognitive processes and social relations” (p.216).

In line with the above considerations, the MMSS research aimed at developing an understanding of the social processes involved in the learning effort in which distance learners engage. The research is thus part of a growing tradition that recognizes learning as a social process that must be examined in a social-cultural setting. It looks at interacting individuals in a context of activities, situations, meanings, etcetera (Newman, Griffin & Cole, 1989).

It was argued that it is important to get insight into the applied processes of motivational strategies. It is believed that there is an enormous variance in the possibilities that learning, and learning through student support, offer in a real-life context. The MMSS aims at validating a particular strategy of motivational student support in a real-life context. Getting insight into whether the strategy works, and if so, how, has been an important concern. The cases of students functioning in the MMSS in Section 6.3 are typical examples of offering rich descriptions of how humans behave.

For the main research a multiple-case study approach was chosen. This contributed to understanding and strengthened the validity of the study. Within the case study, an embedded multiple-case perspective was considered to be most suited for the context and the aims of the research. Chapter 4 presents reasons for these choices. The separate studies in each of the cases, that are part of the main research, offered the possibility to assess replicability, since they served as multiple experiments. It should be noted in this connection that the use of the motivational strategy in different circumstances must be based more on qualitative generalizations (Stake, 1988), than on the type of replication that is assumed under the experimental research design paradigm.

Concerns about validity and reliability were discussed in Section 4.5. One of the possible threats to validity of the study was the involvement of the researcher as tutor/motivational facilitator and at the same time as researcher. This has the obvious advantage of unobtrusiveness, but also involves the risk of researcher bias. As explained in Section 4.5 various measures were taken to reduce or eliminate such bias. The establishment of a well-organized database, that can be consulted by the research community, is one of these measures. The involvement

of two other tutors, in addition to the tutor/researcher herself, has been equally important in addressing this threat to validity and reliability. Care was taken to ensure that the other tutors carried out the work independently, following the tutor guide. Tutors were informed that, should the research show that the motivational messages did not work, this would be equally important as if it was found that they did work. The use of multiple sources of evidence, as well as anonymous procedures to collect data, has furthermore strengthened the validity of the study. Using both quantitative data and qualitative data in collecting information has been another way to strengthen the basis of the study.

The degree of precision in documenting the study also contributes to reliability. Although a naturalistic replication has not been the aim, the two studies and their cases analyzed in the embedded multiple case-study perspective, contained similar instances in the application of the motivational strategy. It was also recognized that they were different in some aspects, but together they provided a broader base for generalizing than each case on itself would have done.

Limitations of the study

At least two limitations of this study can be identified. These have been analyzed in detail in Section 4.7. The first one relates to the level of detail attained in applying procedures of formative evaluation and improvement of motivational message design. During the piloting stage, the motivational messages were sent to students of one of the Foundation Courses of the College. The 19 course participants came from 13 different countries and five continents. Due to the distances involved, it was thus difficult to apply highly structured and rigorous processes of formative evaluation. By the time a motivational message had reached a student, the next one had to be sent out and it was thus impossible to wait for the reaction of the students to one message before the next one was prepared. As discussed in Chapter 5, students did react to the messages in general and these reactions were taken into account in the overall process of message design. The comments of some of the staff of the College and of colleagues working in the field of distance education have been equally useful in the development of the messages.

The second limitation of the study relates to the double role of the researcher who was, at the same time, message designer and tutor. This limitation was analysed above from the perspective of researcher bias. A second element lies in the perception of the students who were not aware of the research setting of which they were a part. Whenever they reacted to the motivational communication, they addressed their tutor rather than a researcher. There was thus a risk that their reactions reflected a possible wish to please the tutor. To control this threat, a final questionnaire was sent out to evaluate the motivational messages and their use. The questionnaire and a cover letter signed by the Executive Director of the College were despatched by the College, and not by the tutor/researcher. Completed questionnaires were sent to the College and from there to the tutor. The responses obtained on the final questionnaire agreed with earlier responses.

7.5 Design and Development of the MMSS

As discussed in the Methodology chapter (Chapter 4), the research consisted of two stages: the pilot study and the main research. The aims of the pilot study were:

1. To explore whether motivational messages could be developed that were effective in distance education and

2. To develop a final quality motivational message that was valid and practical.

The MMSS pilot study

The pilot study was discussed in Chapter 5. The conclusions and recommendations of the pilot study were discussed in Section 5.7. In summary it can be said that the conceptualization and development of the MMSS evolved during the pilot study. The consideration that the MMSS had to be practical so that tutors, who generally have limited time for tutoring, could use the system and would like to use it, stimulated reflection on practicality. The prototyping resulted in a final version of a motivational message largely based on the result of feedback

received from learners of the distance education courses involved in the research during this stage and on feedback received from colleagues. As regards the effectiveness of the MMSS pilot stage, the completion rates indicated that the MMSS had been effective: in comparison to the completion rates of the year before, a higher percentage of students completed the course. Students reported that the motivational messages had contributed to helping them to stay in the course, to increasing their confidence and to enhancing their feelings of belonging to a group all striving to complete the course successfully. It was also concluded that more research was needed to determine whether a simplified system of motivational support could be used, such as preparing the messages during the first month of the course and personalizing them afterwards as necessary. Such research should determine whether this would be more cost-efficient while similarly, or perhaps more, effective. Based on the outcomes of the prototyping stage of the MMSS it was asserted that:

- The design of the motivational messages was such that they favourably influenced the completion rates of students.
- The students appreciated the messages.
- Those messages that addressed confidence needs were preferred.
- Different types of messages should be used and more courses should be involved in the research.

The findings of the assessment stage indicated that further insights were necessary. The pilot study was considered to have been limited, not only in numbers of students involved, but also in that it was carried out in its entirety by the researcher, who was also the tutor of the course.

The MMSS main study

For the main research, a multiple-case study was set up, involving over seventy students (65% of the total student population of the College), two additional tutors, as well as the researcher in her double role as researcher and tutor, and three courses. In the largest course (Course B), the students had been assigned to either Course B1 or Course B2 for research purposes. Tutors were individually briefed during face-to-face sessions. An audience analysis to determine what the

motivational needs of the students were, preceded the design of motivational messages. The outcomes of the audience analysis confirmed earlier findings that the greatest motivational need was in the area of confidence. The research used two different types of motivational messages: personalized messages, based on close monitoring of the motivational needs of the students during the course, and collective messages based on initial motivational needs. It was likely that the preparation of the first type of message would take more time, as the messages had to be personalized or had to be especially designed. Data were thus collected to find out whether the collective messages were as effective as the personalized messages and if they were more cost-efficient. The main study lasted the eight months each course took to be completed by the students. The outcomes of the main study were presented in Section 6.5.

Summary of the findings of the MMSS main study

Based on the outcomes of the main study it was concluded that:

- The major findings of the pilot study were confirmed.
- The use of motivational communications has been effective in the distance education courses studied.
- The students appreciated the messages.
- The messages increased the confidence of the students
- There is no significant difference between the use of the collective messages and the personalized messages as regards effectiveness.
- The use of prepared messages, for the collective system, made it easier for tutors to use the MMSS and increased the chance of successful implementation. They were also more cost-efficient.
- Designing, developing and preparing all the messages used in the personalized system, is likely to be too much work for the tutor and causes practical problems. Leaving it to the tutors to take care of the personalized messages reduces the chance of successful implementation.

These findings will be discussed in the next Section.

7.6 Discussion of the Findings of the MMSS Research

The motivational communications in the form of letters and messages were used to solve a problem namely the drop-out of students in a distance learning context. Just looking at the number of students who completed the courses there is ample evidence indicating that the strategy used in this study worked well. The completion rates of students in the courses that used the MMSS almost doubled in comparison with the two preceding years. The motivational messages strategy was clearly effective in the setting chosen for the research described in this study. The use of the ARCS model, discussed in Sections 3.4 and 3.5, made it possible to deal with the motivational needs of the learners in a coherent and systematic way. As referred to in Section 3.7, and in Section 6.3 which deals with the exploratory question, the confidence dimension stood out among the four aspects of motivation identified in the ARCS model. The increased confidence of the students also contributed to an increase of the pleasure of doing the course.

The first research question asked to what extent motivational messages are effective in distance education courses. In Chapter 6 the quantitative data are given which show that a higher percentage than before finished the course successfully. In the same chapter it is also seen that students found doing the course more pleasurable. These are important findings. Students who fail a distance education course might repeat the course, but are not likely to turn to distance education again when they embark on another course. Successful and satisfied students are likely to engage in distance learning again whenever the need or the will to do a course is there. The students of the College are all working in education and many in distance education. If they are, themselves, successful distance education learners, it is likely that they will be more motivated for their work in distance education. Another important facet of offering quality courses and quality tutoring is that those students working in distance education will learn from the way they have been assisted in their courses.

The tutors who had decided to participate in the research, were, as was discussed in the preceding section, left on their own to implement the MMSS. In one of the courses the tutor did not, for various reasons, implement the MMSS and

communicated this only after the course was over. Although this lack of participation was not a pleasant surprise, it indicated that a framework for implementation is required and that ways must be found to make implementation of the extended support system, the MMSS, as tutor friendly as possible. The next sections will discuss the implications of the MMSS for the students, the tutors and the College.

Implications of the MMSS for distance education students

Students in distance education settings, especially those involved in the courses of the College, study in isolation. Initially students had little detailed and concrete information on what the course would bring them. They had received course books and a study guide and were supposed to act by studying and by sending in their Tutor Marked Assignments. The first thing the MMSS tutors did, was get in touch with the learners, telling them that the tutor was there to help them. This approach was a pleasant surprise for those students who had already done other courses with the College, or who had gone through other distance education experiences. It is uncommon in most distance education environments, including the College, for students to receive letters inviting them to get and stay in touch with their tutors. The initial effect on the students was that they embarked on communication processes with their tutors, discussed course content problems, but also asked advice. Analyzing the communication as it is contained in the database, it is seen that the messages have been successful in increasing the self-confidence of many students. Detailed examples of the communication processes, as they developed, are given for three separate cases discussed in Section 6.3.

The importance of communication in distance education is confirmed by many studies (for instance Wellens, 1986; Zvacek, 1991; Rowntree, 1994). What the messages did was initiate the communication in a structured way, while addressing the students' motivational needs. This approach goes further than the "traditional" communication as, for instance, used by the Open University in the UK. It is not just communication to draw the students' attention to making assignments, or send in examination registration forms: it is communication that

touches upon the student's sense of belonging to a course. It expresses understanding the student's difficulties and emphasizes the student's being part of a group of people working together with someone (the tutor) who shows confidence and interest in them. A Swiss student who had been studying six years via distance education for, among others, a BA, commenting on the personal approach in the messages, stated: "Last year I did receive the 'mandatory' two letters from my tutor - exempt of warmth and genuineness". Furthermore it is not a one-way communication process. The average number of exchanges, from student to tutor and from tutor to student documented in the research was about the same, namely three each way (excluding the motivational messages). In addition, the communication is text-based, but includes graphics as well. The great majority of the students found this combination of graphics and text mutually reinforcing and referred to the style of presentation as stimulating.

In the first place the messages addressed motivational needs in the area of confidence. In that respect they have been successful, as was seen in Section 6.3 (particularly Tables 6.7, 6.8 and 6.9). Students themselves identified the confidence dimension as the most important one, using words like 'encouragement' and 'confidence' when giving their appreciation for the notes. The various dimensions of the ARCS model are, as was argued in Chapter 3, interrelated. Thus, while focussing on ways to help students to be appropriately motivated in terms of confidence, one is likely to also influence their motivation in terms of the other components of the ARCS model.

In discussing motivation and motivational processes, J. Visser (1990) argues that, for a motivational intervention to be effective, two conditions must be fulfilled. Firstly, the motivational facilitator must acquire and maintain the trust of the motivational subject and, secondly, the motivational interaction must be of a nature that allows the motivational subject to perceive that s/he remains in full control of the situation. In employing the MMSS strategy much attention was paid to building up a trust relationship between the tutor and the student and to increasing the student's confidence. The individual cases, presented in Chapter 6, show this process worked. As to the second condition identified by J. Visser, namely that the learner must feel in full control of the situation, the outcomes of the final

questionnaire (Table 6.6) show most students are not at all convinced that the notes have made it easier (in terms of shared responsibility and understanding the academic content) for them to do the course. The notes have encouraged the learners and contributed to their pleasure in the course, but only six out of twenty-five students completely agree that the notes have made it easier, while eight students partly agree and nine partly disagree and two completely disagree. The learners seem to be well aware that they, themselves, still had to do the work.

Evidence has been presented in Chapters 5 and 6 that the motivational messages did not only positively influence the learners' learning in a restricted sense, but also that the learners became more communicative at a meta-cognitive level and discussed problems related to study strategies and how to handle their course work and examinations. It has been mentioned before that the number of communications initiated by the learner in the courses involved in the research, was approximately three. In the control Course A, where no MMSS took place, no communication whatsoever took place between the tutor and the students or *vice versa*. The students who wanted to contact the tutor about their course work or other matters did so through the assistance of the staff of the College.

Based on the outcomes of the main study, it was concluded that:

- The motivational strategies improved the motivational disposition of the learners to finish the courses successfully. The messages had a particular impact on the level of self-confidence of the learners.
- The percentage of learners who finished the courses successfully, increased; both for students enrolled for the first time and for repeaters.
- No notable difference was found between the personalized messages and the collective messages.
- The use of collective messages was found to be more cost-efficient.
- Use of the MMSS strategies resulted in an enrichment of the student support system, particularly as it raised the general level of active participation of the students and increased their active involvement in the two-way communication process between students and tutor.

- It is possible to implement the MMSS without surpassing the eight hours tutoring time per student per course (budgetted according to the Director of Courses).

The case has thus been made that the MMSS has been effective, cost-efficient and affordable. The study focussed on student support in three distance education courses. While above the implications of the use of the MMSS were analysed in terms of student behaviour, the following sections will focus on the implications in the institutional context, including the tutorial staff.

Implications of the MMSS for tutors

Although designing and using the motivational messages is something that is interesting and rewarding, it should be seen as part of a motivational process and cannot be looked upon in isolation. In the preceding paragraphs it was argued that the motivational facilitator should acquire and maintain the trust of the learners. A tutor who merely sends out (as part of a mandatory procedure) motivational messages, but forgets about the importance of a motivational approach in responding to queries and concern of students is not adhering to the motivational system. A tutor who sends out motivational messages, but is not sensitive to issues such as gender, culture and religion in communicating with the students, is not servicing the motivational system.

Implementing the MMSS means that new roles will have to be taken on by the tutors. They will no longer just be ‘markers’ who give feedback on assignments and write hints in the margin on how a student could improve his or her performance. The tutor must become much more personally involved. As a consequence, the tutor can and should also be held accountable for what happens in a course in terms of tutor-student interaction. A more personal involvement of the tutor will undoubtedly result in an increased workload for the tutor. This does not have to be a problem. In a structured interview involving three tutors of the College, all of them declared that they preferred to be more personally involved with the students and do more than “marking” only.

Contracting tutors will then be done keeping in mind that tutors should be well qualified and experienced in the understanding of distance learners and distance learning, and that they should be able to monitor work sent in for cognitive achievement for affective responses as well (Moore, 1989). Implementing the motivational communication might also require a change in attitude of the tutors. They can no longer just mark papers, they must show - and thus feel - empathy, work with the students and understand the importance of and be open to motivational communication. Their role will match that of a good teacher in conventional education, rather than that of traditional distant tutor in distance education. Tutors should help distance learners to make sure they are heard, recognizing that they are part of a diverse body of people whose interests need to be voiced and whose stories need to be told (Evans, 1994).

Among the implications for the institute of incorporating an extended motivational support system will likely be an increase in tutor costs. This aspect will be discussed in the following two paragraphs that deal with the implications for the distance education provider.

Implications of the MMSS for the College

Throughout this study the impression may have been given, that the student support services the College offers is less than what the average lead college of the British University offers. This is not the case. The British University has over 20.000 students working towards diplomas and external degrees. Attempts from the researcher to obtain concrete information on how the British University saw student support, failed. The College, being small, is concerned about the low completion rates in distance education. It encouraged the present research in the field of student support, offering facilities for it to be carried out.

The College is not in an easy position to increase student support. With just over a hundred students and offering nine different courses, it has to do everything possible to avoid increasing costs too much. The research has, however, indicated that the motivational support given through the MMSS can be accommodated within the eight hours available for student support. The eight hours that have

been budgetted for student support, are based on the maximum of four assignments students are allowed to send in. The great majority of the students, however, send in only two TMAs, which makes it possible to spend the remaining four hours on more intensive student support. The very occasional student who does all four assignments makes up for the student who does none at all. Thus extending student support with motivational communication would not be an important financial investment.

Improving student support means that changes must be made in two areas. The position of the tutor would have to be redefined as argued above in the section on implications of improved student support for the tutor. The College has very good staff relations. It is therefore in a relatively comfortable position to start a discussion among its staff, including external tutors, about the changes that are necessary. This means that the College would have to assign more responsibility to the tutors and set up mechanisms that make it possible that students and tutors stay in direct contact. It should encourage the use of e-mail for these purposes. Systems should be set up to make the tutor accountable. In addition, selection of tutors must be rigorous (Moore, 1998) and follow the recommendations given in the preceding paragraphs. Such change processes are always difficult and somewhat painful. Their effectiveness greatly depends on the extent to which the institution is able to learn. The literature on organisational learning (for instance Senge, 1990; Marquardt and Reynolds, 1994) provides ample evidence of institutions that effectively learn to change. In view of the quite fundamental deviation from current practice at the College, it would thus be advisable for the community of director, staff and outside tutors to take the opportunity to redefine itself as a learning organisation (see for instance Senge et al, 1994; Hesselbein, Goldsmith & Beckhard, 1997).

Changes to be made will also include financial restructuring. Involving the tutors more in the tutoring process means improving the financial compensation. This means extra funds should be made available for student support. If motivational student support is used, motivational communications will have to be designed and prepared and for this an instructional designer, preferably with experience in designing distance education materials, should be contracted. The motivational

messages could be prepared and the tutor be requested to add an extra personal line to the messages to show that the students get personalized attention. Existing commercially available computer programmes could be used to add clip art and photo house to the messages. There will be costs related to photocopying the messages and sending them out. The tutors would need an e-mail account and will, as was discussed, have to spend more time on tutoring, performing different tasks in addition to their traditional role as 'markers' of assignments. As tutor fees are currently based on marking only, work to perform such extra tasks must be financially compensated. All this would mean an increase of basic costs. It will be clear that, although some of the extra costs involved could be met by time that is left over from the eight hours tutoring time budgetted for, there will be additional costs involved.

The actual cost enrolling in a course is approximately $ 1200.--. Most of the students of the College are sponsored. If, for instance, the costs of the course would go up by 10% for extended tutoring facilities, it would mean that if annually 80 students enroll in a course for the first time, (which seems to be a minimum for survival), an additional $ 10.000..-- would become available every year. That amount could cover the costs involved in extra tutoring (a tutor now receives about $ 80.-- for a student who is newly enrolled and sends in 2 assignments). If then the completion rates of the MMSS could be maintained at approximately twice the level of what they used to be, it would mean that administration costs for re-enrolling a student would decrease. It is also likely that if sponsors would know that the completion rate is likely to be in the proximity of 75% for students who enroll for the first time, they would be more strongly encouraged to sponsor students so that the increase in fee may not be a problem at all. It could be researched if students who pay their own fees may be prepared to pay for extra tutoring if their chances to complete the course successfully within the time set, increase. The College may be the first distance education institute that can 'advertise' its completion rates, as they are much higher than even institutes that are ranked among the best distance education providers, and equal completion rates in traditional education. The College must, however, be prepared to implement the motivational interventions. This constitutes a trade off as regards time- and financial resources available for student support. It also requires that the

College is willing and has the courage to make structural changes and adopt a student support system that is more aware of students' needs and wants.

Many distance education institutes do not specify the type of student support offered and students are not informed what they can expect. Offering quality student support is more expensive than offering weak or virtually no student support. In any distance education setting, it is likely that a student who drops out is in the short run more profitable for an institution than a student who needs student support. Course fees may even have been fixed taking into account that no more than 50% of the learners would pass. Distance education institutes that have proven higher completion rates might get more students, but may end up having lower profits. A discussion of these ethical problems is beyond the scope of this book but may serve the distance education community well.

Implications for distance education institutions in general

Nowadays much attention is paid to the use of electronic media in distance education, particularly the so-called new Information and Communication Technologies (ICTs). Driven by this interest, many institutions and people, who were not previously involved in distance education, join the field. Many of them are unaware of the accumulated knowledge and wisdom that characterize the field as a result of its development since the early days of correspondence education. Consequently, the importance of elaborate student support, of which the earlier distance education tradition had grown well aware, tends to be overlooked by those who join the field now, attracted by the prospect that the new ICTs can make a significant contribution to redefining the world of learning. Yet, it is exactly the new ICTs that offer excellent opportunities for enhanced student support, including the kind of motivational communication investigated in this book. According to Threlkeld and Brzoska (1994) results of many studies suggest that not the media, but other variables, among them motivation, might be far more important. They also recognize the importance of student support. In this study, the two have been combined. Student support has been extended with motivational support and has resulted in course completion rates that compare well with completion rates in conventional education. To implement such a

motivational communication system does not require complicated strategies. It requires a dedicated tutor and a supportive institute. It also requires that the management of student support take into account the needs of the students as expressed by themselves (Sewart, 1993). To know the needs of the students an audience analysis must be undertaken. The MMSS was based on the (motivational) needs of the students. Extending existing student support with motivational communication should not be complicated as long as the needs of the students are known and the providing institute is prepared to listen to the learners.

7.7 Recommendations for Further Research

This study has answered a number of questions related to student support in distance education. As was mentioned in Chapter 1, in connection with Handy's (1992) wheel of learning, the testing of ideas to produce reflections leads to new questions. In the particular case of the MMSS study, the new questions that were generated by this process refer to two areas, namely procedural aspects in the application of the MMSS intervention and the methodological aspects of the study. The former area can still be subdivided into issues related to: 1) the media through which the motivational communication took place; 2) the students role in consciously opting for the possibility to engage in a dialogue with the tutor, and 3) questions pertaining to the role played by the tutor.

Media for motivational communication

For the purpose of this study, motivational communication with the students took place through the exchange, by ordinary mail, using the regular postal services, of printed messages and letters. This choice of medium was prompted by the lack of access to e-mail and fax of the distance education students who were mostly based in developing countries around the world. Access to electronic media, however, is rapidly increasing. In fact, while the study was progressing the situation already changed and many students who had no access when the course started were either personally online or had access to e-mail via others or at their place of work when it ended. It is therefore recommended that further research be

done to investigate these processes of motivational communication in a virtual environment. In that context it will be of particular interest to look into the effects of rapid motivational feedback made possible by e-mail as well as the possibilities offered by this medium to establish dialogue not only between the tutor and individual students, but also among the students themselves. A first step in that direction is reported on in the following section.

The student's option to consciously engage in dialogue

In this study, tutors undertook to engage in a motivational dialogue with their students without asking whether they were indeed interested. A large number of students reacted positively to the tutors' initiative, but some did not react at all even to repeated attempts on the part of the tutors to get them engaged. Much effort and frustration on the part of the tutors could have been avoided had it been possible to be confident that students who would not respond to a first prompt to engage in dialogue would not do so following repeated attempts.

No longer as part of the study, but rather as part of the researcher's ongoing interest in this area, a follow-up study is underway providing motivational support to the students of the 1998 Course B. In contrast with the approach presented in this study, this time the students were asked, at the beginning of the course, whether they wanted extra support. If so, they had to show their initial commitment to engage in a dialogue with the tutor by returning the audience analysis form. Of the 18 students to whom this offer was made, 13 returned the form, while two other students sent it in at the end of July. By then it was too late for them to be included in the group receiving additional support. The extra support was thus given to 13 students: ten were on e-mail and three not. Tutoring took place via e-mail and via hardcopies of the same messages to those not on e-mail. A total of five motivational newsletters was sent out (one with student contributions) via e-mail and postal services. In addition, one 'traditional' motivational message was sent to everyone via the postal services.

it is possible to predict the results at this stage. It is foreseen that eleven of the twelve students enrolled for the first time will finish, while the student who has

enrolled for the second time will also finish. The completion rate for the thirteen students who consciously opted to become part of the MMSS system is thus expected to be 94%. None of the other five students, who did not react to the offer for extra support, but who received all other regular tutorial services, have sent in any work so far. Not targetting all the students, but only those who have confirmed their interest in extra student support may thus be a topic for further research. It could be particularly useful to compare students whose exposure to the MMSS intervention is made contingent upon their initial confirmation of interest in such additional support with those who indiscriminately exposed to the intervention.

The position and the role of the tutor

In the MMSS study reported on in this book the role of the tutor was extended as compared to the regular duties defined by the College. The channels of communication between students and tutor have changed as explained in Figures 7.1 and 7.2, the tutor and the students being able to communicate with each other directly rather than via the Director of Courses. Tutors as well as students made use of this possibility and engaged in often intensive communication exchanges. If the MMSS is going to be implemented this will considerably change the position and the role of the tutors. It is also likely that their new involvement will increase the number of hours spent on tutoring.

It is therefore recommended that research be undertaken to investigate what extra responsibilities tutors are prepared, able and willing to take on and how a new and better definition of the function of tutors can be realized. Such research could establish guidelines both for tutor selection and tutor training. The research would also have to answer questions related to how tutors can be best involved in decision making processes; how career perspectives within the institute can best be developed; what training and professional support systems should be created in response to the need for professional development of tutors as well as pedagogical and administrative staff of the providing institution; and how these changes should impact on the work environment in general, including logistical aspects, such as access to e-mail, and the institutional status of the tutor.

Methodological issues

The MMSS study has operated in a limited environment of only one specific college and with a relatively small numbers of students involved. This calls for more research, particularly to undertake similar studies in environments that are distinctly different from the one described in this book and among students in different contexts and with different learning needs.

In the MMSS study here some results were obtained that were not conclusive. This was the case, for instance, for the possibility that the motivational messages were differentially effective for newly enrolled students and for repeaters. More research is needed to confirm whether motivational messages have more influence on the motivational disposition of repeaters than on new enrollees, as the present study seems to indicate.

As stated earlier, the researcher had a double role in the MMSS in that she was not only the researcher but also the tutor in one of the courses. It is thus suggested that further research be done in which the researcher's responsibilities are more clearly separated from those of the tutors. Investigating the functioning of the MMSS, as an embedded support system within the system of distance education of the College, rather than as an add-on to a system that was not contemplated in a systemic way from the start, is recommended.

One of the outcomes of the study was that there was no clear indication that personalized messages were more effective than collective ones. It was, however, seen that collective messages were more cost-efficient. Further research should thus be done on using the (prepared) collective messages, but adding an occasional line to make them more personal for the students. This makes it possible to use a prepared set of existing messages, personalizing them with an extra remark or observation, thus reducing the effort involved in applying the intervention.

7.8 Closing Remark

In the MMSS study, a case has been made that motivational communication in distance education courses can be effective. It has also been shown that such a communication process does not take up excessive amounts of time. In the case of the College, it was seen that the intervention could be added without significantly exceeding the time budgetted for student support. Additional costs, such as for the design and production of the messages and for their despatch, may make it necessary to marginally increase course fees.

Various types of messages and of ways of incorporating them in student support have been discussed above. The MMSS study has shown that it is possible to increase the number of students, who finish their distance education courses successfully and in general to make the learning experience of students in a distance education setting more enjoyable and rewarding. The MMSS has functioned within a student support system that is still very elementary. One could even say that it is “old-fashioned,” considering the medium (postal services) used. Many distance education institutions support their students using media such as telephone, fax and e-mail. However, such support usually focusses quite exclusively on the cognitive needs of the students, rather than their affective needs. As the learning landscape is gradually changing and more and more learning opportunities are being offered through the distance education mode, it is in general important that increased attention be given to the motivational dimension of the interaction with the distance education students. In addition distance education systems should contemplate the affective needs of their students as an integral component, alongside such more traditional components as learning materials development and delivery, evaluation of learning outcomes and the provision of cognitive and administrative support to students. If this study has contributed to stressing the crucial importance of this argument, the author will feel that her three-year effort has not been in vain.

Samenvatting

De Ontwikkeling van Ondersteunende Motiverende Communicatie in Afstandsonderwijs

Ter inleiding

Of studenten in afstandsonderwijs er in slagen hun cursus op tijd af te ronden wordt voor een belangrijk deel bepaald door de aard en mate van hulp en ondersteuning die zij daarbij krijgen. Heden ten dage is het nog altijd zo dat studenten in het afstandsonderwijs minder kans hebben hun cursussen af te ronden dan studenten van een gelijk niveau in traditionele vormen van onderwijs. Dit is een betreurenswaardige zaak, met name gezien het veranderende verband tussen genoten onderwijs en carrière perspectief. Kon men er kort geleden nog van uit gaan dat een met succes bekroonde studie de basis legde voor een stabiele carrière voor het leven, nu moeten velen zich tijdens en ook na hun professionele bestaan heroriënteren, bijscholen, of in de avonduren een cursus doen omdat het volgen van onderwijs via de traditionele weg moeilijk te realiseren is. Afstandsonderwijs kan in deze gevallen een belangrijk medium zijn om aan deze veranderende wensen en eisen te voldoen.

De in dit boek besproken studie is in de eerste plaats het gevolg van bezinning op mogelijkheden om studenten in het afstandsonderwijs te helpen hun studie te voltooien. Gebleken is dat motivatie een belangrijke rol speelt bij de slagingskans van studenten in het afstandsonderwijs. Geen of een gebrekkige motivatie wordt in vormen van traditioneel onderwijs gemakkelijker opgemerkt dan in afstandsonderwijs. Contact tussen de leerling en het instituut dat de cursussen aanbiedt is in afstandsonderwijs vaak minimaal, vooral omdat hulp van begeleiders of mentorenom financiële redenen veelal tot een minimum beperkt

blijft. Bovendien ontbreken in afstandsonderwijs de ‘affectieve’ mogelijkheden om leerlingen te motiveren. Hierbij kan men denken aan non-verbale communicatie zoals een schouderklopje, een knipoog of een blik van verstandhouding.

De cursussen en de begeleiding en ondersteuning van studenten

De cursussen

Het onderzoek heeft tot doel de motivatie bevorderende ondersteuning van mensen die aan afstandsonderwijs deelnemen, te verbeteren. Deze zogenaamde MMSS (**M**otivational **M**essages **S**upport **S**ystem) studie, is uitgevoerd in de jaren 1996 en 1997. Het MMSS heeft tot doel de leerlingen te steunen om gemotiveerd te blijven zodat het gemakkelijker wordt de studie vol te houden en af te maken. Het instituut waar het onderzoek plaatsvond is gevestigd in Engeland en biedt belangstellenden de mogelijkheid een ‘Master of Arts’ graad (gelijkgesteld aan het Nederlandse doctoraaldiploma) te behalen in de richting ‘Afstandsonderwijs’. Hierbij is afstandsonderwijs zowel de methode via welke de studenten leren als het onderwerp van hun studie. De verantwoordelijkheid voor de cursussen ligt bij een gerenommeerde Britse Universiteit die de cursus in praktische zin heeft uitbesteed aan het ‘College’, zoals het bovengenoemde instituut in de study verder wordt aangeduid.

Het College biedt negen verschillende cursussen aan: vier op basis niveau en vijf op gevorderden niveau. De vier basiscursussen zijn alle verplicht, terwijl van de vijf overige cursussen alleen de onderzoeksmodule verplicht is. De studenten kiezen dan twee van de overige vier cursussen. De studiebegeleiding bij de cursussen die deel uitmaakten van het onderzoek bestond uit het nakijken en corrigeren van twee werkstukken die de student voor elke cursus moest inzenden. De cursusmaterialen bestaan uit een speciaal voor dit doel geschreven dictaat, geluidscassettes en een bundel geselecteerde artikelen. Elke cursus bestaat uit ongeveer vijftien lessen die elk naar schatting tien tot vijftien uur studietijd vergen. De meeste cursussen worden afgesloten met een examen. Voor sommige cursussen echter wordt het examen vervangen door een project. Het eindcijfer bestaat (afhankelijk van de cursus) voor 40 tot 50% uit de waardering van de

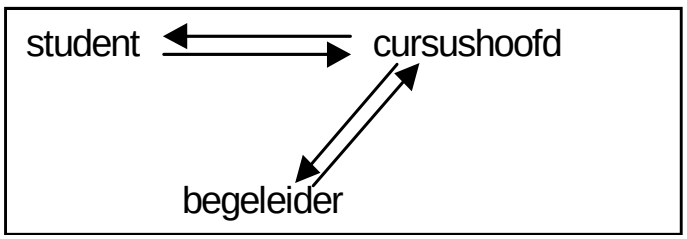
werkstukken die tijdens de cursus gemaakt zijn en voor de resterende 60 of 50% uit de waardering voor het examen of het project waarmee de cursus wordt afgesloten.

De studenten

De studenten die zich hadden ingeschreven voor de cursussen betrokken in deze studie waren afkomstig uit meer dan dertig verschillende landen.De meesten hadden bij de aanvang van de cursus een ‘Bachelor of Arts’ graad of een gelijkwaardige achtergrond. Bovendien sprak de meerderheid Engels (de voertaal van het onderwijs) als tweede taal. Veel van deze studenten wonen en werken in ontwikkelingslanden en hebben zodoende lang niet allemaal de beschikking over computerfaciliteiten of toegang tot een openbare bibliotheek. Minder dan 5% heeft ervaring met het volgen van afstandsonderwijs. Studenten in dit soort cursussen studeren over het algemeen onder zeer moeilijke omstandigheden.

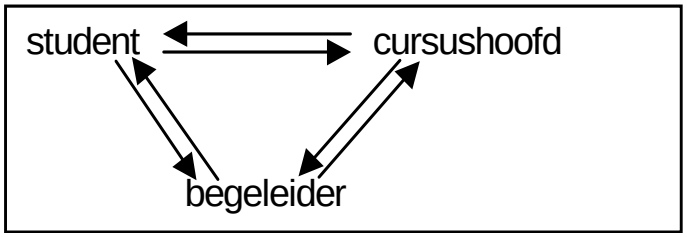
Begeleiding en ondersteuning van de studenten

De normale gang van zaken bij het College is dat de begeleiding van studenten hoofdzakelijk bestaat uit het nakijken en verbeteren van de verplichte werkstukken.Begeleiders hebben geen geïnstitutionaliseerd contact met de studenten. Met vragen die betrekking hebben op de inhoud van de cursusmateriaal worden studenten geacht zich te wenden tot de Staff van het College en niet rechtstreeks tot de begeleiders.
Het traditionele communicatieproces tussen begeleiders en studenten kan als volgt worden weergegeven (Figuur 1):



Figuur 1: Traditioneel communicatiepatroon tussen studenten en begeleiders van het College

In the MMSS studie werd een meer rechtsreeks communicatiepatroon gehanteerd zoals is aangegeven in Figuur 2.



Figuur 2: MMSS-communicatiepatroon tussen studenten en begeleiders van het College

In de MMSS-studie wordt het wederzijdse directe contact tussen student en begeleider centraal gesteld. Binnen het kader van dit directe contact is een communicatiemethode ontworpen die tot doel had de student te helpen om gemotiveerd aan de cursus te blijven deelnemen. Wanneer de begeleider op de hoogte is van het motivatieniveau van de student is het voor hem of haar mogelijk, indien nodig of gewenst, studenten te helpen hun motivatie op het juiste niveau te brengen en te houden.

De hierboven beschreven motivatie bevorderende communicatie met de studenten verliep via de reguliere postkanalen, aangezien dit het medium was waarmee in ieder geval alle leerlingen bereikt konden worden. Deze communicatie vormde een belangrijke uitbreiding op het bestaande contact tussen het College en de student dat zich tot dan toe beperkte tot één of twee brieven naar de student met studie-aanwijzingen en informatie over het examen betreffende het examen.

Doel van de studie en opzet van de motivatie bevorderende communicatie

De studie had tot doel het bestaande systeem van begeleiding en ondersteuning van studenten uit te breiden met een motiverende component, die niet alleen simple van aard was, maar ook praktisch en goedkoop. De ontworpen en beproefde oplossing bestond uit een schriftelijke vorm van communicatie: een motiverende memo in de vorm van vouwkaarten van het soort dat ook als wenskaart wordt gebruikt. Onderzoek (Keller, 1987; J.Visser, 1990) heeft

aangetoond dat het mogelijk is op systematische wijze de motivatie van studenten te beïnvloeden. Keller (1983) heeft daartoe een model ontworpen, het zogeheten ARCS-mdel. In dit model wordt motivatie opgedeeld in vier categorieën: Attention (attentie), Relevance (relevantie), Confidence (zelfvertrouwen) en Satisfaction (voldoening). Alle memo's die voor deze studie werden ontworpen, waren gebaseerd op deze vier aspecten van motivatie. De memo's werden gedurende de cursus op gezette tijden naar de studenten gestuurd. Het ARCS-model werd gebruikt om vast te stellen wat de tekortkomingen waren in de motivatie van de studenten op deze gezette tijden, waarna de inhoud van de memo's zo werd samengesteld dat deze aansloot op de situatie. Deze motivationele deficiënties werden bepaald op basis van 'signalen' die de leerling uitzond tijdens de cursus en op de uitkomst van een analyse van de initiële vragenlijst die de studenten hadden ingevuld voor ze aan de cursus begonnen. In deze vragenlijst werd studenten onder andere gevraagd welke problemen zij voorzagen tijdens de cursus.

Het MMSS past binnen het bestaande systeem van begeleiding en ondersteuning van studenten van het College en kan dus beschouwd worden als een sub-systeem dat is ingebed in het College. Het wordt beïnvloed door een aantal factoren zoals de psychologische drijfveren van de studenten en de houding van de begeleiders en de Staff van het instituut. Het MMSS benadert motivatie op een systematische manier. Het systeem bestaat uit mensen (de begeleiders en de studenten), en uit een omgeving die strategieën, zoals motiverende memo's, mogelijk maakt die de studenten kunnen helpen gemotiveerd te blijven.

De MMSS studie wordt gekarakteriseerd door de volgende zes aspecten:

1. Het MMSS onderzoek gaat er van uit dat de motivatie van de leerlingen beïnvloed kan worden.
2. Binnen de MMSS studie worden motiverende memo's gebruikt als het belangrijkste middel om de studenten te helpen hun motivatie op het juiste niveau te brengen of te houden in elk van de verschillende dimensies van het ARCS-model.
3. De strategieen gebruikt in de MMSS studie zijn gebaseerd op waargenomen behoeften aan motivatie bij de studenten. Aan het begin van de cursus worden de specifieke behoeften van de leerlingen in kaart

gebracht, terwijl gedurende de cursus verdere behoeften naar voren moeten komen door middel van het intensief contact met de leerling.

4. De MMSS study is opgezet als een integrale en systematische aanpak. Daarin zijn zowel begeleiders als alle studenten van de cursussen waarin de MMSS functioneert, betrokken.
5. Het MMSS is onderdeel van een systeem voor de begeleiding en ondersteuning van studenten en vraagt als zodanig om een geïnstitutionaliseerde opzet.
6. Het MMSS vereist de steun van het de onderwijsinstelling waar het gebruikt wordt.

Onderzoek ter ontwikkeling van een prototype

Voorafgaande aan het MMSS-onderzoek werd een prototype ontwikkeld voor het proces van communicatie via motiverende memo's binnen een van de cursussen die het College aanbiedt. Deze fase werd gestuurd door de volgende onderzoeksvraag:

> *In welke mate Is het mogelijk om motiverende memo's te ontwerpen die effectief zijn in afstandsonderwijs cursussen en waarbij gebruik wordt gemaakt van Keller's ARCS model van motiverende analyse?*

Om meer duidelijkheid te verkrijgen omtrent een aantal aspecten van de motiverende memo's werden allereerst verschillend formaten ontworpen en getest. Sommige waren geïllustreerd, andere niet. De eerste twee memo's hadden de vorm van een brief; alle andere de vorm van een wenskaart. Omdat de ervaring leert dat begeleiders vaak maar weinig tijd hebben voor het begeleiden van studenten, was het van belang een ontwerp te kiezen dat praktisch, bruikbaar en aantrekkelijk is. Gedurende de prototyping fase werden in totaal acht verschillende memo's verstuurd, die formatief geëvalueerd werden. De prototyping benadering leidde tot een valide, practisch bruikbare en effectieve eindversie: de geïllustreerde motiverende memo.

Het slagingspercentage bleek gemiddeld hoger in de cursus waarin gebruik werd gemaakt van de memo's. Een week na het beëindigen van de cursus werd aan alle studenten een vragenlijst toegezonden waarin hen onder andere werd gevraagd te oordelen over de memo's die ze gedurende het jaar hadden ontvangen. Uit deze enquête bleek dat studenten het gebruik van de memo's als zeer gunstig hadden ervaren. Niet alleen gaven zij aan dat de memo's hen hadden gestimuleerd de cursus af te maken, zij meldden tevens dat de memo's hen in hun zelfvertrouwen hadden gesterkt. Het hogere slagingspercentage en de toegenomen tevredenheid bij de leerlingen geven aan dat het MMSS effectief is.

Terwijl de resultaten van de prototyping fase zonder meer als bemoedigend konden worden gezien, werd het ook duidelijk dat meer onderzoek gedaan zou moeten worden. Een onderzoek met een bredere basis, betrekking hebben op een groter aantal cursussen was gewenst zodat meer inzicht verworven zou kunnen worden. De prototyping fase was enigszins beperkt, niet alleen omdat slechts één cursus betrof, maar ook omdat ze was opgezet en uitgevoerd door de onderzoeker zelf, die tevens fungeerde als begeleider van de cursus.

De prototyping fase toonde ook aan dat het ontwerpen en vervaardigen van de motiverende memo's een tijdrovende bezigheid is. Bovendien bleek dat het voor de begeleiders een extra belasting betekende om tijdens de cursus individuele memo's te ontwerpen die aansloten op de specifieke behoeften van de studenten. Het was dus belangrijk om na te gaan of er een methode gebruikt kon worden die minder tijdrovend maar toch effectief was. De prototyping fase leidde deshalve tot een tweede (nieuwe) onderzoeksvraag:

> *Als er een verschil is, wat is dan het verschil in effectiviteit en kosten-efficiency tussen de twee verschillende soorten motivatie verhogende memo's, namelijk tussen de persoonlijke motiverende memo en de collectieve motiverende memo?*

De MMSS studie

Bij de tweede fase van het onderzoek, een meervoudige gevalsstudie, waren meer dan 70 studenten en drie tutoren betrokken. De onderzoeker nam zelf als begeleider deel aan de studie. In de eerste maand van het onderzoek werden de behoeften op het gebied van motivatie van de studenten in kaart gebracht. Hieruit bleek dat de grootste behoefte lag op het gebied van zelfvertrouwen. In deze tweede fase werden twee verschillende typen motiverende memo's onderzocht: de persoonlijke memo's en de collectieve memo's. De inhoud van de persoonlijke motiverende memo's was gebaseerd op behoeften die zowel aan het begin als tijdens de cursus geconstateerd werden en waren bedoeld om leerlingen te helpen hun motivatie op het gewenste niveau te brengen. De collectieve memo's gingen uit van de behoeften van de studenten zoals die aan het begin van de cursus naar voren waren gekomen en van behoeften die zich zeer waarschijnlijk tijdens de cursus zouden voordoen. De collectieve motiverende memo's waren voor aanvang van de cursus ontworpen en geproduceerd en werden gebruiksklaar aan de begeleider ter beschikking gesteld, die dan alleen nog voor verzending ervan diende zorg te dragen. De meervoudige gevalsstudie duurde even lang als de cursussen: acht maanden.

Samenvatting van de uitkomst van de MMSS studie:

Een analyse van de resultaten van de MMSS meervoudige gevalsstudie toonde aan dat:

- de belangrijkste uitkomsten van de prototyping fase (pilot studie)bevestigd werden.
- het gebruik van motiverende memo's effectief was in de cursussen die deel uitmaakten van de studie.
- de studenten de memo's op prijs stelden.
- de memo's het zelfvertrouwen van de studenten verhoogden.
- er geen noemenswaardig verschil was tussen persoonlijke memo's en collectieve memo's.

- het gebruik van de motiverende memo's vergemakkelijkt werd door de toepassing van de collectieve memo's, hetgeen de kans op succesvolle implementatie verhoogde.
- het ontwerpen, produceren en verzenden van persoonlijke motiverende memo's zeer waarschijnlijk te veel werk vergt van de begeleider, waardoor de kans op succesvolle implementatie aanzienlijk verkleind wordt.

De implementatie van de MMSS zal gevolgen hebben voor de studenten, de begeleiders en voor het College. Deze gevolgen worden in de volgende alineas nader toegelicht.

Het gevolg van implementatie van de MMSS voor de studenten

Studenten die via afstandsonderwijs studeren ervaren vaak een zeker isolement. Dit geldt zeer zeker ook voor de studenten van het College, die afkomstig zijn uit meer dan dertig verschillende landen en dientengevolge geen gelegenheid hebben studiegroepen te vormen of makkelijk contact op te nemen met de begeleider. De begeleiders die aan de MMSS-studie deelnamen, benadrukten dat zij het als hun taak zagen de studenten te helpen. Zij stimuleerden hen dan ook contact te zoeken. Hierdoor werden de leerlingen aangemoedigd tot een schriftelijk contact met de begeleiders waarbij niet alleen vragen en problemen met betrekking tot de inhoud van de cursus aan bod kwamen, maar ook problemen op het gebied van studietechnieken, keuze mogelijkheden voor cursussen en dergelijke. Hierdoor kreeg de begeleider ook de taak van een mentor. Wellens (1986) en Rowntree (1994), onder anderen, benadrukken het belang van open communicatiekanalen tussen begeleiders en studenten.

De memo's boden de studenten een gestructureerde motiverende communicatie, waarbij de behoeften van de studenten een belangrijk uitgangspunt vormden. Een dergelijke vorm van communicatie verschilt op een aantal punten van de 'traditionele' communicatie zoals die bijvoorbeeld door de Britse Open Universiteit wordt gebruikt. In het MMSS was het doel niet alleen om de studenten te bewegen hun werkstukken op tijd in te zenden en zich in te schrijven voor het examen. Het ging er ook om de leerlingen ervan te doordringen dat ze deel uitmaakten van een

groep gelijkgestemde studenten die er allemaal naar streefden de cursus binnen een jaar af te ronden. In de memo's werd begrip getoond voor de problemen van studenten en werd benadrukt dat de begeleider geïnteresseerd was in het welzijn van de leerlingen en ervan overtuigd was dat volharding zou leiden tot een succesvolle afronding van de cursus. Een Zwitserse student, die zes jaar door middel van afstandsonderwijs had gestudeerd, waardeerde de persoonlijke benadering van de begeleiders en schreef: "Vorig jaar ontving ik de twee 'verplichte' brieven van mijn begeleider - er sprak warmte noch oprechte belangstelling uit". Zowel studenten als begeleiders verzonden en ontvingen gemiddeld drie brieven of faxen (memo's buiten beschouwing gelaten).

Op grond van de uitkomsten van de meervoudige gevalsstudie werd geconcludeerd dat:

- de motiverende strategieën de motivatie van de leerlingen om de cursus te voltooien verbeterden. De motiverende memo's brachten een belangrijke toename in het zelfvertrouwen van de leerlingen teweeg.
- het percentage leerlingen dat de cursus met succes afrondde steeg . Dit gold zowel voor studenten die voor het eerst aan de cursus deelnamen als voor herhalers.
- er geen significant verschil was tussen het gebruik van persoonlijke of collectieve motiverende memo's.
- het gebruik van collectieve memo's meer kosten-efficiënt was.
- het gebruik van motiverende strategieën een verrijking betekende voor het studenten support systeem.
- het mogelijk is de MMSS in te voeren zonder dat daarbij al te hoge kosten hoeven te worden gemaakt.

Het gevolg van de implementatie van de MMSS voor tutoren

Het invoeren van de MMSS brengt voor de begeleiders een nieuwe rol met zich mee. Zij zullen in meerdere mate persoonlijk betrokken raken bij de studenten en ook meer persoonlijk verantwoordelijk worden gehouden voor de voortgang van de student. Dit houdt in dat begeleiders zich meer bewust worden van het belang

studenten op een motiverende manier tegemoet te treden; begeleiders zullen niet langer alleen op kwalificaties worden beoordeeld, maar ook op ervaring in het begrijpen van studenten en leerprocessen.Ze zullen leerlingen niet alleen moeten corrigeren, maar hen ook moeten begeleiden door hen te motiveren hun werk te doen. Dit vereist mogelijk een verandering in het beeld dat begeleiders hebben van hun functie. Het gaat er niet langer alleen om de toetsen en werkstukken van studenten te corrigeren en te beoordelen; ook het tonen van persoonlijke betrokkenheid wordt van de begeleider verwacht. De rol van de begeleider zal dus meer overeenkomsten vertonen met die van een leraar in traditionele leeromgevingen. Deze veranderingen brengen waarschijnlijk hogere kosten voor het studenten ondersteuningssysteem met zich mee. Deze aspecten worden in de volgende twee paragrafen besproken.

De gevolgen van invoering van de MMSS voor het College

Het is mogelijk dat in deze studie ten onrechte de indruk is gewekt dat de ondersteuning die studenten van het College ontvangen van mindere kwaliteit is dan de ondersteuning die door een gemiddeld college wordt aangeboden. Het College heeft er belang bij studenten goed te begeleiden en heeft derhalve het onderzoek naar mogelijkheden om het bestaande ondersteuningssysteem te verbeteren aangemoedigd. Bovendien heeft het College actief mogelijkheden geschapen om dit onderzoek uit te voeren.

Financiële overwegingen maken het voor het College echter moeilijk om de ondersteuning van studenten te vergroten. Immers, met een aanbod van negen cursussen en net iets meer dan honderd studenten wordt het College gedwongen al het mogelijke te doen om een kostenstijging tegen te gaan. De MMSS studie heeft echter aangetoond dat een groot deel van de motiverende ondersteuning betaald kan worden uit het budget dat reeds is vastgesteld voor ondersteuning van studenten. Het invoeren van extra ondersteuning zoals in deze studie is voorgesteld hoeft dus geen onoverkomenlijke financiele drempel te betekenen.

Het verbeteren van begeleiding vereist een twee-ledige verandering. In de eerste plaats moet de taak van de begeleider opnieuw ingevuld worden. Met de

implementatie van de MMSS zal de begeleider een grotere verantwoordelijkheid krijgen en meer tijd moeten investeren in de leerlingen. Het systeem van direct contact tussen begeleiders en studenten, dat voor de MMSS was opgezet, zal moeten worden doorgevoerd. Teneinde deze veranderingen te realiseren is het belangrijk dat ze eerst besproken worden en dat veranderingsprocessen geleidelijk en met tact opgezet en doorgevoerd worden.

In de tweede plaats zullen de begeleiders voor hun toegenomen betrokkenheid met betrekking tot de studenten en hun veranderde taakinvulling, ook een aangepaste financiële vergoeding moeten ontvangen. Het gemiddelde uurloon van een begeleider ligt momenteel op fl. 25.-- bruto. Een meer intensieve begeleiding van studenten zal mogelijk gepaard gaan met een geringe verhoging van de cursusprijs. Dit hoeft echter geen bezwaar op te leveren, immers, tijdens de MMSS studie is in de jaren 1996 en 1997 het aantal leerlingen dat bij eerste inschrijving voor de cursus slaagde bijna verdubbeld, en lag op meer dan 75%. Naar schatting zouden de cursuskosten met ongeveer 10% verhoogd moeten worden om een betere en meer volledige begeleiding van studenten te realiseren. Onderzoek zal kunnen uitwijzen of leerlingen bereid zijn 10% meer voor een cursus te betalen als ze weten dat ze daarmee hun slagingskans verdubbelen.

Aanbevelingen voor verder onderzoek

De MMSS-studie heeft een antwoord gegeven op een aantal vragen ten aanzien van de ondersteunening van studenten in afstandsonderwijs. Echter, de studie heeft ook weer nieuwe vragen opgeroepen. Een aantal van deze vragen wordt hieronder beknopt behandeld.

Welke media kunnen gebruikt worden voor motiverende communicatie?

In de MMSS studie vond de communicatie tussen begeleiders en studenten plaats via de reguliere post omdat veel studenten, zeker zij die wonen en werken in ontwikkelingslanden, geen toegang hadden tot internet of E-mail. Het aantal studenten dat van E-mail gebruik kon maken verdubbelde gedurende de twee jaar die het onderzoek duurde. Verder onderzoek, waarbij gebruik gemaakt wordt van

E-mail om de motiverende memo's met een minimale vertraging aan de studenten aan te bieden is dus gewenst.

Ondersteunende motiverende activiteiten voor iedereen, of alleen maar voor belangstellenden?

In de MMSS studie ondernamen begeleiders een poging om een motiverende dialoog op te zetten met hun studenten, echter zonder vooraf na te gaan of de studenten daar ook werkelijk belang in stelden. Hoewel veel studenten heel positief reageerden op deze dialoog, was er een kleine groep die nooit heeft gereageerd op de vele pogingen hen te betrekken bij de meer uitgebreide ondersteuningsfaciliteiten die door het College werden geboden. Veel overbodig werk en frustratie zouden kunnen zijn voorkomen als op voorhand duidelijk was geweest dat studenten die bij een eerste opening tot een dialoog niet reageerden, niet alsnog bij latere pogingen overstag zouden gaan. Als onderdeel van de belanstelling van de onderzoeker op het gebied van ondersteuning van studenten, wordt momenteel een vervolgstudie uitgevoerd die motiverende steun aanbiedt aan studenten in een van de cursussen van dit jaar (1998). In tegenstelling tot de procedure die gevolg werd in 1996 en 1997, werd in 1998 aan de studenten bij aanvang van de cursus gevraagd of zij prijs stelden op extra begeleiding. Zij konden dit aangeven door het invullen van een vragenlijst waarin informatie werd gevraagd met betrekking tot de achtergrond van de studenten, hun persoonlijke omstandigheden en interesses en eventuele problemen die ze in het nieuwe cursusjaar verwachten. Bovendien werd hun aangeboden om contactadressen van collega studenten te ontvangen. Door deze vragenlijst werd het voor de begeleider makkelijker om gerichte ondersteuning te geven. Van de 18 studenten die dit aanbod kregen hebben er 13 gereageerd (2 andere studenten reageerden toen de cursus al vier maanden bezig was en konden helaas niet meer in het system worden opgenomen). De extra hulp werd dus gegeven aan dertien studenten, waarvan tien de beschikking hadden over E-mail. De ondersteuning van studenten vond plaats via E-mail en via gedrukte kopieën van de E-mail voor hen die geen E-mail konden ontvangen. Verder werden vijf motiverende nieuwsbrieven verstuurd, waarvan één met bijdragen van studenten zelf. Op het moment van schrijven loopt het cursusjaar 1998 over drie weken af. Aangezien de cursus waar dit nieuwe onderzoek plaatsvond niet met een examen wordt

afgesloten maar met een project waaraan de studenten gedurende een korte tijd werken, is het gemakkelijk na te gaan hoeveel studenten de cursus in 1998 zullen voltooien. Van de dertien studenten zullen er tenminste twaalf de cursus dit jaar afmaken. Dit betekent dat het percentage studenten dat slaagt 92% is. Het is belangrijk om na te gaan of het geven van extra ondersteuning aan studenten die dat wensten, een goede methode is. Het is mogelijk dat het vooral een methode is waar de begeleider baat bij heeft, aangezien hem/haar de frustratie van studenten die een jaar lang pogingen tot contact onbeantwoord laten, bespaard blijft.

Scheiding van de rol van onderzoeker en begeleider

In de MMSS vervulde de onderzoeker niet alleen de rol van onderzoeker, maar ook die van begeleider van een van de cursussen die in het onderzoek betrokken waren. In deze cursus werden in één groep de persoonlijke memo's gebruikt en in de andere groep de collectieve memo's. Het lijkt releveant om verder onderzoek te verrichten waarbij de rollen van begeleider en onderzoeker strikt gescheiden zijn. Tevens wordt aanbevolen dat gekeken wordt naar het functioneren van de MMSS als een ondersteuningssysteem dat een werkelijk onderdeel vormt van studenten begeleiding als een systeem binnen het College, en niet als een extra, doch min of meer individuele, toevoeging aan het bestaande ondersteunings systeem.

Collectieve versus persoonlijke memo's

Uit het onderzoek kwam naar niet duidelijk naar voren of, en zo ja, in hoeverre, de persoonlijke memo's effectiever waren dan de collectieve memo's. Wel is echter gebleken dat de collectieve memo's meer kosten-efficiënt waren. Verder onderzoek naar het gebruik van de kant-en-klare collectieve memo's, waarbij van tijd tot tijd een persoonlijke opmerking wordt toegevoegd, wordt aanbevolen. Op deze manier wordt het mogelijk om de memo's voor te bereiden aan het begin van de cursus en ze toch een persoonlijk tintje te geven.

Slot opmerkingen

De MMSS studie heeft aangetoond dat motiverende communicatie in afstandsonderwijs effectief kan zijn. Het heeft tevens laten zien dat een dergelijk communicatieproces niet erg tijdrovend hoeft te zijn. In het geval van het College werd aangetoond dat de motiverende interventie plaatsvond zonder dat daardoor de tijd die begroot was voor studenten ondersteuning noemenswaardig overschreden werd. Kosten verbonden aan het ontwerp, de produktie en de verzending van de motiverende memo's zouden een bescheiden verhoging van de cursusgelden kunnen vereisen.

Verschillende soorten memo's en mogelijkheden om ze te integreren in het studentenondersteuningssystem zijn besproken. De MMSS studie heeft aangetoond dat het mogelijk is om het slagingspercentage te verhogen, en dat daarbij de leerervaring van de studenten binnen de context van het afstandsonderwijs, een toegevoegde waarde krijgt. De MMSS heeft echter gefunctioneerd binnen een ondersteuningssysteem dat elementair, haast ouderwets, was. Veel afstandsonderwijsinstituten gebruiken telefoon, fax en E-mail om hun studenten te ondersteunen. Dergelijke hulp concentreert zich echter meestal uitsluitend op de cognitieve behoeften van de studenten, en niet op hun affectieve behoeften. Het spectrum van mogelijkheden om te leren verandert langzamerhand en afstandsonderwijs biedt steeds meer mogelijkheden. Dat maakt het echter ook steeds belangrijker dat, met de toegenomen aandacht die afstandsonderwijs krijgt, motivatie als onderdeel van de interactie tussenbegeleider en student en tussen studenten onderling in termen van affectieve behoeften, als een integraal onderdeel van studentenondersteuning wordt gezien. Net als de ontwikkeling van leermaterialen en de evaluatie van studenten en van cursussen, en net als het verschaffen van cognitieve en administratie ondersteuning, moet motiverende steun een deel van het studenten ondersteuning proces worden. Als de MMSS studie een bijdrage heeft geleverd aan de bewustmaking van het belang van motivatie dan worden de drie jaar die aan deze studie zijn besteed, beschouwd als een nuttige bijdrage.

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Annexes

The Development of Motivational Commmunication

in

Distance Education Support

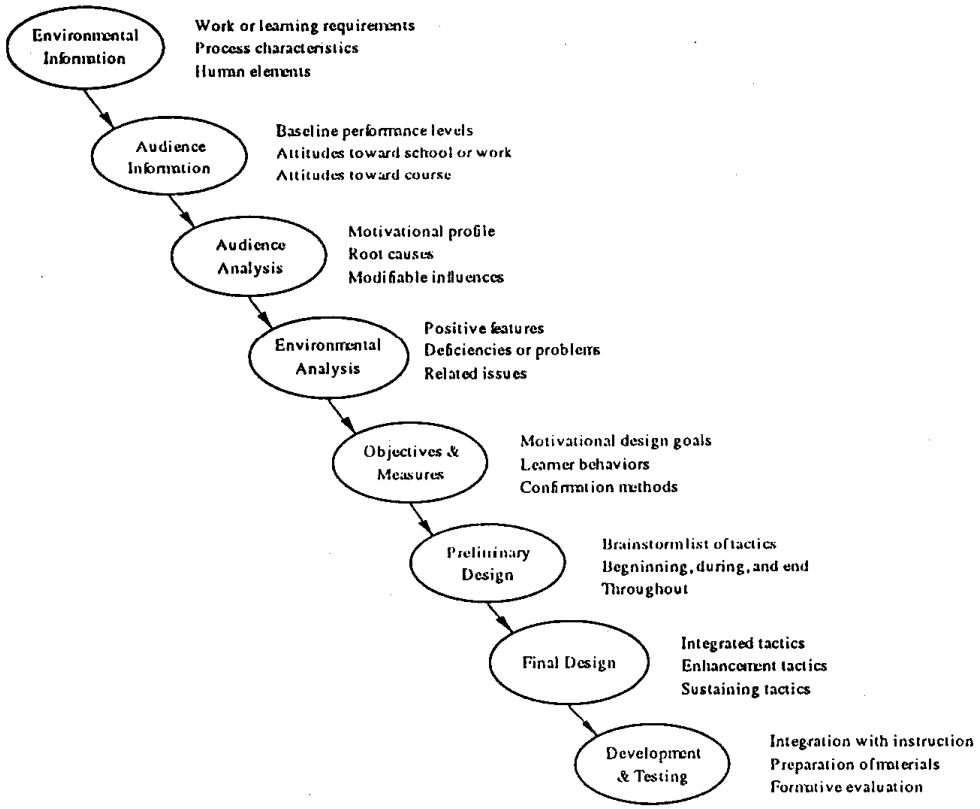
Motivational factors and subcategories of the ARCS model

(Adapted from Keller, 1987b; J. Visser, 1990)

Categories and subcategories		Process questions:
Attention:		
A1	*Perpetual arousal*	*What can I do to get the attention and interest of the learners?*
A2	*Inquiry arousal*	*How can I encourage the learners to adopt an attitude of questioning?*
A3	*Variability*	*How can I keep the learners focussed on the course?*
Relevance:		
R1	*Goal orientation*	*Do I know my learners' needs?*
R2	*Motive Matching*	*How can I give my learners appropriate choices and responsibilities?*
R3	*Familiarity*	*How can I tie the feedback to the learners' experience?*
Confidence:		
C1	*Learning requirements*	*How can I help learners to develop a positive expectation for success?*
C2	*Success opportunities*	*How can what learners learned help them to believe in their own competencies?*
C3	*Personal control*	*How will learners know that success is based on their own efforts and abilities?*
Satisfaction:		
S1	*Natural consequences*	*How can I help learners to use their newly acquired knowledge and skills?*
S2	*Positive consequences*	*What can I do to reinforce the learners' successes?*
S3	*Equity*	*How can I help learners to get positive feelings about their accomplishments?*

Annex 3.2

Steps in Motivational Design (Keller, 1988)



Annex 4.1

GUIDE FOR TUTORS INVOLVED IN THE MMSS

Thanks for participating in the 1997 research. Your help is most welcome!

The framework

As we have already discussed four tutors will be involved:

- Course D tutor
- Course C tutor
- Course B tutor
- Course A tutor

We will work using two different types of motivational messages in the tutoring. The following table shows how each tutor is involved:

type of motivational message	tutor involved	course
collective approach	course C and course B1[1]	tutors:
personalized approach	course B2 and course D	tutors:
conventional approach	course A	tutor:

The personalized approach

The content of the personalized motivational messages will be based on an initial motivational needs assessment, research done such as reported by Robinson (1995), on the outcomes of the MMSS pilot study, on the design for motivational support (Chapter 3) and on the carefully monitoring of the motivational disposition of the learner during the course duration. This means that messages might be designed especially for individual learners or that a message for the whole group will be used and that additional motivational remarks are made on the message. For this approach a basic timetable will soon be supplied.

The collective approach

Collective motivational messages will be based on an initial motivational needs assessment, on research done such as reported by Robinson (1995), the outcomes of the MMSS pilot study, on the motivational messages support design in Chapter 3, and on the

[1]For the research course B will be divided into two equal groups: course B1 and course B2

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results of the questionnaire sent out to the tutors of the 1996 courses of the College. The collective motivational messages will follow a basic timetable, soon to be supplied, consisting of around eight messages/communication.

The conventional approach

The conventional approach is based on the content of the Tutoring Contract of the [redacted]

The development of the motivational messages

Let me stress again and refer to our personal meetings in addition, that all motivational messages will have to be developed in such a way that they take the four motivational categories of the ARCS model into consideration. You might find it helpful to refer to the results of the pilot project which you have received some time ago. As agreed the planned messages will first be sent to the researcher to make sure that they are in line with the objectives of the research.

I hope that our discussions during my visit, the reprint of the publication of Visser and Keller (1990) and the copy of the presentation for the ICDE world conference paper (Visser 1996), which have been sent to you have been helpful in gaining more insight in the use of the ARCS model of motivational design and in its use in both conventional and distance education.

A preliminary timetable will soon be sent to you for your approval. The outcomes of the pilot project show that the idea that the learner is part of a group of students, who are all working towards the same goal (finishing the course as soon as possible) seems to be very important. We might decide on sending out such a motivational message in annex, to be distributed in the early months of the course. For the collective approach all messages will have to be developed before 30 April by the course tutor. The tutor and the researcher will discuss the messages to make sure that they fit the research objectives.

In annex you find a copy of the initial questionnaire, which will be used to get information on the audience. It has been designed for the use in both the personalized and the collective approach. As the [redacted] does not have details about the personal and the work circumstances of the learners, the audience analysis also deals with questions related to personal and work circumstances.

Time monitoring

It is very important that all tutors, also the one who provides conventional support, write down the time spent on the tutoring. For this a special form (a logbook sheet), which is supplied in annex, can be used This includes the time spent on the design of the motivational messages and the registration of feedback. Thus all the time spent on each individual learner should be recorded, resulting in the total tutoring time spent on the course.

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Feedback

Tutors will use record all exchanges the have had with the students. For this the time log sheet can be used. In order to preserve the confidentiality of the learner they will use the course number and give the learners a letter. Tutors are asked to send copies of the results of the audience analysis questionnaire to the researcher as soon as forms are received back. You may occasionally get feedback via the [redacted] or maybe another institution or person. This feedback should also be carefully noted down: please indicate date and person and send copies of documents. Letters etc. to me.

General

I would appreciate it if tutors if they have questions, suggestions, ideas or just want a chat get in touch with me. I hope that we, together, can use this opportunity to think about effective and efficient methods to improve the support to our students. It might easy if you have the e-mail addresses/fax numbers of your colleagues who participate in this research. They are included here.

If there is still additional information you will need to make the research a success or to facilitate your tutoring, please let me know. Please be assured that I do consider the research a common effort and I hope that we can use our electronic links and the data acquired to give the results a broader use that just a Ph.D. research.

Kind regards and Courage,

Lya Visser

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RESEARCH ON MOTIVATION / COMMUNICATION

COURSE:
SHEET #:
STUDENT#:

date	in/out*	type*	description	tutor's observations	time**

*Please use following abbreviations for "type":
Motivational Message MM; Tutor Marked Assignment TMA; Letter L; Questionnaire Q; Other X
**Time in minutes

Annex 4.3

Time monitoring TMAs course 4 Diploma/MA in Distance Education **1997**

Name or number	TMA 1	Time min.	TMA 2	Time min.	TMA 3	Time min.	TMA 4	Time min.	Exam yes/no	

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STUDENT SUPPORT QUESTIONNAIRE

Course number: Student number:

Please complete the following questions.

General Information

1. Family name: First name:
2. Date of birth:
3. Address:

4. Work telephone: Home telephone:
5. Work fax: Home fax:
6. E-mail address:
7. Which is your preferred contact address?

Information about your background and circumstances:

8. Please give some details such as courses completed, level attained etc. about your previous education.

9. Have you done any other course via distance education with other institutions? Yes/no
If you answer to question eight is yes, could you please give some further information about courses and dates.

10. When did you start studying this course? --------

11. If you started this course last year, or in an earlier year, what items of course work have you already submitted TMAs Exam

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12.	How many hours do you think to have available for studying per week?		------
13.	Do you plan to sit the exam for this course this year?		Yes/no
14.	Do you have access to:	Radio	Yes/no
		Television	Yes/no
		Cassette recorder	Yes/no
		Video	Yes/no
		Palsystem or secam:	--------
		Computer	Yes/no
15.	Do you have access to a library with study books?		Yes/no
16.	Could you please tell us a little about why you are taking this course?		
17.	Studying is not always easy, especially if you have to learn via distance education courses. What kind of difficulties do you expect studying for this course?		
18.	Could you make suggestions as to what the could do for you to make studying easier?		
19.	We hope you will work closely with your tutor this year. Could you indicate what sort of help would be most useful to you?		
20.	Do you think that you will use what you learn this year in your daily work? If your answer to this question is yes, could you tell a bit more about how you will apply what you learn?		Yes/no
21.	Do you consider the fact that your tutor has successfully finished courses via distance education important?		Yes/no
22.	Many students finish their course within the planned period of eight months. This year we will work very hard to get all the students to take the exam or finish the project. This may require a tutor's and your hard work. Would you be interested, if necessary, in getting extra advice and help?		Yes/no

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23. Would you like to receive names and addresses of other students in this course and can we give your name and address to fellow students? Yes/no

24. Have you already finished other Diploma/MA courses? Yes/no

If your answer is yes, please tell which courses you have done?

To finish this questionnaire we would like you to tell a little more about your daily circumstances:

- Do you work full time? Yes/no
- Do you work more than 30 hours per week? Yes/no
- Do you work more than 20 hours per week? Yes/no
- Do you have children at home? Yes/no
- If you answered yes, how many children do you have? -------
- If you want tell something about these activities:

- Other remarks you may want to make:

Date: Signature:

- Please note that if you are interested in a close cooperation with your tutor it is very helpful if you fill the questionnaire out and return it immediately. An envelope is enclosed.
- Thanks for taking the time to complete this student support questionnaire.
- You can, of course, be sure that the information you have given will be used in strict confidence.

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EVALUATION QUESTIONNAIRE ON STUDENT SUPPORT USED IN COURSE

I hope you remember that at the beginning of this course year I have asked you to give information about yourself and about what you expected me, as your tutor, to do for you during the course year.
In this questionnaire you are asked to evaluate the student support you have received this year for course . Please fill the questionnaire out by putting a circle around the correct number or letter. The following key is used:

1 = agree strongly
2 = agree partly
3 = disagree partly
4 = disagree strongly

A. I received the following communications and little notes during this course year. Please look at the attached sheet for the letters (A,B,C etc) and fill out the letters for the notes etc. you received.

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

B. The letter/note I liked best was communication/note ☐
Remarks:

The letter/note I did not like was communication/note ☐
Remarks:

C. The letter I received which invited me to fill out a slip to help me with the planning of the TMAs was helpful

1 2 3 4

Remarks:

D. The notes and letters I received during the course year encouraged me to go on with the course

1 2 3 4

Remarks:

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E. The presentation (drawings) of the little notes was stimulating

1 2 3 4

Remarks:

F. During this course year I was looking forward to receiving the little notes

1 2 3 4

Remarks:

G. Without the little notes and the other messages I would not have continued my course

1 2 3 4

Remarks:

H. If I do another course with I would like to receive the little notes again

1 2 3 4

Remarks:

I. The little notes/messages have contributed to my pleasure in the course

1 2 3 4

J. The little notes/messages have made it easier for me to finish my course this year

1 2 3 4

K. I think that the purpose of these little notes has been to.....

.....

L. In some cases the tutor has frequently been in touch with you via e-mail, fax or even telephone. If this has been the case could you please answer the following questions:
My tutor has frequently (more than 3x) been in touch with me via e-mail ☐
My tutor has frequently (more than 3x) been in touch with me via fax ☐
My tutor has used a combination of fax and e-mail more than 3 x during the course ☐

Remarks:

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M. This has stimulated me more than receiving the little notes

1 2 3 4

Remarks:

N. I think that this combination of little notes and fax/e-mail has been very encouraging

1 2 3 4

Remarks:

O. If I do another course I would like to receive student support through a combination of little notes and fax/e-mail

1 2 3 4

Remarks:

P. If I do another course only fax/e-mail support would be sufficient for me

1 2 3 4

Remarks:

Q. If I do another course only the little notes would be sufficient for me

1 2 3 4

Remarks:

R. I enrolled in course For the first time in 1997 1996 1995 1994 1993

S. I did the exam for course this year Yes/no

T. I am selfpaying ☐
I am partly self-paying ☐
I am sponsored ☐

U. I am married/living together Yes/no

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V. I have children at home Yes/no

W. I work full-time Yes/no
I work part-time Yes/no
I do not work Yes/no

X. I have successfully completed the following courses(s) of the Diploma/MA in Distance Education:
Course..... in .....(year)
Course..... in .....(year)
Course..... in .....(year)

Y. As well as course I have also done course.....this year

I finished it and did the exam/project Yes/no

Z. To get support from my tutor I can use: telephone ☐ fax ☐ e-mail ☐ other ☐

In my contact with my course tutor this year I have mainly used.....

My previous education is
- secondary school ☐
- Teacher Training College ☐
- Tertiary Education BA or equivalent ☐
- Tertiary Education MA or equivalent ☐
- Tertiary Education Ph.D. ☐
- Other (specify) .....

I would like to make the following remarks: (You can continue on the back of this paper).

Name (optional).

Please make sure that you have filled out, or encircled, all the items.
You can choose one of the following options to send this questionnaire back:

- You can send it to me, using the enclosed envelope with my name and address
- You can send the questionnaire to making use of the enclosed envelope.

Unfortunately I cannot provide you with a stamped envelope.

Thank you very much for participating in the course this year and for filling this questionnaire out. It will help me to improve my tutoring and this, in the end, will benefit both of us: the student and the tutor

Annex 5.1

G

Mr. [redacted]
P.O. Box [redacted]
[redacted]

March, 1996

Dear

First a warm welcome to the Development of Distance Education Course. This letter serves partly to tell you that I am going to tutor you this year, and to give you some advice on the course and on the assignments you are going to do this year.

Let me first give you a personal introduction with some background details of my career. From 1977 till 1985 I taught English at the Eduardo Mondlane University in Mozambique. After having worked for eight years at the University, I decided that it would be nice to work in training and I accepted a job offer from the International Trade Centre (GATT) to teach Business Communication and Management. When I moved to Zimbabwe in 1990 I accepted a few short term contracts with the International Labour Organisation, working in instructional design and evaluation of course materials.

In the meantime, I had taken a number of courses, mainly in the field of management and training with the Open University of the Netherlands. It was such a positive learning experience that I decided to take an MA in Distance Education, studying via the external degree programme of the University of London and with [redacted]. I finished last year. So I am familiar with the experience of studying via distance education and I consider it a real challenge.

By now you will, I think, have already found a study pattern and started on Block A. I suggest that you do the units in the order they have been developed. Read the assignment booklet at the outset and prepare a plan when you want to send in your assignments. I would be happy if you send me a copy of your plan so that I can help you to finish in time. Let's make sure that all students of Course 2 are going to complete their course this year!

Whenever you need my help, have questions, or just want to discuss something, please do not hesitate to contact me via the [redacted] office. I know from experience how important it is to stay in touch.

I do look forward to working with you and I hope to receive your first assignment before the end of April.

Yours sincerely,

Lya Visser

Annex 5.1

H

Dear [redacted]

Last month I sent you a letter to introduce myself. As you have seen from that letter I have done the same course as you are doing now and I found it not always easy to keep going and to get my Assignments ready in time.

One these days I expect to receive your first assignment and I am really looking forward to see how you are doing. {Please remember that and I, as your tutor are there to help you, so if you have any problems don't hesitate to write. If you want to finish the course this year, and I am sure that is what you have planned, it is important to send in your TMAs in time. To help you with your planning I would like you to return the slip and indicate when you think you will send me your various TMAs. During the year I will then get in touch with you to encourage and/or remind you.

The group I tutor consists of 14 students coming from 11 different countries. Some of them have started their course already some time ago, for others this is their first year. This year, I think, we should aim at getting everyone to sit the exam. As a group we can prove that distance education can be very productive.

Good luck and I hope to hear from you (soon!),

Please send me this copy (via[redacted]), mentioning that it is for me) Thanks, LYA

I, , plan to send in my TMAs around the following dates:

TMA 1 .....

TMA 2 .....

TMA 3 .....

TMA 4 .....

You can get in touch with me via: Fax # .....
E-mail .....
Postal address .....

A

I haven't heard from you for a long time!

About three months ago you have started course 2 of the MA and Diploma in Distance Education Course. Up to now I have not heard anything from you and I wonder whether you are experiencing some problems in getting on with the course.

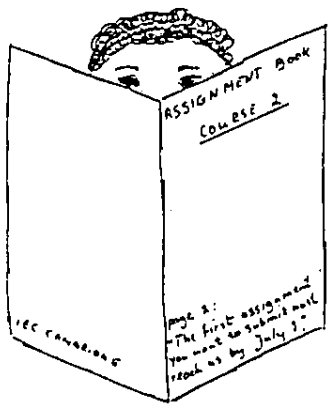
Have you received my letter inviting you to send a plan regarding the TA's you are going to do this year? I would really appreciate it if you could send me a note telling how you are coping with your studies.

I know from experience that studying via distance education is not always easy but I'm sure you can do it!

Kind regards and hope to hear from you soon,

Lya Visser (Course 2 tutor)

B



Please note that we have not yet received your first assignment for course 2. You were supposed to send it in before July 1.

It's quite well possible that you have sent it already and that we will receive it in time. Then , thanks for the good planning.

If you have not yet sent in your first TMA, I suggest that you work hard on it and make sure that it will be in Cambridge by July 20, at the latest.

I am very sure that you can do it. I promise that I will correct your TMA immediately so that you have your feedback without delay.

Don't forget sending in the first TMA is difficult, but your second one will already be easier!

Good luck,
Lya Visser (tutor course 2)

C

I'm still waiting for your first TMA!

Although we tried hard to get everyone to send in their first assignment before 1 July, we have not been entirely successful as your TMA has not yet arrived.

If you plan to sit the exam for course two this year you should really send us assignment one now.

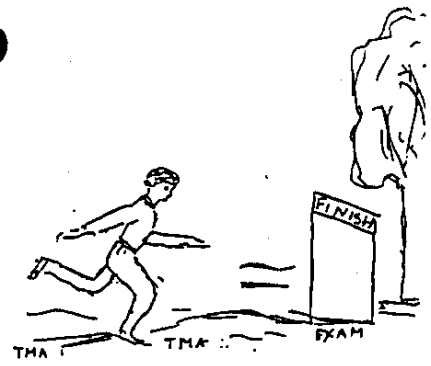
Give yourself a chance and finish it quickly and get it to Cambridge. You may even fax your TMA.

I look forward to receiving your work. As always if you need any help please get in touch.

Good luck!

Lya Visser (course 2 tutor)

D



Where are you?

If you plan to sit the exam for course two this year, you would do wise to send off your second assignment by the end of August. This will give us time to give you feedback and for you there will be time enough to revise.

Don't forget you have to send in a minimum of two assignments, but you may send in four. The two best TMA's will count towards your final mark.

Be quick, go for the finish and send in your second TMA now.

Kind regards,

Lya Visser (tutor course 2)

E

You're one of them .....

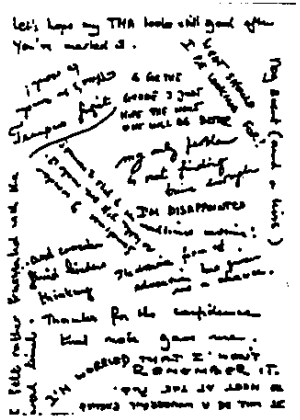
You are one of the students of course two who are going to sit the October 1996 exam. Congratulations that you have come so far.

I wish you lots of good luck. Don't be nervous - just make sure that you plan your answers well and show the examiner that you have learned a lot this year.

For those of you who are accustomed to using a computer, remember that handwriting is more time consuming.

Good luck and you can do it!

F



November 1996

We have come to the end of this course year.

For those of you who have done the Course II exam - congratulations!

For those of you who will sit the Course II exam next year - Courage - you, too, can do it!

I've enjoyed working with you. Thanks for the many nice letters and messages I've received.

I hope we will get another opportunity to work together.

Lya Visser

PLEASE TURN OVER

Annex 5.3

Dear Course [redacted] Student

Enclosed is a questionnaire from your tutor for this past year, Lya Visser. Lya has been developing some creative approaches to communicating with her students, and is now wanting to assess the effect of these approaches on students' experience with the course. Hence her questions, which she asks you to answer and return.

Just as Lya is working hard to assist you in your studies, we are supporting her as she looks for ways to more effectively support her -- and our -- students and to facilitate students' learning. We hope that you will take a few minutes to complete this questionnaire and return it to us. To preserve the confidentiality of the information you have provided, we ask you to put your return address on the outside envelope only, please, the one that comes to us. We will discard this envelope, and forward on to Lya only the sealed, internal envelope that contains your completed questionnaire.

Thank you for you cooperation in this. The information you provide will, we hope, help us improve our service and support.

With all best wishes

[redacted]

[redacted]
Executive Director

Annex 5.4

EVALUATION QUESTIONNAIRE ON STUDENT SUPPORT USED IN COURSE

In this questionnaire you are asked to evaluate the support you have received during the course year in keeping you motivated to work on Course xxx.

I doing this I would like to ask you to put a circle around the correct number. Your comments will be very helpful to improve the support we offer to the students.

5 = agree strongly
4 = agree partly
3 = neither agree nor disagree
2 = disagree partly
1 = disagree strongly

A. I received the following letters and little notes during the course year. Please look at the attached sheet for the letters (A, B, C etc) and circle the letters of the notes and letters you have received

A B C D E F G H

Remarks:

B. The introductory letter, I received when I started the course, helped me to make a good start

1 2 3 4 5

Remarks:

C. The second letter I received, which invited me to fill out a slip to help me with the planning of the TMAs was very helpful in my subsequent course work

1 2 3 4 5

Remarks:

D. I liked receiving letters more than little notes

1 2 3 4 5

Remarks:

Annex 5.4

E. The little notes I received during the year encouraged me to go on with the course

1 2 3 4 5

Remarks:

F. The presentation (drawings etc) of the little notes was not stimulating

1 2 3 4 5

Remarks:

G. During this academic year I was looking forward to receiving the little notes

1 2 3 4 5

Remarks:

H. Without the little notes I would not have continued my course

1 2 3 4 5

I. The little note I liked best was note letter.....
The reasons for my liking this little note best are the following:

J. The little note I liked least was letter.....
The reasons for my liking this little note least are the following:

K. I like the drawings on the little notes

1 2 3 4 5

L. Next year I do not want to receive these little notes

1 2 3 4 5

M. I think that the purpose of the little notes has been to: (please fill in why you think you received the
notes).....

L. I enrolled in course two in: 1996 1995 1994 1993 1992

M. I did the exam for course two this year (1996): yes/no

Annex 5.4

N. I am self-paying yes/no

O. I am married/living together yes/no

P. I have children at home yes/no

Q. My previous education has been:

secondary school	yes/no	tertiary (BA) level	yes/no
tertiary MA level	yes/no	Ph.D.	yes/no
other.....			

R. I have successfully completed the following courses of the Diploma/MA in D.E.
.....

S. In 1996 I have also studied course(s):.....and did/did not sit the exam.....

T.

I work full time	yes/no
I work part-time	yes/no
I don't work	yes/no

U.

To get in touch with the	I can use:	telephone	yes/no
		fax	yes/no
		E-mail	yes/no
		Other	specify

V.

What I learn in the courses I use very often in my work	yes/no
What I learn in the courses I use sometimes in my work	yes/no
What I learn in the courses I do not use in my work	yes/no

- Name: (optional)
- Please check carefully that you filled out, or encircled all the items.
- Unfortunately we cannot provide you with a stamp, but please use the enclosed envelopes.

Thank you for assisting in this evaluation.

Please use the remainder of this sheet if you still want to make other observations or if the space provided is not enough. Don't forget to give the letter when you add additional information on one of the questionnaire topics.

Annex 6.1

April 1997

Dear

Welcome to Course [redacted] I will be tutoring you this year and I hope to accompany you in getting all the course work done and finishing the course project in October, so that you will have the good feeling of having another course completed this year.

I'll first tell you something about myself. From 1977 till the end of 1993 I worked in a number of countries in Southern Africa. For eight years I taught at the University of Mozambique; after that I worked in training for international organisations. During these years I took courses with the University of Cambridge and with the Netherlands Open University. I liked studying via distance education quite a lot and saw that the diplomas I obtained over the years helped me in getting interesting and challenging jobs. This positive experience made me decide to enrol in the Diploma and MA courses of the University of [redacted] .I completed the MA course in 1995. Last year was my first year as a tutor for the [redacted] In addition I work as a consultant.

The good thing for both of us is that I'm familiar with the experience of studying via distance education. As to your new course I suggest that you study the units in the order they have been developed. Read the assignment booklet well and follow the advice it gives. I will shortly get in touch with you to help you to make a plan for your course work.

Please don't hesitate to get in touch with me whenever you have a doubt, or just feel that you need some encouragement. I am sure that you can finish the course in time if you just try hard.

I do look forward to working together.

Warm regards,

Lya Visser
Course Tutor.

Annex 6.2

Dear

My name is [redacted] and I should like to welcome you to Course[redacted] of the External MA/Diploma in Distance Education. I shall be your tutor for this course this year.

I hope you will find studying this course on the development of [redacted] Interesting and worthwhile. As your tutor, I shall be taking a very close interest in your progress and I look forward to establishing a dialogue with you and getting to know each other a bit through your assignments and my feedback to you on them.

I will do my best to make my feedback comments helpful to you as you pursue your studies and I do hope you will use me to the full by submitting your TMAs to a schedule. You find advice on this in your **Study Guide** and **Assignment booklet**, and I recommend you study both of these booklets right away (if you haven't already done so); they will help you organise your study and your work on TMAs.

So maybe I should now tell you something of myself. I work full-time for [redacted] Based in [redacted] As Training Coordinator. I have been in this job for a little over two years now. As well as tutoring on this distance course, I coordinate short face-to-face courses and do consultancy and training work overseas for [redacted] . Before this I worked for four years in [redacted] where I was distance education adviser to an in-service teacher education project. My first job in distance education was as developer and coordinator of a distance education English teaching course in[redacted] ,where I spent three years. Prior to that my background was a teacher of English as a foreign languages, working in [redacted] I am married, my wife is an [redacted]

I myself have completed the MA in Distance Education. I started studying it while I was in [redacted] And finished it back here in the UK. So I think my experience 'on the sharp end' of distance education will help me to empathise with you and understand your experience as a student on this course.

As regards your own studying, do persevere, even if you feel daunted by the prospect sometimes or suffer a setback: I can tell you from my own experience, it's worth it even though it's hard work and it won't always be easy to find the time (or maybe the motivation) to study.

Thinking back to my own studies, the most important advice I'd offer you at this stage would be on the following three points: schedules, resources and getting started.

- Schedules. Get organised and assess the task you have set yourself for this year. Plan your study schedule over the period between now and the exams at the start of November. Become fully familiar with the course materials, the study guide and the TMA booklet, and use these to plan out a study schedule for this. When you have decided your schedule, write it out as a table or on a calender or diary, where you can refer to it easily. In planning your schedule be realistic - allow time for other things in your work and life which you know will

Annex 6.2

take time at certain points, and plan your study around these. Leave yourself a bit of spare time in the schedule at the end, to revise and to enable to catch up if - as almost everybody does - you find you run behind schedule.

•Identity your resources.
Where will you study? At home? In the office?
When will you study (before the children get up? In your lunch hour? Can you negotiate and protect some time at work for study? - After al, it's to the benefit of your organisation
Who can help you? Apart from myself and [redacted] Administration, can you get help from a colleague as a mentor? Is there another student you could study with regularly? Are your family and work colleagues aware of your study and the time and support you'll need to succeed? Can they help you?
Have you got a file for your notes, paper, pens and pencils, and a place to keep your course materials and notes neatly, securely and accessibly?

•Get started and submit your first assignment early. There's an old song, "I can't get started with you!" - and, for many people, getting started is one of the hardest steps. It's like starting a car - once it's going, it's much easier to keep going. It's all too easy to put off opening the course file until you have time - which is almost always **next** weekend! Don't delay: start reading and you'll soon find you have completed the first unit.

•Focus on getting your TMA written and sent in. Very often, students feel a psychological block at doing this: you may feel you need more time to perfect your TMA...well, do write two or three drafts and take care to make it presentable; but don't think it has to be perfect. No distance learner has ever achieved perfection, but many have failed ever to submit a TMA because they felt unable to do so until it was perfect! So I recommend you get the first assignment in and proceed with your study of the next unit. I'll return your TMA with my feedback as quickly as possible, but don't stop studying while you wait for this feedback.

You may think all this advice is unnecessary - and I'll be delighted if you sail through your studies with no 'hiccups'! But I know I had times when I slipped behind schedule, and times when I panicked at how big the task seemed. But you can succeed - if I did, so can you. I'm not a great academic: I took the MA because I want to know more about distance education and gain a professional qualification in it.

From my study of Course [redacted] I feel I now understand better the background and context of what I do in distance education and this helps me in my work. What do you hope to gain by studying this course? It may be interesting to not down your expectations at this stage and to look back when you have completed the course.

I wish you good luck in your studies.

Annex 6.3

April 1997
Dear

I am writing to introduce myself as your academic tutor for Course D. I must apologize for this introductory letter being so late. There appears to have been some confusion in the [redacted] office over getting these letters out. I hope that future correspondence will be more timely. I'll certainly do my best.

Welcome to the course. I hope you will find it both useful and enjoyable. I am certainly looking forward to seeing your assignments and helping you whenever I can over the year. It is very unlikely that we shall meet, but I hope I can be of help in what will be an intensive study period for you.

Let me give some background information about myself. I was associated with the London [redacted] for many years, having studied for both my MA and my doctorate in the [redacted]. I have also taught on various courses in the same department and worked on a variety of projects with other staff.

My main overseas experience comprises twelve years in [redacted] and six years in [redacted] Although I have been mainly involved in science education - including teaching - I have a wide interest in most aspects of education. In the last two years or so I have been involved in [redacted] Since last September I have been a lecturer at the University of [redacted]

As far as your course is concerned, I suggest you to keep to the order A, B, C, D in studying the Block in Course D. Continue to refer to the Study Guide, make sure you read the assignment booklet at the outset and lose no time in preparing your first assignment. You may find the idea of writing an assignment rather daunting to begin with, especially if you have done little academic writing before, or have done none for some time,. My advice is to get into it as soon as you can. Write and re-write. Don't expect to be able to get an assignment right full time. Organise your ideas into plan, then write a draft based on that plan, then re-read your draft and try to be self-critical before writing a new version. A good assignment usually has to be developed rather than appearing all in one go.

When I mark your work I will try to be quite critical and to give you detailed feedback. I hope I do this in a way that is helpful to you in developing your academic writing skills. But do remember that I can be of help to you on future assignments, if you get the first ones off to me as soon as possible . Don't leave all assignments until the last minute, because there will be no opportunity for you to make use of the feedback.

I shall try to communicate with you at regular intervals, but please do write to me whenever you feel I might be able to help. If you write c/o [redacted] they will make sure your correspondence gets to me without delay. I look forward to seeing your first piece of work,

yours sincerely

Annex 6.4

Vernouillet, 14 May 1997

Last month I sent you a letter to welcome you to Course[redacted] and to offer you my help in making sure that you will sit and pass the exam in the beginning of November. I'm sure that you have by now already done the first few units of the course. Was it difficult to get in the rhythm of studying on your own?

In my letter I mentioned that I have done the same course as you are doing now. I did not always find it easy to keep gong and to send my TMAs in on time. That's why I would like to offer you help to bring some pacing into the course. At the bottom of this letter you find two slips which you can fill in to indicate when you plan to do the assignments. Please send the top one SOONEST to me; I will then get in touch with you to encourage and or remind you,. You should keep the other one yourself, fill it out and put it in a place where you see it daily., I remember that I made one for myself and stuck it on the mirror in the bathroom. Not a bad place I think. You group consist of twenty-five students from a great variety of countries. Some of you were my students in course 2, others are new. I hope to send you a list of your colleagues soon.

Please use the enclosed envelope to send your slip back to me. Remember that it is important to stay in close contact with your tutor, which also means trying to keep turn-around time to a minimum.

Kind regards,

Lya Visser (tutor course[redacted])

✂To be sent to tutor

I.....plan to send in my TMAs around the following dates:

TMA 1	.....	
TMA 2	.....	
TMA 3	.....	
MINI-project	.....	Date:

✂To be kept by you

I am going to send in my first TMA by	.....
I will send my second TMA by	.....
My third TMA will go out by	.....
The Mini-project will be finished by	.....

Annex 6.5

Hello, I wrote you a few weeks ago to introduce myself as your tutor for course [redacted], so I hope you feel you have some idea of whom I am from that letter. As you will know, I myself completed this course as a student, so I think I am in a good position to help you and to understand some of the difficulties you may face as a distance learner.

My role is to help you make progress in your study of this course and to make sure that you finish this course in time. I will not only give feedback on your TMAs, but I also want to help you to plan your course work and to ensure that you send in your TMAs in time. We found that many of those who sent in the first TMA in time, managed to successfully sit the exam that same year. I'm sure you want to be one of them.

Don't forget studying of your TMAs can be a very useful way of structuring your study schedule. The feedback you receive will give you an idea on how you are progressing in the course and where you might do well to concentrate in the future. The grades you get contribute directly to your overall assessment grade for this course (40% for continuous assessment and 60% for the exam).

To help you and me plan our workloads and set some targets during the year, it would be very useful if you could let me know when you plan to send in your TMAs. Please fill in the attached slip and return it to me SOONEST. By doing so you communicate your interest in working together.

Don't hesitate to contact me at any time or at any point in relation to your study of this course. You can reach me via the [redacted] and use phone, fax, or e-mail.

Best wishes,

[redacted] (Tutor course[redacted])

✂----------

I,.....plan to send in my TMAs around the following dates:

1st TMA .....
2nd TMA .....
3rd TMA .....
4th TMA .....

Other remarks you want to make:

I suggest you keep a copy of your "promise" and put it up somewhere so that you will see it daily.

Annex 6.6

[redacted] 1997

Dear

Last month I sent you a letter welcoming you to Course[redacted] and introducing myself as your course tutor. I hope I am going to be able to help you with the course and help you to prepare for the examination later in the year. I expect you have already begun to work through the materials and I hope you have not found it too difficult to get into a pattern of working. My personal experience with a distance education course and with tutoring others on this course is that planning and pacing your work can be of great help. It is often very difficult to get the Tutor Marked Assignments (TMAs) done on time, so I suggest that you try to set yourself target dates for these and between us we will try to meet these targets. You set the targets and I remind you or 'chase' you if you slip from them!

To assist you in this you will find two schedule planners on an accompanying sheet of paper. I suggest that you fill in both of these, then keep one for yourself in a place where it will act as a reminder. Perhaps put it somewhere where you will see it every day. The other can be sent to me in the enclosed envelope so that I know your intended schedule and can try to help you stick to it.

It is possible that you have already done your first TMA and sent it to [redacted] Congratulations if you have. I look forward to receiving it and sending you some feedback on it. In that case you will have only three dates to fill in.

Could I also take this opportunity to remind you of the questionnaire I sent you with the introductory letter. If you have not yet completed it and returned it, perhaps you could send your TMA schedule and the completed questionnaire back together. It really is very helpful if I know more about you. You may like to know that you are one of the fifteen student on Course from twelve different countries and five continents.

Yours sincerely,

[redacted]

Keep this copy to your self:

Course [redacted]

I am going to send my first TMA by .....
I am going to send my second TMA by.....
I am going to send my third TMA by.....
My last TMA will be send in by.....

Tear along the above line and send this copy to me in the enclosed envelope

I.....plan to send my Course [redacted] TMAs in around the following dates:

TMA 1: .....
TMA 2: .....
TMA 3: .....
TMA 4: .....

A

Why not work together?

About a month ago I sent you a questionnaire to fill out so that I would know a little bit more about you and your circumstances. Up to now I have not yet received it back.

The idea was that, if we know each other better, our working together would benefit. There are still six months left for you and me to make sure that you finish course three this year.

Let's use the opportunity and work hard so that you get the course done by November. I'm sure that you will enjoy working with me. So please send the questionnaire back immediately. You can also fax it. My number is 33.1. 39280811.

Hope to hear from you soon and keep going!

B

I would like to remind you that, according to your booklet your first TMA is due by the end of June. I hope by now you are working on it.

Please make sure that you follow the instructions, include the reference list, keep a copy and then just send it off. I'll correct it immediately and return it with my feedback.

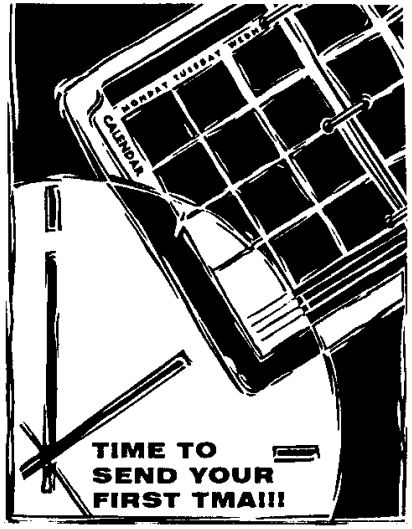
So get it done and you will feel good that it is out of the way. Having sent in your first TMA increases your chance to finish in time very much.

You, too, can do it!

Warm regards,

Lya Visser

C

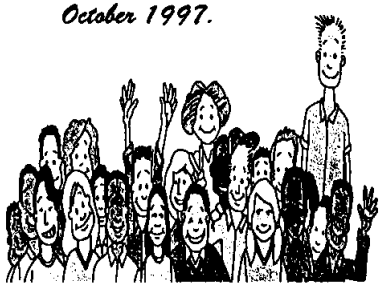


I have received quite a few TMA's already, but yours is still missing. If you have problems, do get in touch with me and we will work out a solution. Otherwise just set about ten hours of your time aside (less than one weekend) and get it done. You will feel good when you have taken this first important step towards completing your course work in time.

Remember, we are working together to get you to finish the course this year.

D

You're are part of a group of 27 students, all working to get their course finished by October 1997.



You have already done quite a lot this year. Let's have a look at what has happened. You have worked on your own, you have sent in a first assignment and now you will soon send me the second or maybe the third one.

What is equally important is that you, yourself, have become an advocate for distance learning by proving that it is possible to learn on your own. There are still some hectic weeks ahead with lots to do, but we know that your hard work will have positive results.

Please make sure that you have two TMA's ready by now. Don't forget you are not alone; almost thirty colleagues are in the same circumstances, i.e. working hard and maybe stressing, but in the beginning of November I hope to tell you that all of you have done the exam!

Courage!

Lya Visser

E

You can count on me for feedback.....

By now you should be working on your mini-project. Don't forget that I am there to help you and to give you hints and advice.

Doing the mini-project is one of the most interesting parts of this course; it gives you a chance to be creative and to apply what you have learned.

So, don't hesitate to get in touch. It could be fun to work together on this.

F

THANKS!

Dear

We've come to the end of course 3. Many of you have finished it by sending in the mini project – Congratulations! Some of you will finish the course next year. Those, too, can certainly do it!

I would like to thank you for the nice letters, e-mails, faxes and calls I received and of course for all the TMA's and projects you've sent in.

It has been a real pleasure working together and I do wish you much personal happiness and of course success in your work! Yours,

Lya

A

Up to now I have not yet received your questionnaire back. Please send it in **NOW** as it is essential for me to know a little bit about you and your circumstances if I want to give you relevant support.

Looking forward to a speedy reply and wishing you success.

Jason Pennells
tutor course 2

B

Is that *your* first TMA?

Although many of your colleagues have already sent in their first TMA, I am still waiting for your TMA. It is, of course, possible that postal services take long, but I worry that you experience some difficulties that may delay sending in your first assignment. If that's the case, please get in touch with me.

The submission date is, according to your booklet, the first of July. Don't forget doing your first assignment is probably the hardest step in your whole education career. It will give you such a good feeling when you have finished it, so get it done, send it off and feel happy.

Good luck! I do look forward to reading your TMA.

Best wishes,

C

I received your TMA

What a pleasure to receive your TMA now already. I will soon give you feedback on it. It seems that you have really managed to get yourself going. If you continue in this way you will have ample time for revision and you will thus be well prepared for the exam.

If you have questions or need advice, don't hesitate to get in touch with me.

I'm confident that you will successfully complete this course.

Kind regards,

D

You and your colleagues.....

You and many of your colleagues all over the world are planning to sit the exam this year. I am proud of your decision and of the hard work you have already done. Don't forget that you have to send in a minimum of two TMA's. It is now time to send in your second assignment. It would be good if I receive it by the middle of September; in this way I can still send you feedback and comments so that you can use this info for your revision.

There is still sufficient time left; you are well on your way, go for it! I'll do what I can to help you-I promise to return your TMA's promptly.

De ring, write, fax or e-mail if you have the opportunity. I'll be so happy to call you my "ex" student in November. With a little more effort and hard work you will get it done!

Best wishes,

Jason

E

Soon you and your colleagues from all over the world will sit the exam.....

We are almost at the end of the course. You have come very far already and in another few weeks you and most of your colleagues will sit the exam Let me give you a few hints to help you to "enjoy" the exam.

First of all do the trial exam you have received carefully and monitor your time. If you are used to working on a computer it is important not to forget that handwriting is more time consuming and it is not easy to correct big mistakes.

Read the questions carefully when you are in the exam room, make your choice and answer the questions you ithink you know best. Examiners want to know that you have studied the course, so it pays to quote from the course. Don't be nervous, after all you have studied hard and this exam is just to show that you have learned a lot this year.

I am sure you can do it. Good luck!

F

From me to you....

This is the last of the little notes I'll be sending you, as we have come to the close of the course year. I have enjoyed the opportunity to get to know you a little and hope that you have liked the course.

To all of you I want to say thank you for all the messages, the TMA's and the chats. I have found it a very rewarding experience to tutor this course.

To those of you who have done the exam, congratulations and keep going. For those of you who have decided to sit the exam next year, I know you will get it done, too.

To each of you, do stay in touch. I hope we may meet at some point. All the best for your future and for your studies.

Jason

I had been hoping I would have received your first TMA by now.

Maybe it is in the post and simply has not yet arrived. If that is so, I look forward to reading it and you can safely ignore the rest of this message!

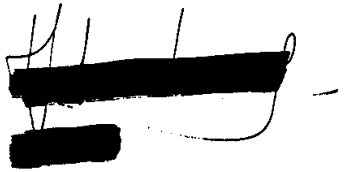
You may be having difficulty getting down to studying and writing. I do sympathise, having been through the same difficulties myself, and if it is of any consolation, I know you are not alone amongst those on the course this year. But, in my experience, the best cure for 'writer's block' is writing! Get something down on paper and send it off for feedback from me, because the real value of the first TMA in particular is that it gives me the opportunity to make constructive comments on your work. It is always useful to get feedback from the first before submitting the second.

If you are worried about 'not making the grade' on the first assignment, do remember that you can submit up to four assignments, with the best two counting. And anyway, how do you know you are not going to make it without trying. You are probably being too modest about your own abilities.

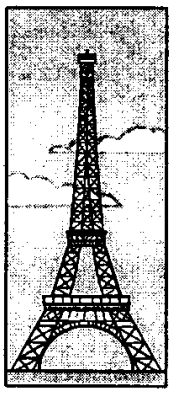
I know also that just finding time to get down to work can be a problem. If this is true for you, try drawing up your own personal work timetable AND FORCE YOURSELF TO STICK TO IT. Don't make a timetable that is over ambitious. Better to be realistic and achieve your target than over-optimistic and fail.

Anyway, I am still hoping I am going to hear from you soon, although I must point out that I shall be away from July 27 to August 15, and anything that arrives in that time will have to wait until I get back. (This is the first holiday I have had with my family for five years, and I intend to make the most of it!)

All the best



Annex 6.10



Thanks from Paris for sending in your TMA

I was very pleased to receive your TMA now already. Good work! I'll send it back very soon.

Keep going; you are well on the way. Hope you enjoy the course. Just work hard these last few weeks.

I know you can do it! Stay in touch!

Warm regards,

Lya

Annex 6.10

CONGRATULATIONS ON
SENDING IN YOUR TMA 1
SO QUICKLY. YOU'RE ON
THE WAY TO BEING VERY
SUCCESSFUL

Time monitoring TMAs course 4 Diploma/MA in Distance Education **1997**

Name or number	TMA 1	Time min.	TMA 2	Time min.	TMA 3	Time min.	TMA 4	Time min.	Exam yes/no	
	V	150	V	120					V	270
			V	135	V	150			V	285
			V	150			V	165	V	315
	V	180	V	145					V	325
			V	120	V	130			V	250
	V	195	V	180					V	375
	V	240					V	200	V	440
	V	120								
	V	110								
Total 18 students										

This book is about student support in distance education. Many students in distance education do not finish their courses, often because of inadequate attention to their motivational needs. The study presented in this book looks at how the problem of high drop-out and non-completion in distance education can be addressed. It argues that traditional student support, which focusses on instructional guidance, should be enhanced to include motivational guidance as well.

The Motivational Messages Support System (MMSS) presented in this book concentrates on extending existing student support with simple, practical and affordable motivational communications in the form of messages, sent to the students at regular times during the course. The study shows that increasing and intensifying communication between learner and tutor and vice versa in the affective domain helps learners to stay motivated.

The results of this study indicate that the MMSS greatly improves the completion rates of students in distance education courses, while also increasing the self-confidence of the learners. The additional costs resulting from this innovation are marginal and largely justified by the improved system performance.

Lya Visser works as an independent consultant in education. She has a professional interest and background in the development of effective learning systems. In addition, she owes a large part of her own intellectual and professional development to her long-standing experience as a distance learner. In her work and studies she often experienced the shortcomings of traditional student support in distance education. This led her, after finishing a MA with the University of London in 1995, to embark on the doctoral research discussed in this book.