Negotiating the symbolic power of ICT:

The spread of Internet-supported distance education

Abstract

The Internet may be, as typically suggested, important in distance education for facilitating connections between groups of students, educational institutions and external learning resources. This paper, however, reveals why this is not the only reason for applying ICT in higher education in a remote area in a developing country. In addition, the Internet seems to be of great importance in symbolising modernisation and progress, thereby adding symbolic power to such education. Empirical sources originate from an explorative case study of an Internet-supported distance education programme in the province of Bangka Belitung in Indonesia. Based on a translation perspective on the spread of pheromones, the analyses of empirical sources show how the Internet has contributed to the spread of distance education, but paradoxically this has not had much effect on the use of Internet by students in peripheral areas, at least not in the short term. Theoretically, the paper supports research which claims that the symbolical/political perspective on the uses of technology is of special importance during the implementation process of a project. Moreover, it adds to existing research by showing how the symbolical emphasis may have functional outcomes as a target, and not only as rhetorical argument.

Keywords: communications technology, diffusion, distance education, ICT, Indonesia, translation, the Internet, development

Introduction

The 'massification' of higher education is an ongoing worldwide process where also many developing countries, which until recently had limited and often elitist academic systems are now facing the pressures of this expansion (Albach, 1999; Perraton, 2000). As a response many countries have focused on distance education, in which new information and communication technology (ICT),

particularly the Internet, has played a major role in the development (Kirkwood, 2003; Perraton, 2000; Rumble, 2001b; UNESCO, 2001). In this paper this process is explored through a case study of a group of students living in the province of Bangka Belitung in Indonesia. In August 2003 they started an Internet-supported distance Master's programme in Public Administration (MPA) offered by Universitas Terbuka (UT) (UT is Indonesian for Open University). Based on this research, I aim to highlight why the Internet is linked to distance education programs in remote areas in developing countries. By raising this question, I will provide insight into how the use of new technology contributes to the spread of distance education to remote areas, as well as how distance education affects the use of the Internet in such places. A main concern regarding the spread of Internet-supported education is the educators' rationale regarding development and implementation. However, to make sense of this rationale I also elaborate upon the students' considerations regarding participating in such education.

Diffusion, translation, and the spread of Internet-supported distance education

In traditional spatial *diffusion studies*, such as within geography, the main objective has been to find generalised empirical spatial patterns for how objects move in time and space (e.g. Hägerstrand, 1967). Other researchers, such as Rogers (2003), have paid attention to how new ideas, practices and objects are adopted by new actors, and have considered diffusion as a social process. Whatever the focus is, spatial or social, new technology has commonly been at the centre of attention regarding what is spreading, and the context has often been modernisation and development in developing countries (Yapa, 1996). The aim has been to indicate what makes objects spread and what the effects of the process are in relation to what is recognised as progress. Baliamoune-Lutz (2003), for example, examines the diffusion of ICT in developing countries through economic indicators by using a quantitative approach. Using these indicators, she aimed to show both what makes ICT spread as well as what its

effects are. Others, such as Avgerou (1998) and Morales-Gomez and Melesse (1998), have paid attention to the effects of the diffusion of ICT. What all of the aforementioned researchers have in common is the abstraction of technology into a variable that exists theoretically independent of its users and creators, and hence the researchers have wanted to explore the causality of diffusion. The independent and objective status of ICT is also reflected in the term 'technology transfer', such as it is used in relation to the spread of technology from developed to developing countries (Ruth, 2000). Moreover, the diffusion model may also be associated with what Nidumolu et al. (1996) describe as a *functional perspective* on IT implementation. Thus, it is the technical performance that is at the centre of attention and results from using new technology are measured by what has been registered in terms of change in costs and benefits.

A major critique concerning diffusion theory, social or spatial, has been the attempt to develop causal models on an empirical level, which is widely criticised within social theory (e.g. Bhaskar, 1989; Giddens, 1984; Sayer, 1992). Regarding the spatial diffusion theory, Harvey (1990) claims it fails to explain *why* phenomena move in time and space, and he suggests that the starting point should be the social structures producing the space and thereby also the spreading. Such a claim is supported by several geographers who find that spatial diffusion studies have failed to apply social theory in their attempt to understand why things extend their existence (Blaikie, 1978; Gregory, 1985). However, no new approach to the study of diffusion has emerged from the aforementioned critiques of the spatial diffusion model, at least not within the field of geography (Yapa, 1996).

An interesting contribution outside geographical research, suggesting an alternative to the diffusion approach, is Latour's (1987) *translation model*. By this model he rejects the understanding of hard facts and ideas as something fixed, which move more or less independently of people and projects. In the diffusion model, according to Latour people are considered as passive social groups that exist independently of the object on the move. They might resist or adapt what is spreading, but they are considered less as created by and creators of what is on the move. Rather, Latour (1987: 140) emphasises: '*We are all multi-conductors and we can either drop, transfer, deflect, modify, ignore, corrupt or*

appropriate the claims that need our help if they are to spread and last.' Accordingly, adoption and resistance are also part of a process of creation of the object through the actors' inclusion or exclusion of the object in their own programmes. In this way, facts and ideas are created in networks where actors try to gain support for their programmes. Such processes will, according to Latour, also occur after the product is claimed to be finished and ready to spread out to customers, users, etc. The object of spread is dependent upon actors in order to last and continue the spreading – if not, its existence will end. Thus, what is spread cannot be separated from its creator, or its users. Hence, we should not talk about technology spreading from developed to developing countries as processes of 'transferring' objects, but rather as processes of translation and creation (McMaster, Vidgen, and Wastell, 1997).

In this paper I follow Latour's (1987) approach, as I do not consider the way the Internet is attached to distance education as a fixed solution that moves from one place to another, but rather as a 'black box' that has to be opened if the aim is to understand why things spread. I do this by exploring the rationale of the actors who initiated Internet-supported distance education and the users that allow it to continue and exist. Thereby, my theoretical approach will be close to an interpretive perspective where the technology is considered in terms of the way it changes through the actors' conceptualisation. This is in line with Walsham (2002) and Shoib and Nandhakumar (2003), who show how the users in cross-cultural environments differently shape the technology by the way of their interpretation. What the technology is, according to the authors, depends as much on the user as on the technological structures. Similarly, Warschauer (2003), in his study of the implementation of ICT in Egyptian schools, demonstrates how such programmes change their character and content during the process of transfer to the intended users. However, even though an interpretive approach is used, this paper also take into consideration Walsham's (1997) claim that the translation model has a major weakness in its limited use for analysing social structures. A main concern in this critique is the need to highlight the conditions which enable and constrain the actions of the actors and their relations to other actors. Following Giddens (1984), these may be identified as underlying structures constituted by resources and roles. By this means, not

only the actors' acts and interpretations are emphasised but also how the acting is embedded in structural conditions whereby technology may be a resource enabling acting (Bhaskar, 1989; Sayer, 1992). Thus, following Orlikowski (1992), technology (in this case the Internet) should not only be analysed according to how it is used in distance education but also as a structural force that is significant for the relations between actors within such a phenomena.

The intention behind adopting a translation perspective on the spread of Internet-supported distance education is the possibility to go beyond the knowledge provided by the diffusion and functionalist perspective. Further, by adding structural features to the analyses it opens up for approaching the spread of what Nidumolu et al. (1996) characterise as the *political/symbolic perspective*. This perspective highlights how the use of ICT aims to acquire power that may be used to realise political programmes. By applying this approach I intend to go behind what can be discovered in variable-oriented research, as I attempt to explore the processes leading to the spread of the Internet rather than empirical preconditions and effects. I primarily do this by through a case study of actors involved in the development and implementation of an Internet-supported distance education programme, and how these actors relate to each other. In the next section I will give a brief introduction to this case study.

Case study of a master's programme in public administration

The context for this empirical study is the province of Bangka Belitung, which is located in the southern part of Sumatra and consists of two major islands, Bangka and Belitung, and several minor islands. Although there are several private higher education institutions located in Pangkalpinang, the capital city of Bangka Belitung, the province does not have any state universities or well-recognised private universities. The nearest one is in Palembang, approximately seven hours distant by land, or in Jakarta which can be reached in about one hour by plane. An alternative to the conventional universities has been UT, but until recently UT has offered only undergraduate programmes. During the last few years,

however, several graduate programmes have been launched, starting with the MPA (Master's in Public Administration) in Bangka Belitung in 2003 (Rye and Zubaidah, 2004; Zuhairi, 2001). The MPA students were recruited from different levels of public administration.

Following the announcement of the MPA, eighty-seven students applied, of which approximately half were invited to take a selection test. The test consisted of two parts. The first part was an academic selection test of basic knowledge of public administration and English. Language skills were required as some of the course materials were written in English and students were expected to use Internet resources written in English. The second part of the test was an administrative selection process where students were requested to provide official endorsement from their superiors, as well as documentation of computer literacy and their ability to access the Internet. Out of the twenty-seven people who passed this selection process, only nineteen decided to enrol in the master's programme. They varied in age from twenty-seven to fifty-six, and only two were female. Even though most of the students worked in public administration, a few other students, including a young journalist, were also allowed to enrol on the programme. The students were from various locations on the island of Bangka; some lived in the provincial capital, others in small villages in remote areas of the province.

In contrast to the undergraduate programmes, the study mode in the MPA, as in the other graduate programmes, was based on compulsory face-to-face and online tutorials. The face-to-face tutorials were held four times each semester and consisted of lectures and discussions. Eight online tutorials were planned for each semester and were connected to compulsory assignments. In addition, students were able to access Web-based discussion groups related to the study. Instructional material and local Web solutions, such as an open sources based learning management system (LMS), were developed at UT's main office in Jakarta. The students were expected to make their own arrangements for access to a computer and Internet connection. Initially, however, UT did make agreements with employers regarding providing the students with reasonable access to the Internet, a commercial Internet service provider or good quality access through selected Internet cafés. None of these agreements seemed to have

had much effect as far as the students were concerned, and UT did not pay much attention to reinforcing such agreements, as their main focus was not infrastructure development.

Finally, the master's programme was strictly organised and scheduled through modules containing assignments and tutorials. Even though the students were expected to follow the schedule, they were free to follow the programme in their own way as long as they completed the compulsory parts. Subsequently, in March 2003, twelve of the students were considered by the regional office to be inactive students as, for different reasons, they had not taken part in organised activities related to the course. Despite this, UT expected most of them would complete their studies at a later stage.

Conducting the study

Empirical sources used in the further discussion were collected through an explorative case study of the MPA in Bangka Belitung during its second semester. Inspired by Latour's (1987) translation model, the investigation started at the UT campus in March 2004, where the aim was to identify the 'black box', which in this case was the MPA in Bangka Belitung. Thereafter, I spent one week on fieldwork on the island of Bangka to learn how the master's programme was viewed by the students. Then I returned to UT's campus in order to identify the processes leading to what I had found during the fieldwork in Bangka Belitung. Theoretically, the research design is close to Marcus' (1995) understanding of *multi-site ethnography*. A key feature of this methodological approach is the possibility for examining how the circulation of cultural meaning and object spreads in time and space by following the move, and thereby also the creation, of the object of study.

The main source in the search for the rational behind the MPA was in-depth interviews and conversations with informants connected to the development and implementation of the MPA. These informants comprised the dean, the vice dean, members of the research and development department, head of the computer department, head of the regional office, academic staff at UT, and

external lecturers and tutors. They were selected to represent different views and rationales regarding the programme development and implementation, and also because they had access to different sources of factual information about the programme in Bangka Belitung. In addition, official documents published by UT were used for mapping background information about how the study was organised and the institutional goals. The documents included internal evaluations, strategic plans and information distributed to the students (Universitas Terbuka, 2004a; 2004b; 2005). A further important source was in-depth interviews with seven selected students and informal conversations with all of the students participating in the programme. The interviewed students were selected by maximum variation sampling in order to represent a variety of experiences (Patton, 2002). They came from different locations, had different work practices, and were of different ages. The conversations and interviews were conducted at the student's workplace, their home, or at a place where face-to-face tutorials were held. When the students were included as a source for aiming to understand the institution's rationale it was because their response to UT was considered significant for how UT developed their arguments and strategies regarding the use of ICT.

The formal interviews were conducted in Indonesian by a native Indonesian who was affiliated to UT, together with the author who partly speaks Indonesian. All of the interviews were recorded and after transcription they were translated into English. More informal conversations were held by the author in a mixture of English and Indonesian and were not recorded or transcribed.

The rationale behind Internet-supported distance education in Bangka Belitung

A fundamental end justifying the existence of UT as a significant educational institution in Indonesia has been from the outset to offer high quality education to students who are unable to enrol at conventional higher education institutions (Universitas Terbuka, 2004; Zuhairi, 2001). This forms the point of departure in my search for the rationale behind using the Internet in the MPA in Bangka

Belitung. I will start by examining the initial argument for establishing the programme in Bangka Belitung, as expressed by members of staff at UT.s

UT's rationale regarding the students in Bangka Belitung

In the academic literature about distance education in developing countries, the potential and the promises of ICT are widely recognised (Perraton, 2000; Ramanujan, 2002). Also, among UT's staff ICT was commonly claimed to have the *potential* for improving the study situation for students in Bangka Belitung. This was expressed by the head of the computer department as follows:

> *A master's programme requires ongoing communication between students and the lecturers. For our students the [digital] communication technology enables such communication. … The students can get frequent feedback even though they live far from Jakarta. … and a master's in public administration requires the students to know what is going on in society, not only in Indonesia but also in the rest of the world. Society is continually changing and the textbooks cannot cover all this. [The students] need to be connected to the Internet.*

The statement highlights two sets of arguments regarding the use of the Internet in the MPA. First, the Internet was expected to enable interaction between students and academic staff and among students themselves. Second, the use of the Internet was supposed to enable students to access additional learning resources via the World Wide Web (WWW). Thus, theoretically, by using the Internet students should not only be able to stay in touch with their educational institution but also with the rest of the world. UT expected students to be able to acquire skills about how to be updated about what is going on in the world.

Enabling students to connect to tutors from outside and having recourse to external learning was considered to be of special interest for the students in Bangka Belitung as there was no state university or well recognised private university in the region. Without the use of the Internet the students would, according to UT, to a large extent be excluded from important resources regarding their study. Such resources included regular contact with lecturers and the possibility to find academic literature from libraries and bookshops. Reading books provided by UT and independent work on assignments were not considered sufficient, and new communication technology was claimed to be

necessary in order for students to reach an acceptable academic level, which in turn could justify offering a master's programme to other students in remote areas.

In this regard, it may be of interest to understand how the interviewed staff developed their argument regarding why the MPA should be an Internet-supported programme. Mostly they talked about the possibility rather than the real activities and experiences when they considered the importance of ICT. Expressions such as '*technology can be useful*' and '*online tutorial gives the opportunity to …*' were frequently voiced when they described the position of technology in the MPA. In this way, the potential was constructed out from *expectations* of what the technology actually can do through its technical features. However, even though the potential might have been present it hardly ended in *concrete action*, at least not for the students enrolled in the MPA programme.

How the ICT was received by the students

When the MPA students were interviewed they voiced the same argument for using the Internet as that used by the UT staff. For example, one of the students said:

> *[The Internet] can be helpful in enriching my knowledge on related subjects. I can find a lot of references that are useful for my learning tasks. With the use of the Internet I no longer have to rely on books and handouts as I can search other sources from the Internet.*

The student saw the potential for supplementing existing resources with information produced by actors, possibly from locations spread around the world. Nevertheless, even though this student and also several others claimed that ICT would be important for their studies, only a few of them actually used the Internet regularly. Even the use of computers for typing was limited, as the aforementioned student revealed later in the interview when asked if he used the computer for study purposes during work hours: '*I just read some books. I hardly use the computer … the connection is too slow*'. Despite having good computer skills and good Internet connection at his workplace, he was not able to use the

Internet much as part of his study. He explained this as primarily due to limited access. For most of the other students, the situation was even more problematic, as expressed by one of them:

> *I tried once to make a connection. It took many hours, the connection was really bad and it was expensive. It is also difficult to understand how to use the Internet, so I don't use it much as part of my study. I used the Internet for the first time when I started to study at UT.*

Thus, according to the students access problems occurred in different ways, including poor infrastructure, lack of suitable location for hardware, economy constraints, and lack of knowledge. In summary, they evidently did not use computers and the Internet much in their studies. In some ways, the requirement of using computers rather created problems for them as they were expected to use a technology that was difficult to access.

How could the programme continue?

From the described situation, two questions can be raised. First, why did the students accept the situation? They could have left the MPA programme and thereby the spread of Internet-supported distance education to Bangka Belitung would have ended. In fact, several students had left the programme: in the second semester almost half of the students were considered to be passive students. Further, according to the head of the regional office, one important reason for the students not taking an active part in the programme was the difficulties they encountered as to how they were supposed to act regarding ICT.

However, most of the students continued to affiliate to the MPA and this may be explained by the fact that there were no other attractive possibilities in Bangka Belitung. This situation may be exemplified by one of the interviewed students who already had a master's degree from a private university located in Pangkalpinang. He considered his first degree to be worthless, describing the quality of tuition as poor and identifying the problems experienced in gaining formal recognition of his qualification. Hence, the main question was not whether the MPA was supported by the Internet or not. The students had to take what they were offered if they wanted to study at a recognised university as well

as continue living at the same place. Further, even though the use of ICT created some difficulties for the students, they were mostly capable of finding a solution, such as not using the Internet.

The second question for consideration is: Why should UT continue spending resources on using the Internet as part of its study programme? As has been seen, the Internet was not used, much and expectations about its advantages were not realised. One reason could have been that UT, or at least those who were responsible, was not alert to what was going on in Bangka Belitung. However, as expressed in the interviews, UT's members of staff were quite aware of these problems. One member of the academic staff from the faculty responsible for the MPA stated:

> *It is difficult in Pangkalpinang. The students there do not know how to use the Internet and the access is very difficult. In reality, they are not able to use ICT much in their study. This is a problem for us.*

Similar problems were also documented in UT's own evaluation of the master's programme (Universitas Terbuka, 2004a).

An alternative explanation could be that UT was indifferent to what was going on among the students in Bangka Belitung. However, UT made an effort to enable students to complete their studies without using ICT. For example, it accepted that some students did not take part in the online tutorials, even though this was a formal requirement. They also accepted assignments which were supposed to be submitted by e-mail but which instead were delivered as hard copies at the regional office. In addition, while the students continued in their efforts at using the Web, the regional office simultaneously made hard copies of instructional material so that students would not be dependent on downloading from the Internet.

An alternative approach in the search for why UT continued to use ICT for students is to *not* regard them as the main target in the development of the MPA. Even though the students in Bangka Belitung fulfilled the requirement of being a target for UT, they were just a small part of the institution's activity. Rather than searching for how the MPA was valuable to the students, it may be more

interesting to investigate how the students were useful for the MPA and UT's efforts in offering Internet-supported distance education.

The symbolic power of technology

Prior to 2004 UT was not certificated to offer any graduate programmes, which was dependent upon formal acceptance from the Diretorat General Perguran Tinggi (Directorate General Higher Education (DGHE)). ICT was considered as essential in UT's effort to secure such an acceptance, both by the dean responsible for the MPA and the head of the computer department. They considered that by emphasising the use of ICT they could show that UT was at the forefront of developing higher education, as the head of the computer department stated:

> *In a high quality master's programme the students need discussion or other kinds of two-way communication. We can do that with communication technology. The use of ICT will help to ensure the quality of the programme, and it is important for the DGHE.*

The head of the computer department further described ICT in combination with attracting lecturers and tutors from some of the best recognised universities in Indonesia as the *selling point* regarding the DGHE. According to him, interaction between students was a basic condition for this kind of education, and the use of the Internet was expected to enable this. Accordingly, the incorporating use of the Internet in the programme was not considered as a choice but rather as something UT had to offer in order to maintain the credibility necessary for developing graduate programmes. This reflects that offering education is not only the duty of a state university such as UT, but also a privilege that the institution has to strive for by proving their competence. In this respect, ICT can be considered as an ally in the university's effort to support to its own agenda. However, UT was not indifferent as to *where* this happened. A main feature of Bangka Belitung was, as the dean claimed, that: '*[t]his is one of the few provinces without a state university, so we have a special responsibility there*'. UT could therefore prove that they were able to do what other state universities could not: offer good quality higher education to students in remote areas of the

country. Consequently, UT depended on the students in Bangka Belitung in order to be able to prove its competence. Thus, it also had to accept students finding their own solutions to the 'problem' relating to use of the Internet. The importance of ICT was to a large extent symbolic, created out of the *potential* that it might have for students within the distance education system. The technology acquired its property through actors' interpretation of it.

In search of resources by expanding the target group

To offer good quality higher education is not only about having the legal right to do so but also about having students. In this case, UT differs from other state universities in Indonesia as state funds contribute to a relatively small part of its total budget. Almost 70% of the operating budget comes from students (Zuhairi, 2003), which means that to a large extent UT is financially dependent upon its students. UT's philosophy has been similar to that of most open universities in developing countries: small fees and a large number of students (Ramanujan, 2002). Their students are those who have been excluded from conventional universities, often coming from middle- and low-income groups and/or from remote areas (Suparman, Zuhairi, and Zubaidah, 2004). In this manner, UT's advantage compared to conventional universities has been that they have been able to award undergraduate degrees to large groups of students'. This was the case in their efforts to raise the formal competence of primary and secondary school teachers (Julaeaha, Andayani, Padmo, and Pannen, 2004). With the introduction of postgraduate programmes this situation has changed to a large extent. The target group is partly new, or at least extended by focusing on students who are more capable of paying. Moreover, the use of ICT seems to be pushing this trend further.

   Even though the fees for the MPA were about the same as most students paid in other state universities and even remarkably higher than for the undergraduate programmes, the programme was not lucrative for UT. The costs of offering an interactive Internet-supported programme were too high. Several members of staff at UT emphasised the extra resources used in the development and implementation of the MPA. Such costs were related to investment in hardware,

software, training, and one-to-one tutoring. UT's attitude towards the resources used on ICT was summed up by the head of the computer department as follows: '*We know this programme is expensive, but we just have to do it.*' So, why did they have to do it? First, UT was prepared to use resources on ICT because they hoped to be rewarded in the long run, as the dean of the responsible faculty claimed:

> *Our experience in Bangka Belitung will hopefully enable us to develop our graduate programme so it can be offered to students in other cities. ICT has to be a part of such studies.*

The faculty dean considered the high costs related to the use of ICT as partly a first-time investment. When new similar programmes were to be developed, they hoped to use much of what had been invested already in the programme in Bangka Belitung, such as knowledge building among the staff, developed Web technology and multimedia instructional materials. The dean also considered investment in ICT as a factor in increasing their possibilities for developing study programmes on demand and thus aggregating the economic income at a later stage. The question was, as several members of staff expressed: What had been learned? They did not care much about whether the project in Bangka Belitung succeeded in terms of input and output for the study programme itself.

Evidently, the programme in Bangka Belitung was just the first step in UT's efforts in searching for new groups of students. One indication of this is that the MPA in Bangka Belitung was converted to a Master of Management (MM) degree course offered in Jakarta in August 2004. In 2005, six MPA and MM programmes were launched. All of them, except for one which I will comment upon later, were located in major cities in Indonesia. The students were recruited from management in the private and public sector. The experimentation with the use of ICT in Bangka Belitung can thus be seen as a pilot study in order to develop knowledge and experience about how to reach new groups of students that differ from the original target group. Yet, as the head of the computer department claimed, even though these groups of students were not from low-level income groups and not all were from very remote areas, they were still students who were not able to attend conventional educational institutions. Thus,

these students could be considered as falling within UT's target group, even though they were not marginalised.

When the head of the computer department was asked whether UT aimed to introduce a new MPA programme there or in other similar places after the project in Bangka Belitung was completed, he answered with certainty:

> *No, Bangka Belitung is not situated for such a programme. We do not want to repeat this painful experience. We need places with good infrastructure and students who are familiar with the use of computers and the Internet.*

Thus, the programme in Bangka Belitung was regarded as just an unexpectedly negative experience. However, UT was also aware about the difficulties in Bangka Belitung prior to running the programme, not only during it. The province was not, as claimed by the head of the computer centre, on the initial list of places where they had wanted to implement the MPA for the first time; only major cities had been listed. Bangka Belitung was chosen after negotiations with the DGHE. When the master's degree certification permit was in place the students had served their purpose, and UT could focus on places where distance education supported by the Internet was considered more suitable. This can be underscored by the fact that UT already had been requested to offer the MPA programme to places with similar conditions to Bangka Belitung, such as Nias in North Sumatra. However, UT rejected these requests, arguing that the infrastructure at Nias was not suitable.

Back to students in remote areas?

As discussed, UT had shifted their focus towards students in places with well-developed infrastructure. Students in remote areas were not considered as a target group, at least not at the time when my empirical investigation ended (January 2006). Nevertheless, the interviews with staff at UT indicated a possible path where Internet-supported distance education could be offered students in remote areas again. When the head of the computer office declared Bangka Belitung as not suitable for such programme it was not the place itself that was the problem but its physical conditions. He was, however, aware about how such places were changing, and also the level of infrastructure: '*Maybe in the future*

we can offer postgraduate programmes in such [remote] areas'. While waiting for '*the future*', UT did not see it as one of their main tasks to develop infrastructure supporting Internet-supported education in peripheral areas. At the same time, the staff recognised the possibilities of how they could contribute to such a change, and the head of the computer office claimed:

> *[To] develop a good system and good use of ICT, the staff at UT need more knowledge about how to use the technology so it can benefit the students […] It is not only the students in Bangka Belitung that do not know much about how to use computers, but also the staff at UT have a problem with this.*

The best way of contributing to the development of Internet-supported education in remote areas was, as the head of the computer office said, to start in places where students actually could use it, namely the central areas and not the remote ones. By developing such programmes in the big cities, UT hoped to create a demand from students in areas that currently were not suitable for the use of ICT. As an example, the head of the computer department cited the newly launched MM programme in Bengkulu, Sumatra, which is neither a very remote area nor a major city. Initially, UT refused to offer the MM there due to the lack of sufficient infrastructure. In response, a group of local enterprises upgraded the facilities at a local Internet café and allowed the students free access to the Internet.

Furthermore, as expressed by the UT's director of community services, by showing that they were able to offer high quality Internet-supported education they saw the possibility to develop partnership with other institutions that could provide computer and Internet facilities. By January 2006 the work to establish such a partnership was already in progress. The partners included private enterprises, local authorities and international aid agencies (Budiwati and Parwitaningsih, 2004; Sembing and Zubaidah, 2004).

Discussion: negotiating the symbolic power of ICT

In the investigated case the Internet was initially claimed by UT to be necessary for enabling a high quality programme for the students in Bangka Belitung. In this respect, UT was in line with research literature indicating that the use of ICT in distance education may have the potential to increase the quality of such education also in developing countries (Perraton, 2000; Rumble, 2001a). This is also in accordance with UT's own researchers, who reported the positive effects of their students' use of ICT as a voluntary additional resource in undergraduate programmes (Belawati, Hardhono, and Anggoro, 2004; Karnedi, 2004. However, as expressed by UT and their students in Bangka Belitung, the use of the Internet did not improve the quality of the students' study situation significantly, and hence the students did not use it much. Hence, from a functionalist perspective, the whole programme can be characterised as an unsuccessful attempt to comprehensively use the Internet in a distance education programme in a peripheral area of a developing country. This supports Ramanujan (2002), who claims that even though many developing countries succeed in acquiring the necessary new technology for Internet-supported distance education the actual practice is rather poor.

However, what is interesting here is that the students did not directly oppose the programme, although expectations regarding the use of the Internet to some extent created problems for them. Rather, they largely ignored the use of ICT, and accepted other parts of the programme. So, they continued to show up at face-to-face tutorials and completed their assignments. In effect, the programme was translated into an Internet-supported programme where ICT was little used. Thus, the students took part in the creation of the master's programme, and in accordance with the translation model (Latour, 1987) the MPA was not only implemented by UT but also translated, changed and created by the students. How much they were able to change the MPA was, however, dependent upon what UT was willing to accept. The students' dependence on UT gave them limited choice in how to translate the MPA.

When UT did accept the students' translation it may be explained by the situation where not only the students depended on the educational institution but also UT needed the students in order to fulfil their project in Bangka Belitung and to obtain the permit to offer graduate programmes. It was the students who, by not leaving the project, kept alive the symbolic power of the technology, a power necessary if UT was to fulfil the programme. By this means, UT was supportive in the students' translation process. However, due to UT's dependency on the DGHE it could not allow any change and the programme had to appear as an Internet-supported programme. Thus, the translation process became a negotiation that was embedded in structural features by each of the actors. What triggered this negotiation was the context in which these students were living: Bangka Belitung was not only poorly equipped with higher education institutions, but also the digital infrastructure was not well developed.

Ultimately, it can be claimed that the use of the Internet was trapped in a political processes ongoing between UT and the DGHE, and where usefulness of ICT was not related to the utilisation for the students in Bangka Belitung. This supports Warschauer's (2003) concern relating to the risk that ICT can end up as the symbol of progress for those responsible for the development of education, and with less effect for the students who are supposed to use it. As Mercer (2005) concludes in her study of telecentres in Tanzania, the rhetoric behind the politics of implementation of ICT in remote areas is often progress and solutions of fundamental problems, but in practice the use does not match this rhetoric and should rather be characterised as a symbol of modernisation for those involved in the use.

The situation in Bangka Belitung has similarities to what has been described so far. However, it should be noted that for the students in Bangka Belitung utilisation was never the main argument for using ICT there. Rather, the motivation was the desire to obtain the permit from the DGHE and to gain economic power, which in turn would be used to offer students in Indonesia's major cities an Internet-supported master's programme. These students were expected to benefit from ICT due to their location, i.e. where infrastructure and knowledge about using new technology would be much more developed. This might be a critical point, as UT's use of ICT in distance education could be

regarded as just another example of how ICT tends to be supportive for students living in central areas and working in the modern sector (Dhanarajan, 2001; Perraton, 2000; Rumble, 2001a). At the same time, Ramanujan (2002) also argues that educational institutions in developing countries have to monitor experiences of ICT use in similar environments, i.e. other than in technologically advanced societies. UT's efforts in offering Internet-supported programmes in Indonesia's major cities can therefore be regarded as an attempt at securing their own experience by enabling them to choose the right technology at the right time.

Concluding remarks

The Internet may be, as typically suggested, important in distance education by facilitating connections between groups of students, educational institutions and external learning recourses. This paper, however, has shown that this is not the only reason for applying ICT in higher education in a remote area in a developing country. In addition, the Internet seems to be of great importance in symbolising modernisation and progress. In the investigated case, the symbolic power of ICT made possible, for example, support from political actors that were necessary to reach out to students in an area such as Bangka Belitung. The use of ICT also gave the programme in Bangka Belitung a commercial value, and UT expected to benefit from an image of being at the forefront regarding higher education development. This symbolic power was later supposed to be transferred to action involving the use of Internet in distance education, first in the larger cities and later on more widespread around the country. Thus, it may be claimed that the use of the Internet in UT's master's programme had a double scope: to give students in the study programme a better study situation and to add value to the programme, in both political and economical terms. The result was that the Internet contributed to the spread of distance education, but paradoxically it did not have much effect on the use of Internet by students in peripheral areas, at least not in the short term.

What is apparent is that a functional perspective, as described by Nidumolu et al. (1996), was important in the beginning by adding value to the explored study programme. This value was, however, not related to documented effects of benefit for the students, but rather to the power of the functional argument, a process also described by Berman (1992) and Mercer (2005). For the educators, as well as the students, it was initially the symbolic/political perspective that mattered and their use of the Internet gave them the power to achieve their fundamental goals, which were not related to ICT. In this way, the use of the Internet was supposed to add value to the programme, which later was to be transferred into concrete results for the students, as emphasised in the functionalist perspective. Thus, this research support other research claiming which claims that the symbolic aspect is important when new technology is spread to and within developing countries (Mercer, 2005; Warschauer, 2003; Nidumolu et al., 1996). Specifically, it supports Nidumolu et al. (1996), by arguing that the symbolical/political perspective is of special importance during the implementation process of a project. Moreover, it adds to the findings of Mercer (2005) and Warschauer (2003) by showing how the symbolical emphasis may have a functional outcome as a target. Theoretically, this study also demonstrates how a translation perspective may add important knowledge about the spreads of objects, including the Internet. In this paper, the translation perspective allowed insight into the process behind the spread by observing how the notion of the study programme and the use of the Internet changed through being attached to various actors with an interest in distance education. However, this does not deny that the diffusion model may still be used to contribute significant information regarding patterns of distribution and preconditions for adoption.

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