

THE TECHNOLOGICAL CONSTRUCTION OF QUASI-MARKETS FOR EDUCATION

Ranerup, Agneta, University of Göteborg, Department of informatics, P.O Box 620,
SE405 30 Göteborg, Sweden, agneta@informatik.gu.se

Abstract

A fundamental assumption in this article is that not only the public administration but also semi-private and private agencies provide electronic intermediaries between public services and citizens in a quasi-market situation. The theoretical framework of this study views markets as constructed in contrast to natural phenomena. In these processes of construction the role of technologies such as the Internet is seen as decisive. This view will be applied to the quasi-market for upper secondary education using empirical experiences from Sweden. Two questions are addressed in the article: (1) How is the choice of education and available alternatives embodied in the electronic intermediaries and what are the accompanying consequences for citizens? (2) In what ways do public, semi-private and private actors take part in the design of electronic intermediaries in quasi-markets for education featuring as an element in quasi-market construction?

Keywords: Public e-services provision, quasi-markets, electronic intermediaries, school choice

1 INTRODUCTION

Public service provision involves, according to a standard view, the public administration acting as service providers to customers, such as citizens and business. On the other hand it also makes available the communication channels that enable the first activity to take place (c.f. Tambouris & Spanos 2002). This article introduces a situation in which the public administration, but also semi-private and private actors, provide electronic intermediaries between citizens and public services produced in circumstances marked by marketisation arrangements (“quasi-markets”) (Le Grand & Bartlett 1993). The theoretical framework of this study defines markets as constructed phenomena that are formed in processes of negotiation (Callon et al. 2002, Callon 1998). Further, technologies in the widest sense (a pair of scales, cash registers) (Callon 1998) but lately also the Internet (Callon et al. 2002) are seen as key elements in market construction. In the present article this view is applied to the quasi-market for upper secondary education using empirical experiences from Sweden.

With this theoretical framework as a background it is here *claimed* that rather than representing the maturity in using a comparatively simple technology (Griffin & Halpin 2002) the electronic intermediaries between citizens and available educational services embody how these actors support and through this depict the choice of education. It is not a question of introducing information technology (IT) as a simple and settled tool, but one that is given meanings by its designers, owners and others involved in a negotiation process through its very features but also through other arrangements (Callon 1998, Orlikowski & Iacono 2001). Further, the electronic intermediaries are an important element in the materialization of the market for education affecting the conditions for citizens as buyers and service providers as sellers (Bar 2001). In this way it is not only lawmakers deciding about the legal framework constituting quasi-markets that affect what will be the factual market from the point of view of citizens.

Two questions are discussed in the article: (1) How is the choice of education and available alternatives embodied in the electronic intermediaries and what are the accompanying consequences for citizens? (2) In what ways do public, semi-private and private actors take part in the design of electronic intermediaries in quasi-markets for education featuring as an important element in quasi-market construction? The general aim of this study is to contribute with new aspects to the current understanding of actors and contexts in public e-services provision.

2 ACTORS, MARKETS AND TECHNOLOGIES

Analysing the technological construction of quasi-markets for education an important input can be taken from a current discussion in economic sociology (see e.g. Callon 1998 and a special issue: “The Technological Economy” in *Economy and Society* Vol. 31, No. 2) on the creation of markets and the role of technologies herein. In various publications Callon discusses economic markets as constructed phenomena in contrast to natural phenomena (Barry & Slater 2002, Callon et al. 2002). This discourse emerged from texts such as Callon (1998) emphasizing the constructed nature of markets. Further, consumers or calculating agents are not defined as natural phenomena as in mainstream economics but might be created with the help of the right technological devices to support calculation.¹ This perspective implies that there are different ways of organizing concrete and specific markets that are decided in a process of negotiation, making the construction of markets a political phenomenon. *“Economic markets are caught in a reflexive activity; the actors concerned explicitly question the*

¹ Michel Callon is a prominent scholar within Actor-Network Theory (ANT), which can be characterized as a social constructionist perspective arguing against technological determinism. ANT is a rich and continually developing theory. The notion actually used in this piece of research involves the constructed nature of markets and especially the role of technologies in this respect, described by Callon as follows: *“It is impossible to think of markets and their dynamics without taking into account the materiality of markets and the role of technological devices”* (Barry & Slater 2002, p. 285).

organization and, based on an analysis of their functioning, try to conceive and establish new rules of the game” (Callon et al. 2002, p. 194). The actors involved can take the form of professional economists from different schools of thought, authorities, economic actors (industrialists, consumer associations and social movements) and many others (Callon et al. 2002). As previously mentioned, according to this perspective, technologies play an important role in the processes of construction (Callon 1998, Callon et al. 2002). In Callon’s description of a strawberry market in France, the actors constructing the market introduced different types of technological devices in order to facilitate commercial exchange (Callon 1998). Interestingly, Callon defines the Internet as a premium example of technologies that have an important role in today’s markets as a distributed cognitive device that indefinitely becomes richer in its provided capacities (Callon et al. 2002).

The present study focuses on the *non-business* use of technologies for transactions in markets (“e-commerce”) being the least common type with some exceptions. For example, Nelson & Masmurniwati (2004) study facilitators for such transactions as pursued by academic institutions. Also, there are few previous studies of technologies in quasi-markets for public services. Bellamy & Taylor (1998) discuss the use of information technology to collect information about the preferences of citizens in quasi-markets for public services. Further, Schneider (2001) and Norén (2001) pursue a general discussion of the need for information among parents and pupils in quasi-markets for education and suggest that electronic intermediaries might play a role in providing this. Josefsson & Ranerup (2003) introduce the general notion that both public and other types of agencies play an active role as providers of electronic intermediaries in quasi-markets. They discuss what this might mean from the point of view of citizens with brief examples from healthcare and education. As a contrast, the *present study* specifically applies the described theoretical perspective of markets as constructed phenomena to which technologies are important. Further, it features the electronic intermediaries supplied by various agencies in one field of public service provision (education) discussing the consequences for citizens and the role of respective actor in the technological construction of the quasi-market.

Two distinctive models are used in order to problematize the electronic intermediaries featuring as an element in quasi-market construction (Barry & Slater 2002, Callon et al. 2002) expressing different views on how to embody (Orlikowski & Iacono 2001) the choice of education in technology. The first model is derived from the research field of electronic commerce but has been used in studies featuring the choice of education (Griffin & Halpin 2002). It defines the choice as a *general, well-grounded business transaction* (Table 1). In the light of this view an electronic intermediary might facilitate exchange of information, match consumers to services but also to create a safeguarded environment for the transaction (Bailey & Bakos 1997). As to the process related to transactions (Griffin & Halpin 2001), there must be an information phase, an agreement phase and a settlement phase during which the transaction is completed.

Transaction phase	Intermediary service	Criterion
Information	Search for information	Locate and search into available schools and programs (“independent” information or the schools own information about all alternatives/or a selection)
	Match to facilities	Identify school facilities concerning information on their programs and special profiles (“independent information” or the school’s own information, all alternatives or a selection)
Agreement	Match to facilities	Apply for a place at the school
Settlement phase	Match to facilities	Allocation of a place

Table 1. An adaptation of the Bailey & Bakos model with associated criteria

The second model, here denominated as the *guidance model* of choice (Table 2), are taken from the field of educational and careers guidance (Watts 1996). It emphasises the personality as a ground for choice and puts the choice in a long-term perspective (Table 2) (Law & Watts 1977, Watts 1996).

Transaction phase	Intermediary service	Criterion
Self awareness	Define preferences/personal qualities	Personality and competence tests
Opportunity awareness	Find information about opportunities	Locate and search into available schools and programs: (“independent” information or school’s own information, all alternatives or a selection)
Decision learning	Support to match preferences and opportunities, as well as decision-making in general	Support to manage these results
Transition learning	Planning educational activities in a longer time-perspective that includes practical arrangements and the connection with working life	Support by means of technology e.g. in form of portfolios

Table 2. An adaptation of the Law & Watts model with associated criteria

3 RESEARCH SETTING AND METHOD

For more than two decades different types of market-like mechanisms have been an important feature of the educational system in many of the OECD countries (Grubb 2002). Such mechanisms affect the administration and production of public services, and are often denominated as ‘quasi-markets’ (Le Grand & Bartlett 1993). Quasi-markets are characterized by different forms of demand/supply mechanisms, many times strengthening the role of citizen’s preferences in their choice of public services either through mechanisms for citizen’s direct choice of services or through a mediating, contracting agency. The sellers, or service providers, in these markets do not necessarily strive to maximize profits. In spite of this fact they are involved in competition with other sellers to attract citizens as buyers. The buyers, in turn, are acting not with their private capital as a resource, but often with some kind of voucher that entitles them to ‘shop-around’ for public services.

During the 1990’s quasi-markets were introduced in the Swedish educational system. As a consequence, students and their parents have the right to choose by means of voucher-like mechanisms among the various schools that are run by public, voluntary or private agencies. Between the age of 7-15 the pupils and their parents are in a position to choose from a variety of schools that are run by various types of agencies with different profiles. Further, for young people between 16-19 there is a similar range of upper secondary schools run by different agencies to choose from. These older students have at their disposal a wide selection of practically and theoretically oriented programs at the different schools. Formally, albeit not always heavily promoted by individual municipalities, the national legal framework gives the right to a free choice between all the semi-private and private schools in the country as well as the municipal schools in the students’ own municipality. The education system in Sweden makes up a quasi-market for education of considerable size and scope (Norén 2001). This makes Sweden a case with strategic significance to the larger set of countries with quasi-market for education (Grubb 2002). The present study features experiences associated with the choice of upper secondary education in this country where the idea of choice is well established. As a contrast, even though quasi-markets for education exist as regards primary and secondary education the options for choice might locally be limited and the marketing of the options for choice even more limited.

This study is based on data from two types of public agencies: the National Agency for Education (Skolverket) and two regional agencies that organize local markets for upper-secondary education by

means of electronic intermediaries and agreements concerning the choice of schools (Göteborg, Skaraborg). Data has also been collected from two semi-private, national agencies: The Association for Semi-private and Private Schools (Friskolornas Riksförbund) with its website friskola.se and the Parents Association (Hem och Skola) (hemoskola.se). Lastly, two private agencies owning websites to support the choice of upper secondary education are also a part of the investigation: syoguiden.com and efternian.com. The intention has been to include a majority of the most important and innovative actors. In this study semi-structured interviews have been conducted with the project managers in each case. The national public agency and one of the regional public agencies featured in a previous study meaning that a reuse of interview data from 2001, 2002, and 2003 (nine interviews) was possible. Apart from this, data from the rest of the cases was collected in March-April 2004 (six interviews). The interviews treated the history and functionality of the electronic intermediaries, but also their anticipated and actual forms of use. The electronic intermediaries have been examined through direct inspection with a focus on their functionality. Lastly, the author has used official documents in association with the cases as a source of information.

4 THE QUASI-MARKET FOR EDUCATION IN SWEDEN

The first actor is situated at a national level: the National Agency for Education (Skolverket). In the autumn of 2001 it introduced on its website a database (Siris) with statistics focusing on the costs of schooling, the staffing, but also grading in schools providing facilities for quality assurance (Table 3). On the agency's website there is, since 1998, the portal Ways Out (Utväg) connecting all websites with information from every level of the educational system. The portal can be viewed as an infrastructure to information about the educational system as a whole. In 2001, a government report (SOU 2001) suggested that a national, independent portal should be introduced covering broad aspects of educational issues. In December 2003 the agency was given an official assignment to lead this project EducationalInfo (Utbildningsinfo). An important ideal in this work is to provide a neutral and complete source of information but recently also tools to support a long-term perspective on education through a portfolio (DS 2003). Table 3 shows that this agency supports both views of the choice of education except that the application cannot be carried out through its facilities.

	Transaction phase	Siris, Utväg, Utbildningsinfo
Transaction model	Information	Yes, all schools and programs in the country. Short, factual information and links to school's own website *
		Yes, general more detailed information on programs, but further descriptions on profiles only on school's own website
	Agreement	No
	Settlement phase	No
Guidance model	Self awareness	Yes, text-based support emphasizing the importance of reflections on personality and competence, links to tests provided by syoguiden.com. More advanced facilities in prototype format
	Opportunity awareness	*See above
	Decision learning	Yes, general text-based support describing important aspects in decision-making. More advanced facilities in prototype format
	Transition learning	Yes, facilities to keep an updated portfolio of activities in prototype format

Table 3. The National Agency for Education

Regional agencies run by municipalities constitute a second relevant group of actors. As mentioned, there is, in Sweden, a free choice between all the semi-private and private schools in the country as

well as the municipal schools in the students' own municipality. However, some municipalities have created regional agreements that give the right to choose between all the municipal schools as well. Table 4 shows the Göteborg region with its website indranet.nu consisting of 13 municipalities including the second biggest municipality in Sweden and the Skaraborg region consisting of 13 municipalities. A main reason for introducing the electronic intermediaries in 2001 was to increase the efficiency of the application process and to give a full picture of options. In one of the cases (Göteborg) facilities are provided by which the guidance professionals might work around the system and register the application, whereas in the other case this is less viable as an option. The use in the full process of application is 43% in the first case and 98% in the other. As shown by Table 4, the regional, public agencies provide facilities to carry out the application. To some extent they also support both perspectives on the choice of education but concerning aspects like decision support and planning education in a long-term perspective facilities are either primitive or provided through other agencies.

	Transaction phase	Indranet.nu	Intagning.mellansjo.nu
Transaction model	Information	Yes, all schools and programs in the region. Short, factual information and links to school's own website *	Yes, all schools and programs in the region. Short, factual information and links to school's own website**
		Yes, detailed information on programs, further descriptions on profiles on school's own website. Link to a special website promoting the schools run by the municipality of Göteborg	Yes, further descriptions on profiles in some cases but also links to school's own website
	Agreement	Yes, except for the final personal signature	Yes, except for the final personal signature
	Settlement phase	Yes	Yes
Guidance model	Self awareness	No, except for a link to private website syoguiden.com and public sector websites providing links to interests-tests	No
	Opportunity awareness	*Se above	**See above
	Decision learning	No, except for link to other public sector website providing e.g. decision-charts	No
	Transition learning	Yes, short info on possible professional futures, link to syoguiden.com and public website ams.se	No

Table 4. The regional websites in Göteborg and Skaraborg

Two semi-private actors feature as important; the Association for Semi-Private and Private Schools (www.friskola.se) and the Parents Association (www.hemoskola.se) (Table 5 below). The aim of both websites is to support their members and to take part in the debate about the conditions in the education system. They also provide information on private and semi-private schools (friskola.se) and the education system in general (hemoskola.se) albeit with few relations to the two models.

One prominent private actor is the company, which owns syoguiden.com that started in 1994 as a resource for guidance professionals and students interested in information on education and the labour market. Originally, it was financed through grants from public agencies like the National Agency for Education and the National Board for Higher Education, but later it became dependent on sponsors. An important intention was to create a portal containing information about every thinkable type of educational and work-related issue to establish a long-term relationship with users. This is shown by its high usage (100,000 hits/month). Efternian.com is newer (1996) and has a much more limited focus (upper secondary education with a technical and natural science focus). It is a website dedicated to the

choice of upper secondary schools. Both of these try to attract attention through links from other websites. Also, both use guidance professionals in order to increase the contacts with users.

	Transaction phase	friskola.se	hemoskola.se
Transaction model	Information	Yes, all schools that are members of the association. Short, factual information and links to school's own website *	No, only brief information on legal framework and information on programs and schools **
		No	No
	Agreement	No	No
	Settlement phase	No	No
Guidance model	Self awareness	No	No
	Opportunity awareness	*See above	**See above
	Decision learning	No	No
	Transition learning	No, except for contributions addressing the role of members' schools in society	Yes, links to private, semi-private and public websites providing information on education

Table 5. The semi-private websites of the Association for Semi-Private and Private Schools and the Parents Association

	Transaction phase	Syoguiden.com	Efternian.com
Transaction model	Information	Yes, a plethora of structured links to public and private websites with relevance to the choice of school. Some links are saliently placed because of sponsorship relations *	Yes, short, factual information on programs that are related to technical and natural science if registered on the site**
		Yes, general more detailed descriptions by sponsor's website gymnasieguiden.com and in the facilities provided by The National Agency for Education	Yes, further descriptions of programs and school's profiles in some cases and links to school's own website if registered
	Agreement	No	No
	Settlement phase	No	No
Guidance model	Self awareness	Yes, links to a plethora of interest-tests and knowledge-tests	Yes, some interest-tests
	Opportunity awareness	*See above	**See above
	Decision learning	No	No, except for a FAQ focusing studies in upper secondary education
	Transition learning	Yes, links to a plethora of structured private and public websites providing information on higher education and careers opportunities	Yes, careers stories from people who has studied the focused type of programs

Table 6. The private websites syoguiden.com and efternian.com

The private actors (Table 6) support both views through e.g. interest-tests and information on future opportunities concerning education and work, with the natural exception of facilities by which to carry out the application. However, the actual features are affected by e.g. sponsor relationships and the overabundance of links to commercial and public sector sources.

5 CITIZENS AND THE ELECTRONIC INTERMEDIARIES

The electronic intermediaries presented show the ways in which public authorities, but also semi-private and private actors, provide devices that are related to the choice of upper secondary education from the point of view of citizens. Here, the transaction and guidance model represent different views on citizen's generation of *preferences* that are an important ground for choice. In our investigation the guidance model of choice defines this as an important activity that might be supported by technology (interest-tests, knowledge-tests etc) (Table 3 & 6). It is here argued that the appearance of this view on preferences is unprecedented when it comes to public e-services provision. On the other hand, in the field of educational and careers guidance the generation of preferences is defined as a relevant activity in connection with the choice of education irrespective of whether IT is used or not (Grubb 2002). The generation of preferences is relevant in all situations in association with the choice of education and cannot be attributed to quasi-market situations only this author argues. Interestingly, in the theoretical perspective of this study the generation of preferences and, on the other hand, qualities in available services are seen as a mutually constitutive and can be supported by technology: "*In the course of the interaction thus constructed [...] [consumers] act, react and, most importantly, interact, thus gradually constructing and clarifying their preferences*" (Callon et al. 2002, p. 209). Consequently, the presented experiences constitute a straightforward example of this phenomenon central to today's markets (Callon et al. 2002).

The transaction and guidance models also represent different views on the *extension in time* as regards the *use* of technologies with accompanying consequences for citizens. When characterized by actors as a general, well-grounded business transaction the use of the technology is limited to the individual transaction. In contrast, the guidance model of choice views technology as an instrument that should be used in order to sustain the choice of education but also the future professional life. In our experiences here, this view is promoted by e.g. syoguiden.com. Even more markedly, an actor like The National Agency for Education aim at a more or less life-long use of its facilities in planning educational activities (c.f. the proposed portfolio). However, there is a conclusive difference concerning the rationale in connection with the two types of actors. The national public agency is acting to fulfil official goals to support the ideal of lifelong learning (DS 2003) whereas the private agencies pursue the guidance model of choice to create a long-term relationship with users.

It is interesting to note that the use of commercial websites is voluntary, whereas public agencies are in a position to introduce routines that make it more or less obligatory to use certain facilities to receive aspired services (Warkentin et al. 2003). However, there are differences between the public agencies concerning the will, but also the capacity, to introduce such routines. A public national agency like the National Agency for Education is assigned tasks in association with its general obligations to inform and evaluate. This means that the relationship between their provided technological facilities and actual situations of choice are more indirect than in situations where the main aim is to support the actual choice of education with facilities in line with the transaction model of choice (Table 4). On the other hand, also in the second type of situation differences might occur in how influential the arrangements are. As e.g., arrangements might be less intended to accomplish the use of the electronic intermediary to complete the application process (Göteborg), as well as more so, as in the case of Skaraborg.

Last but not least, the experiences show the ways in which the electronic intermediaries *materialize* the quasi-market for upper secondary education to citizens. The most obvious examples are the intermediaries provided by the regional agencies (Table 4) that directly are related to the very choice of education and the available options in the region. Also, other actors play different roles in the materialization as well as the negotiation of the market (section 6). In this materialization the provision of information by public and private actors, as well as the resulting treatment of public and private providers of public services is affected (section 7) thus influencing fundamental conditions in the market (Bar 2001). This means that other actors than lawmakers deciding about the fundamental

framework regulating the quasi-market and public agencies traditionally featuring as providers of e-services contribute to the interface between citizens and public services. In the case of quasi-markets for education this is especially significant since the choice as such is important and concentrated in time.

Before the advent of the Internet the overview of options was limited by human guidance professionals through their choice of oral or written information (Ranerup 2004). This determined what was made known to the individual of *the facto* market for education as defined in the national regulative framework. A more active individual could use traditional means of communication to contact schools and perhaps also central authorities. Today there are still some factors left that limit the options for choice from citizens' point of view. One is the absence of agreements between municipalities offering young people to choose freely between municipal schools in a region similar to those described above (Göteborg, Skaraborg). An option that has become more common is the 'open house' that some upper-secondary schools provide to prospective students and parents, sometimes in collaboration with several schools. However, the access to these events is limited by time and travel restrictions on the part of the individual student or parent. Individuals might also have difficulties in using the electronic intermediaries and because of this perceive difficulties in getting an overview of options. Nevertheless, in Sweden Internet access and use rates are very high in relevant age groups (Ranerup 2004). On the other hand, there is a small group of prospective students that are dependent on personalized support. In the case of the choice of upper secondary education there is no intention among the public agencies at the national and regional levels to take away the option to contact a human guidance professional. Despite of the fact that the application process as such can be handled by significantly fewer personnel (informant, region of Skaraborg, March 26, 2004) the support given by human guidance professionals is today sometimes even more developed than previously.

6 THE TECHNOLOGICAL CONSTRUCTION OF QUASI-MARKETS FOR EDUCATION

The quasi-market for education has, as already stated, a common regulatory framework as its formal ground. But how do the various types of agencies take part in the negotiations where concrete and specific markets are moulded, pursuing different strategies and playing different roles through technology (Barry & Slater 2002, Callon et al. 2002)? First, the electronic facilities provided by the National Agency for Education in Sweden show all primary, secondary and upper secondary education in the country due to the agency's assignment to inform. The agency is given official assignments to follow up activities in the school system, a task that is partly carried out through provided facilities in connection with the electronic intermediaries similar to the League Tables in the UK. Further, the activities to put up a portfolio are part of national policies for lifelong-learning (DS 2003, SOU 2001). This means that actors like the National Agency for Education carry out official, more or less *political assignments* emanating from their role in the national bureaucratic apparatus. In the present case the role is to *show and regulate* the national market for education but recently also to promote ideals of lifelong learning thus hopefully *extending the use* of provided technologies from the side of citizens.

Second, regional or local public authorities are subject to these activities and regulations, but might as in the Swedish case be in a position to implement additional regulatory frameworks thus creating an extended market for upper secondary education in a region. This brings new opportunities to citizens since free access to schools is limited to semi-private and private schools, but do not include municipal schools in other municipalities. The administration of the application process and the information about available opportunities is supported not only by computers, but nowadays also by Internet technology to the benefit of the schools and the applicants. Thus, the roles of public regional or local agencies are to *open up* and *sustain* a specific geographically delimited market for education.

Semi-private actors are active in the technological construction of quasi-markets for education. Previously the Association for Semi-Private and Private Schools served as a provider of information of non-municipal schools that not always were presented in e.g. local government websites, but nowadays information on these types of schools are much easier to find. Instead, through the electronic intermediaries this association, as well as the Parents Association, take part in the political process in which the national regulative framework is moulded. Consequently, the role of actors like these is in various ways of a *discursive nature* in the construction of the quasi-market for education.

The electronic intermediaries to support the choice of education supplied by private actors are in a more direct way affected by commercial interests due to their sources of funding. However, the owners strive to attain a high use of their facilities. This means that the information and the available facilities not necessarily are limited to those supplied by their sponsors but include facilities that might be expected to attract high interest from the side of the potential (non-professional and professional) users even though they are supplied by public actors. Due to the fact that use of their facilities is voluntary (Warkentin et al. 2003) they must strive to establish a long-term relationship through a broad focus on the educational system including information related to professional life. In sum, they provide *structured bazaars* containing information placing the educational activities in a long-term perspective thus hopefully *extending citizens' use* of provided technologies.

Most importantly, the different roles as outlined should *not* be seen as a static and purposeful distribution of tasks between actors, but rather as a characterization of recent activities in the negotiated construction and materialization of the quasi-market for education. In ways that change during the course of time actors strive to become citizens' most prominent technological representation of the quasi-market for education. Further, actors cooperate and use each others resources e.g. by linking to other actor's information (section 7).

7 NEW CHALLENGES TO E-GOVERNMENT

As stated in the introduction, public agencies are viewed as the predominate providers of e-services in association with public service provision (Tambouris & Spanos 2002). In contrast, this research shows a new type of challenge to the field of e-government that goes beyond the ones commonly noticed: introducing technology despite a technological legacy that hampers activities, a lack of resources, cooperation difficulties among public agencies, and severe security and integrity problems etc. To some extent these *challenges* are a result of electronic intermediaries featuring as a part of quasi-market construction with accompanying consequences for citizens (section 5) and the different actors herein (section 6).

Additionally, this study illustrates the ways in which semi-private and private agencies *compete* with public actors as providers of electronic intermediaries intended for citizens. Of principal interest is also the *cooperation* between public actors and others in the form of links to commercial actors found on public actors' website (Table 3 & 4). At the same time, large commercial actors like e.g. syoguiden.com (Table 6) might pursue an ambition to provide high quality information both from commercial and public agencies when trying to establish a good reputation among users and guidance professionals. Consequently, this competition and cooperation add new aspects to the issue of *creating trust* in public e-services provision that otherwise focuses on the confidence from the side of citizens in the electronic facilities *per se* (Warkentin et al. 2003). Not least important, the principal issue of public agencies both cooperating and competing with private agencies is of relevance also *outside* of quasi-market situations. Since the middle of 1990's public and private agencies introduced electronic intermediaries to be used by individuals in their choice of education in the field of educational and careers guidance (Grubb 2002). However, in circumstances not market by quasi-market arrangements the electronic facilities will form an electronic window to available opportunities rather than being a significant element in market construction.

There are other types of challenges with a specific relevance to quasi-market situations only. The *neutrality of public sector actors as owners* of electronic intermediaries showing services of different types of providers and their *neutrality as provider of information* about schools run by municipal agencies are two very down-to-earth issues in this respect. For example, concerning the National Agency for Education their independence is a prominent theme in interviews and official documents (DS 2003). The construction of markets for upper secondary education in the Göteborg- and Skaraborg- regions exposes an ambition to provide a neutral facility in relation to the different municipalities, but also in relation to the various providers of education (municipal, semi-private and private). The experiences also show that what might appear as an impartial public agency, such as the city of Göteborg, could consciously be using the technology in order to promote their own schools (Table 4). On the other hand, individual municipalities might actively pursue an ambition to provide an electronic intermediary that is neutral in relation to the various types of providers of education (municipal, semi-private and private) (Ranerup 2004). Thus, through the nature of the facilities as provided by the electronic intermediary important *conditions* in the market are moulded (Bar, 2001) both from the point of view of the consumers/citizens and producer/providers.

Last but not least, in an e-government study Barca & Cordella (2004) characterize the public sector compared with the private sector in the following way: “[I]ts sheer size, its alienation from the threat of bankruptcy, its inherent dichotomy between policy-making and administration (especially as a result of the last centuries reforms), its inherent visibility to the public, and the monopoly it holds over some of its functions [...] clearly marks the public sector’s individuality” (Barca & Cordella 2004, p. 3). Despite this being a relevant characterization the present study calls attention to the increasing *interactions* between the two sectors in connection with e.g. the technological construction of quasi-markets: “The idea that public powers are exterior to markets is becoming more and more difficult to defend. [...] There is a growing recognition that all markets are a strange combination of rules defined by public powers and by private agents.” (Callon in Barry & Slater 2002, p. 299). This truly constitutes a new challenge to e-government.

8 CONCLUSION AND FURTHER STUDIES

The main conclusions of this study are as follows: 1) The electronic intermediaries materialize the quasi-market for education to citizens in ways that are illustrated by this paper. 2) Public, semi-private and private actors take part in the negotiation of the quasi-market by showing and regulating the market, opening up and sustaining regional markets, taking part in the discourse on markets and providing a structured bazaar of opportunities. 3) The interactions between public and other actors are increasingly part of public services provision and thus a relevant issue to the field of e-government.

This study has introduced a perspective on public e-services as an element in quasi-market construction to the field of e-government and has illustrated it through a comprehensive empirical study. The applied perspective on markets has been questioned among other things because its seemingly acceptance of marketisation mechanisms and supposedly associated apolitical ideology (Barry & Slater 2002). In an answer to this Callon declares that through this perspective: “[t]he organization of markets becomes a collective issue and economy becomes (again) political” (Callon et al. 2002, p. 197). This implies that the construction of markets can be viewed as a political phenomenon at the same time as it comprises the materialization of mechanisms in a political field like public service provision closely related to different levels of government.

To the research field of e-government in general, and in evaluations of the success and importance of public e-services provision in particular, the uptake, trust in, and perceived usefulness of electronic intermediaries from the side of citizens is decisive (Warkentin et al. 2003). This is why future research should address issues like the use of different actors’ electronic intermediaries in quasi-markets for education as well as the perceived value from the point of view of citizens (parents and young people in a situation of choice).

ACKNOWLEDGEMENTS

The author wishes to thank the Malmsten Foundation for funding the research.

REFERENCES

- Bailey, J. and Bakos, Y. (1997). An exploratory study of the emerging role of electronic intermediaries. *International Journal of Electronic Commerce*, 1 (3), 7-20.
- Bar, F. (2001). The construction of marketplace architecture. In *Tracking a transformation: E-commerce in the time of competition in industries*. Brooking Institute Press.
- Barca, C. and Cordella, A. (2004). Seconds out, round two: Contextualising e-government projects within their institutional milieu –A London local authority case study. *Proceedings of ECIS*, 2004.
- Barry, A. and Slater, D. (2002). Technology, politics and the market: an interview with Michel Callon. *Economy and Society*, 31(2), 285-306.
- Bellamy, C., & Taylor, J. A. (1998). *Governing in the Information Age*. Open University Press, Buckingham.
- Callon, M. (1998). Introduction: The embeddedness of economic markets in economics. In *The Laws of the Markets* M. (Callon, M. Ed.), pp. 1-57, Blackwell Publishers, Oxford.
- Callon, M., Méadel, C. and Rabeharisoa, V. (2002). The economy of qualities, *Economy and Society*, 31 (2), 194-217.
- DS (2003). Validering mm – fortsatt utveckling av vuxnas lärande [Evaluation of non-formal qualifications – continued advancement in adults' learning] (DS 2003:23), Swedish Government Official Reports. Fritzes, Stockholm.
- Griffin, D. and Halpin, E. (2002). Local government: A digital intermediary for the information age? *Information Polity*, 7, 217-230.
- Grubb, W. N. (2002). *An occupation in harmony: The role of markets and governments in career information and career guidance*. OECD, Paris.
- Josefsson, U. and Ranerup, A. (2003) Consumerism revisited: The emergent roles of new electronic intermediaries between citizens and the public sector. *Information Polity*, 8, 167-180.
- Law, B. and Watts, A.G. (1977). *Schools. Careers and community, a study of some approaches to careers education in schools*. Church Information Office, London.
- Le Grand, J. and Bartlett, W. (1993). Introduction. In *Quasi-Markets and Social Policy* (LeGrand, J. & Bartlett, W. Eds.), pp.1-12, Macmillan, London.
- Nelson, O. and Masmurniwati, M. A. (2004) Dimensions of facilitators for non-business e-commerce adoption. In *WWW/Internet 2004. Proceedings Vol. 1. IADIS*.
- Norén, L. (2001). Offentliga marknader och IT [Quasi-markets and IT]. In Å. Grönlund & A. Ranerup (Eds.), *Elektronisk förvaltning, elektronisk demokrati. Visioner, verklighet, vidareutveckling [Electronic Government, Electronic Democracy. Visions, Reality, and Future]* (pp. 229-253). Lund: Orlikowski, W. and Iacono, S. (2001). Research commentary: Desperately seeking the "IT" in IT research –A call to theorizing the IT artefact. *Information Systems Research*, 12 (2), 121-134.
- Ranerup, A. (2004). Internet-based guidance in quasi-markets for education in Sweden. *International Journal for Educational and Vocational Guidance*, 4, 43-30.
- Schneider, M. (2001) Information and choice in educational privatisation. In *Privatizing education. Can the market deliver choice, efficiency, equity, and social cohesion?* (Levin, H. M. Ed.), Cambridge, MA, Westview press.
- SOU (2001). *Karriärvägledning.se.nu [Careerguidance.se.nu]*.(SOU 2001:45, Swedish Government Official Reports). Fritzes, Stockholm.
- Tambouris, E. and Spanos, E. (2002). An architecture for integrated public service delivery based on life-events. *Electronic Markets*, 12 (4), 281-288.
- Watts, A. G. (1996). Computers in guidance. In *Rethinking Careers Education and Guidance. Theory, Policy and Practice* (Watts, A. et al. Eds.), pp. 269-282, Routledge, London.
- Warkentin, M., Geffen, D., Pavlou, P. and Rose, G. (2002). Encouraging citizen adoption of e-government by building trust. *Electronic Markets*, 12(3), 157-162.