

## **WORKING IN AN INTER-CULTURAL COMPUTER CLUB: EFFECTS ON IDENTITY AND ROLE AFFILIATION**

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### **ABSTRACT**

Former immigrant workers from Turkey have settled down in Germany. They have established communities within German cities. However, they are confronted with unequal opportunities. Differences in access and appropriation of computer technology may amplify the gap between the German Turkish minority and the mainstream society. We have tackled this problem by creating an intercultural computer club. This paper presents results from this action research project in which we engaged children of an elementary school and their parents. We conclude that the application of ICT in the club has to be analyzed carefully with regard to the differing needs of its members. When applying ICT in order to produce artifacts in cross-cultural project teams, specific roles emerge, which are mainly defined by sub-group affiliation. Since Turkish women face serious challenges in finding their socio-cultural identity, we have extended the club's concept by adding a women's group.

### **KEYWORDS**

Intercultural learning, computer club, methodology, socio-technical infrastructures, community of practice

## **1. INTRODUCTION**

When thinking about underserved communities one quickly realizes that underserved is not a well defined term. In our scientific field, it is apparent to define underserved in terms of the use of information and communication technology (ICT), i.e. groups or communities with specific characteristics are underserved in their use of ICT. Typically, digital divide is related to the socio-cultural conditions of the different communities. These conditions have to be taken into account when conceptualizing interventions in order to support special needs of communities.

In this paper, we will focus on one underserved community in Germany – a German-Turkish migrant community in Bonn. The first groups of Turkish people who came to Germany were migrant workers in the 1960's and early 1970's planning to stay for just a couple of years. While they stayed, still nowadays there are significant inequalities between the Turkish communities and the German host society. The degree of social and political participation appears to be rather low. The socio-economical situation of Turkish inhabitants compared to mainstream Germans, is worse, which (as it applies to other socio-economically weak communities) leads also to the vicious circle of a lower level in education for many Turkish Germans. To tackle parts of these problems, we built up an intercultural computer club.

The design process serving underserved communities is not as straight forward as it could be when designing for people, who share more common ground with the developer. Finding requirements in an underserved community needs appropriate methodological approaches. This paper suggests to make sociological instruments practical for developers, namely Grounded Theory (Strauss & Corbin, 1990) in combination with Participatory Action Research (e.g. Kemmis & McTaggart, 1988).

We implement our methodological approach in a multi-cultural computer club, called *come\_IN* (e.g. Stevens et al., 2004 and 2005, and Veith, 2006). Located in Bonn, the club runs since almost three years in cooperation with a local primary school. It allows pupils of the school to meet once a week to work jointly on projects supported by ICT. Each child has to be accompanied by at least one parent. Within the club, Turkish and German inhabitants of the neighborhood work together to create a shared practice around collecting, constructing, and demonstrating real-world and computer artifacts. While shared practices got established and communities of practices emerged, (Lave and Wenger, 1991; Wenger 1998) certain roles came up that, interestingly enough, can be stereotyped according to the actors' understanding and use of ICT. Women, especially Turkish women, appeared to be the most interesting and underserved sub-group of club visitors. They have special needs and interests in joining the club.

In the following, we describe our approach to build a computer club in an underserved community, followed by a description of the experiences of the computer club. Furthermore, we discuss the methods we have used, our findings in the field of ICT and ethnic Turkish migrants, and last but not least, we present one example of how we react on socio-technical and socio-cultural developments within the club, i.e. the women's group.

## **2. MIGRANT-ORIENTED APPROACHES TO ICT**

Germany and other modern western societies are facing migration from countries with distinctly dissimilar socio-cultural backgrounds. Democratically constituted states should encourage social participation of all of their inhabitants, since it is a necessary condition for a sufficient level of integration. The lack of social as well as cultural integration seems to lead to unequal opportunities and lower levels of education, which are specifically problematic for migrants of the second and third generation.

We notice that integration processes of migrants often run into problematical states or even fail entirely. Although existing for more than forty years in Germany, Turkish communities are often still poorly integrated. When starting with primary school, immigrant children of the

third generation still show, for instance, a significant deficiency in the German language compared to other pupils of the same age. Moreover, the social gap between the Turkish immigrant community and the host society seems to be widening recently due to an unequal access and appropriation of computer infrastructures.

In Germany, only a few studies exist on how migration appropriates computers and digital media. Granato (2001) found out that there is a significant similarity between children from Turkish and German families regarding their wishes and preferences towards the use of digital media. This study does not consider the aspects of media competence and media design. It seems that immigrants have not the same access to new technologies (Wagner et al. 2002). In order to avoid the digital divide in the *Information Society*, special support for migrants seems to be necessary. There are some initiatives which try to deal with these problems in the German context. The foundation "Digitale Chancen" ("digital chances") believes that digital media offers opportunities for integration. Hinkelbein (2004, 27) states that the empowerment through the appropriation of new media is an important step for migrants. It helps them to express their needs and to represent themselves to gain more (political) participation.

The effect of digital media on the integration of immigrants is not always considered to be positive. Critics say that global access to media content will increase the cultural segregation. For instance, one may argue that the availability of Turkish satellite TV plays a role in the deterioration of the third generation's lack of German language skills. Aksoy & Robins (2000) argue for a more differentiated analysis. They see the increasing consumption of Turkish TV channels rather as a consequence of a failed integration than a reason for the given segregation.

When developing our approach to intercultural computer club houses, we were influenced by the work of Resnick and Rusk (1996a, 1996b). Their concept of a computer clubhouse (CCH) aims at teenagers in the US coming from lower social classes and educational backgrounds (inner cities) (cf. Kafai et al. 2007). The pedagogical concept is derived from the constructivist learning paradigm (e.g. Papert, 1980). Accordingly to Shaw (1995) social ties are established during the process of constructionist learning. As a result, social capital is a part of the underlying concept of the CCH. Hayes et al. (2004) demonstrate the difficulties in exposing CCH into practice. They also show how it can be in conflict with the actual needs of its members. In the first phase of our work, we subordinated the development of innovative tools for learning to the needs of community building.

When developing our action research approach (see below) for our intercultural computer club, we were also inspired by the theories on Communities of Practice (CoP) (Lave and Wenger 1991; Wenger 1998). In our case, CoPs are an interesting theoretical concept since they relate to the experience of shared practice to the process of identity building and knowledge acquisition. Learning in a CoP is defined by the relationship of 'old-timers' and 'newcomers' within a community. As newcomers interact, work, and communicate with the old-timers their experiences increase. CoPs are characterized by common conventions, language, tool usage, values, and standards. Identity is mainly determined by negotiated experience of one's self in terms of participation in a community and the learning process concerning one's membership in a CoP (Wenger 1998, 145). Following these theoretical considerations, our approach intends to establish a CoP bridging between segregated ethnical communities. We assumed that the establishment of a shared practice among members of ethnical communities would have an impact on the actors' individual and, in a longer term perspective, on the ethnic communities' social identity. Since we do not believe in social

determinism, such interventions will increase the likelihood of a CoP's emergence rather than forcing it into existence (Wenger et al., 2002).

### 3. THE COMPUTER CLUB “COME\_IN”

We evaluated our research approach in a project, taking place in the so called “Bonner Altstadt” a neighborhood within the city of Bonn. The Bonner Altstadt has a population of about 8,700 inhabitants<sup>1</sup>. The social and cultural structure of this district can be characterized as a colorful mixture of different communities. Statistical data characterizes this situation today: The neighborhood has a high rate of immigrants (~28% of the population, in comparison to 22% in Bonn as total) and a low education rate (35% have just a Hauptschulabschluss<sup>2</sup> and 32% of those in employment are workers). However, the German community consists to a considerable part of academics, partly former students who stayed in the neighborhood after their graduation.

In the German context, primary schools are important places where collocated but segregated communities meet. Since most kids attend the public primary school in their local district, schools became one of the very few places where people unavoidably come into contact with different cultures. Therefore, schools in multicultural neighborhoods face considerable challenges in dealing with a differentiated population of pupils.

The computer club “come\_IN” is conducted in cooperation with Marienschule, a primary school in the Altstadt district. The school has adapted a reform pedagogical approach, it focuses on open and work oriented teaching, e.g. in small groups, workshops, projects. Each class room is equipped with 2-3 computers which can be used as resources in daily work. Pupils are taught in classes of mixed age-groups. Beyond the neighborhood, the school has gained reputation for its innovative pedagogies and didactical practice.

While innovative in its didactics, Marienschule experiences several serious problems in dealing with their highly differentiated pupils. Offering appropriate education to third generation children of Turkish origin turns out to be a serious challenge for a variety of reasons. A considerable part of these children starts school with little or even no German language skills. This is particularly surprising since they are the children of second generation Turks who often speak fluent German. Moreover, many children of Turkish origin lack parents' support and motivation concerning their school performance. Finally, the children of Turkish origin seem to have less access to ICT than the children of German origin. This is not only an issue of the availability of computer hardware and software in their homes, but also of the level of computer literacy within their families and networks of friends.

Due to these conditions the – now former – principal of Marienschule adopted our ideas of multicultural CoP and became involved in the project<sup>3</sup>. In the following, we will present the core concepts which were developed in an attempt to establish a multicultural CoP.

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<sup>1</sup> All official data are from the Statistical Office of the city of Bonn, January 2006.

<sup>2</sup> “Hauptschulabschluss” is the German equivalent to the certificate of completion of compulsory basic secondary schooling.

<sup>3</sup> Empirical investigations by Calabrese-Barton (1998) and Nasir (2002) indicate the importance of the pupils' identification with their performance in school settings. Looking at children from minority groups in inner cities in the US, they argue that school performance is often low in case schooling does not play an important role in the self-

We decided to establish a shared practice across the ethnical communities by encouraging participants to jointly work on computer-supported projects. We assumed that dealing with computers and digital media would be attractive for many participants within the different ethnic communities. However, we believed that just offering an infrastructure for a shared practice would not be enough to start the process (Rohde, 2004).

To impact identities in the different ethnic communities, we would not only need to attract the students but also the parents. Since the success of schooling is highly related to the social context of the children, schools and parents need to work together (Lanfranchi 2004, Lanfranchi et al. 2001). Thus, we introduced the rule that children may only come to the club if accompanied by at least one parent. By this rule, we used the attraction computers have for children to get parents involved in the process. In addition, it is hard for primary school kids to manage complex projects by themselves. Conceptual support from their parents was needed to realize the envisioned project's outcomes. While establishing a project-related practice, we assumed that foreign and German parents would have more exposure and therefore communicate with each other.

One of the first projects deals with a multimedia documentation of family histories. Right now, already three generations of Turkish immigrants live in the neighborhood. However, their cultural histories are only poorly, if at all, documented. These family histories should be presented together with German ones from the same neighborhood. Such a shared history may support the growth of a joint identity across the different communities.

Another project deals with sports, more particularly, soccer. Children, parents, and tutors decided together on this project. In the beginning, children and their parents prepared a number of matches between different teams of pupils. During these matches, different types of digital media were used to record the project. Parents and children were improving their abilities in the use of ICT while creating stories, photo presentations and a film about the football matches. In addition, after the first matches, several Turkish parents arranged for another match against a local Turkish football club. These matches gave the computer club more exposure to their community, creating a high level of impact.

#### **4. GROUNDING THE FIELD**

After a preparation period of about half a year, come\_IN opened officially in March 2004. Mainly qualitative research methods have been used to observe the field as detailed as possible. Over 40 days of field observation and a dozen of semi-structured and many free interviews have been conducted up to now. Additionally, a load of field notes, protocols, and other material has been gathered to guarantee a large amount of data.

We chose the Strauss & Corbin Grounded Theory (Strauss & Corbin, 1990) method as our theoretical approach to ground the field. This gave us the opportunity of understanding the computer club in its highly contextualized semiotic nature. By doing so, the computer club as a social construction comes into focus, and the elaborated theories arise from the field. Although Grounded Theory (GT) provides good advice on how to think about a field of application, it does not tell us how to act in this field. We overcome this lack of knowledge by applying Kemmis' & McTaggart's Participatory Action Research (Kemmis & McTaggart,

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conception of the children. So schools need to take more care of the pupils' identities and try to adapt their measures accordingly.

1988 and 2004). The principle of Participatory Action Research (PAR) is able to put GT in an on-going interplay of action and reflection by instructing researchers on how to act in the field. It is possible for us as developers to (a) participate in the club, (b) conduct several sociological means of qualitative research (e.g. interviews, observations, etc.), and (c) ground contextualized theories. By doing so, we have a combination of thought-relevant and action-relevant methods in order to investigate meaningful, field-oriented insights. Vice versa, PAR does not only include the researcher into the field exclusively, but allows the subjects to participate in the processes of changing, planning and even observing (see Greenwood et al., 1993). It is a continuous interplay of field and science guaranteeing a real grounding of practice and theory, of context and action and design implications.

Both theories presuppose a cyclic and evolutionary plan of action providing practical and methodological interfaces where thinking and doing are interconnected. Theories and insights are elaborated step by step. Missing data can be gathered in real-time according to the emerging needs of both, the researcher / developer and the club members / users. As a matter of fact, a cyclic approach is required due to the organizational structure of the school. Each year, new students start school while the 4th grade pupils leave school.

## **5. ICT AND “TURKISH IMMIGRANT WORKERS” IN COME\_IN**

After more than three years of investigating the club, it is now time to evaluate the outcome. From the start of the come\_IN activities mostly between 15 and 30 people participate once a week in the club's activities. As a matter of fact, after school breaks, the number of visitors is a bit lower than on “regular” days. However, the come\_IN community is big enough to realize projects. Larger projects are documented in a booklet summarizing the outcomes. There are measurable results, which characterize the come\_IN process so far. ICT is widely used in the club. Parents, as well as children are involved, and all participants are eager to guarantee equal opportunities to all club members. On a superficial level, the club seems to work fine. When taking a closer look at the internal processes, there are, however, a lot of critical issues still in need to be discussed. How is ICT used in the club, and what design implications can be drawn? How is ICT used particularly by the Turkish participants?

Beforehand we have to ask: Is the Turkish community in general underserved with regard to ICT? First, they very often do not deal with ICT at their work places. The Turkish Germans who are employed mainly work in factories, gastronomical or house-keeping services. In these jobs, they are not confronted with computers or other ICT devices on a regular basis. Secondly, it seems ICT is not incorporated in their everyday life. While computers do not play a very important role in their work lives, we observe that the use of ICT is also less incorporated into their leisure time. Does this mean that they do not need or want ICT?

Since Turkish Germans are part of the German society and therefore know about computers, this assumption seems to be problematic. We rather believe that there is only a weakly developed culture of using ICT. As parts of the Turkish Germans seldom use ICT, they have low ICT competences. Additionally, there sometimes seems to be a low motivation in acquiring competences. We argue that this assumption is especially true for Turkish women but not at all for Turkish children. Turkish men range between women and children. They are mostly unfamiliar with ICT in work life, but are rather keen on the playful nuance of ICT in

private contexts. In the following, we want to unveil specific roles within the club. Having a closer look at the characteristic use and understanding of ICT, we can uncover sub-groups within the come\_IN community. We present those in the order: children, men, and women.

### **5.1 “Play with me!” – Turkish children in come\_IN**

The children in come\_IN use ICT the most regularly and willingly. Turkish and German children in the club do not show any significant level of difference in their implicitness of using ICT. They all enjoy playing with the computer and other technical devices. However, they are not so keen working seriously with ICT, e.g. producing texts. In terms of gender, boys seem to prefer to use the computer a bit more frequently than girls. However, this observation does not hold for alternative input devices such as a tablet PC. It was easily observable that girls really appreciated the opportunity to manipulate “their” favorite programs, which often involves painting and other artistic activities by means of a digital pen. There are significant preferences for certain applications between the two cultures. Whereas Turkish children prefer mainly to play online games, German kids show a favor for chat programs. However, when working on certain projects these differences were easily bridged. For instance, working on Scratch-based projects helped to overcome these differences. Scratch is a pre-interpreted programming language equipped with a corresponding programming environment. It is especially designed for the use in computer clubs to enable actors with little or no programming skills to express their ideas into animated artifacts or programs. These products can be shared online or with other members within the club (Malone 2004). Scratch-based projects often involve using a photo editors and paint software.

The process of sharing user created content helps to strengthen the relationship of the whole group, especially by transforming collectively perceived events into a permanent and shareable state. In our most recent case, this event was a collective excursion to Berlin. Digital photo- and video cameras were provided by the club, resulting in numerous pictures and short clips to be used in the Scratch projects. After the return to Bonn, these projects were carried out to document and tell stories about the Berlin trip by animating photos and videos within Scratch...

However, Turkish and German children are rather distinct with regard to their socio-cultural and socio-technical dimensions in the club. The Turkish kids more often “manage” social interactions among Turkish and German adults than the German children do, i.e. they act as the translators and provide information to their parents. They also help their parents – mainly fathers – when technical problems occur. With regard to German father-son-constellations, it is typically the other way around. In case of German child/parent couples usually the parent would ask a tutor for help, whereas Turkish kids show a tendency to attend the tutors more regularly and naturally than most of the German children do. This might also indicate the parent’s amount of ICT experience – Turkish children on many occasions are aware of the fact that they often cannot expect help from their parents’ side with regard to ICT problems. Therefore, they mostly skip this step and ask the tutors for help first. In case of German children, the parents (the father if available) are their first contact point, who in the event of being unable to solve a problem often consult the tutor themselves. Due to work-related pattern mentioned before some German fathers have a very different approach towards ICT issues such as programming than Turkish parents have. For instance, a German boy’s father, already skilled in programming imported ‘Scratch Boards’, a small sensor board, which

is one of the latest devices designed for the Scratch environment, from the USA on his own initiative and costs. Probably none of the Turkish parents attending the club would have been able or willing to invest the effort or money to get these boards, nor would any of the Turkish parents be able to appropriate such a device.

A similar observation was made, when the club members tried to find some of the places and related distances being of interest for their upcoming Berlin trip, employing *Google Earth*. Some of the elder children (Turkish and German boys) dealt with the complexity of the task at ease, whereas a Turkish mother and her young son were completely unable to cope with the task (probably for not having any experience with Google Earth at all). However, at this occasion two German girls also watched out languidly while their mothers applied and shared their experiences concerning Google Earth.

In a metaphorical and rather abstract way, the Turkish children appear to be an “entrance card” to the socio-cultural identity of their parents community. One example can be seen by the school principal’s approach in informing participants of come\_IN. Besides writing letters to Turkish parents, she “uses” the Turkish children to inform their parents or to invite them to the club. In a way, this is also true for German children, but their parents usually express their interests more independently and therefore come ‘more voluntarily’.

The children’s sub-communities demonstrate how well they work in groups. Typically two or three kids sit together at one computer. Here, the idea of personal computers reaches its limits. Only one child can work while the others watch and negotiate the procedure. This restriction is also quite obvious when they try to explain or teach something to adults. In a narrow, technical sense, project work in come\_IN is communicative, somewhat cooperative, but never collaborative. For instance, two girls wanted to draw an image of an old house in the Altstadt. They had to spend quite some time in negotiating the sequence of their mouse-driven activities, since both of them actually wanted to paint the image at the same time.

## **5.2 “Show me what you got!” – Turkish men in come\_IN**

Turkish men in come\_IN want to use ICT. They are interested in acquiring ICT competences. Most of them know enough German to communicate with all members of the club. They are used to speak at least basic German at work. However, they do not know how to work with ICT. Their activities are mainly restricted to surfing the Internet for personal information or showing interesting homepages to other club members. As their children are mostly familiar with these things, Turkish men often learn from their own kids. First they watch, and then they act by themselves. As they typically do not participate in the organization of projects, their activities often run in parallel to the club business. Examining this phenomenon led us (i.e. the tutorial staff) to the decision to strongly encourage them to bring their own interests into focus more courageous. As a result of this promotion, a soccer project was started (related to the FIFA World Championship 2006 in Germany). From the rapid increase in participation, many club members considered the resulting soccer tournament to be one of the highlights of the come\_IN program. Also the collective trip to Berlin and the evaluation of the animation produced afterwards seemed to be liked by Turkish fathers. Though being limited in participating in the computer-supported projects for qualification reasons, the fathers still feel rather emphatic with regard to the club. For instance, recently one Turkish father asked a tutor (they accidentally met in the city) for the next journey planned by the club. He expressed his very positive experiences with regard to the two earlier trip carried out by the club.

### 5.3 “We live in a men’s world!” – Turkish women in come\_IN

Although Turkish men are often in the beginning passive watchers, they become active in a second step. However, the majority of Turkish women mostly stay passive with regard to the appropriation of computers. While watching their kids playing or working with the computer, they talk to each other or just remain silently sitting. A typical situation can be observed similarly almost every week: A Turkish mother arrives at the club. She greets the principal; they shake hands, and chat for a few seconds. Afterwards she takes a seat next to her daughter, typically near the computer, and waits. Her daughter starts later on moving around in the club, talks and plays with other kids. However, the mother stays sitting in her chair and watches the daughter. From time to time, other Turkish mothers join her. They drink a tea and talk. Typically, it is not possible for Non-Turkish members to understand what they are talking about since they are used to speak in Turkish language. Just in case club members of German origin talk to her, she tries to speak in German. However, most of the mothers of Turkish origin do not speak German well. Most women of Turkish origin cannot handle computers, and very often, they seem too shy to ask for help.

A German language course was especially set up within the club by one of the elementary school teachers. While it was attended by some of the Turkish mothers their number was continuously decreasing. More and more Turkish women stayed at home. Even with the soccer tournament which motivated many Turkish women to participate actively in non-technical activities, the decreasing trend did not stop. One Turkish interviewee provided an interesting explanation for this development. She said: “Well, they [i.e. the Turkish women] have to acquire the basics. I mean, they don’t even master the German language. They are here, but they are permanently confronted with their deficiencies”. come\_IN seems to reach its limits or (to weaken the statement) come\_IN is facing serious challenges.

Together with two female students of social work, we investigated more profoundly into the background of the women’s rather passive behavior. During their inquiries, four main issues were exposed. First of all, most Turkish women suffer from a weak knowledge of German. Language issues create a considerable boundary for most women to address other non-Turkish members of the club or the tutoring staff. As described in 5.1, it’s rather the Turkish children who negotiate for their parents. Secondly, the student researchers suspected that low or non existing prior knowledge with regard to computers and information technology are responsible for lacking activities within the computer club. Many Turkish women just do not see the point in dealing with computers as they do not play a significant role in their everyday life. They know that rather their children have to help them, while among the German parent/child couples it is often the other way around. We assumed that they may feel uncomfortable. If their children would not take the role of negotiators into their responsibility, they presumably felt even more excluded. This perception combined with deficits in language mastery inhibits more active attendance. Cultural differences play a huge role, too. For instance, it is quite unusual for female Turkish Muslims to take part in activities that also involve German men. Finally, they are not used to the open structure of come\_IN. There is neither a fixed hierarchy nor a certain contact person for particular issues.

To deal with these difficulties, a women’s group as a specific line of activities was created in 2006 within the framework of the computer club. The group was built up and coached by the female student who themselves had a migration background, though not from Turkey. The group offered an alternative access points towards come\_IN and was set up in a way that the

inhibition level for the Turkish women was as low as possible. The idea was to provide the women of come\_IN once a week with a specific meeting point, focusing on their needs and interests. They were suggested to bring their children to jointly carry out activities which were neither typically associated with the current projects of the club nor were they ICT related on the first glance. So the group conducted activities such as cooking, ice skating, going to cinema, picnic in the park, and many more. While we did not emphasize ICT use, the documentation of the women group's activities was part of the overall concept. Together with the group's facilitators, the women and their kids, for instance, typed the recipes for cooking on a computer and distributed the printouts later on among the participants. Recently the women group and their facilitators even created a video, presenting impressions of the daily life of the participants and reporting about some of their joint activities. Animated photos about the group's activities and interviews among participants were video recorded and finally arranged and by the tutors of the computer club. The video was exhibited in a local art museum ("Frauenmuseum Bonn") as part of an exhibition displaying work of immigrant artists. While a lot of work was supported by the tutors some of the Turkish women got really excited about their project and proudly joint the opening of the exhibition.

We also had hoped that German mothers would join the group, which could provide rare personal insights into the unfamiliar culture of the other ethnical group. We had hoped that, for instance, a joint picnic in the park could turn into a severe debate about religion. However, the participation of German women was not high from the beginning and vanished rather soon. We have not yet investigated the reasons for this phenomenon any further. However, it may well be that the socio-cultural gap between these particular women was specifically large.

Some organizational problems such as providing a key to the meeting place in the school challenged participation in the women's group. However, the group's basic concept can be considered to be successful with regard to establishing shared practices among migrant women. Finally, these practices even related to the appropriation of ICT. For some of the participants the women's group also strengthened their role in the computer club.

For instance, one woman of Turkish origin, whose two boys and one girl attend the computer club, is a very active member of the group. Speaking German quite well, she participates in the women's group as well as in the regular weekly computer club meetings. Being not well experienced in using ICT, she became quite keen to observe and help her children and documenting the club's activities. She compensates lacking experiences by a good amount of curiosity and sociable behavior, which also transfers to her children. After exploring a tablet PC, used by a tutor, she, for instance, decided to "definitely get one of those for their home, in the future."

In principle, the Turkish women feel a certain attraction towards ICT. Web technologies especially seem to awake their interests since multi media realizations offer the opportunity to overcome textual, and therefore linguistic, barriers. For instance, from time to time a Turkish woman presents photos from her home town in Turkey to German and / or other Turkish women. When this happens spontaneous inter-cultural talks emerge in the club which sometimes even have to be translated by Turkish kids. In one of the sections, a Turkish mother asked her son to search for the homepage of her hometown in Turkey. A German mother was very interested in the landscape to be seen. The Turkish mother was happy to present more photos, and finally found the street where she used to live. Her son had to translate a lot, but still, the communication went for a couple of minutes. Following this interaction, both mothers said hello and talked to each other when they met later on in the club. While this pattern of communication has its limitations, it can be seen as a starting point to integrate

Turkish women into come\_IN's ICT related practices and motivate them to participate in the club's activities.

## 6. CONCLUSION

We have presented a case study of a computer club in a multicultural neighborhood. The come\_IN approach is based on socio-cultural theories of learning which assume that the establishment of a common practice is likely to effect on the actors' identity. However, so far it seems that a come\_IN identity has only partly been established, this point needs deeper analysis and further research. The club has to be rather considered as a community which provides multiple social incentives for participation of different sub-groups. The subgroups are themselves a conglomerate of individuals with different identities. Due to linguistic barriers and socio-economical differences (i.e. different work practice), German and Turkish club members show deficiencies in developing a common practice in computer supported project work. In case of the Turkish adults, the characteristics of their participation are still mainly defined by their group affiliations rather than by personal needs or interests. This is particularly the case for women of Turkish origin though the women's group has started to challenge this behavioral pattern. These group affiliations are commonly accepted within come\_IN. In order to overcome these shortcomings, additional means of communication have to be provided. Discussions, a verbal form of conflict handling, are needed, which have to be supported technically as well as organizationally. By doing so, it will be possible to reduce social stereotypes which limit come\_IN participants to these role affiliations. Identity changes need to be motivated socially.

To deal with the problems of Turkish women within come\_IN, we had to modify our approach. We set up a particular women's group. In this group, women and their children met exclusively (as an additional offer of come\_IN, not as an alternative). While nurturing activities which had a high relevance for the migrant women, the general vision of the club and the digital media available let the participants and their facilitators start creating digital artifacts and establishing ICT related practices. Due to the fact that German women did not yet participate in these additional activities, we did not yet realize the linguistic effects to their full extent.

The empirical findings indicate that aspects of the currently given ICT are not fully suitable to support integration through computer-supported project work. As mentioned above, club members cannot really work together hands-on at the PC, which creates a "culture of watching" in which mainly the children do computer work while most Turkish adults play the role of spectators (some of them learning from their kids, some of them teaching their kids). Large displays are needed in order to enable and foster discussions concerning digital artifacts. Synchronous input devices for multiple users (e.g. keyboards, mice, electronic pens, etc.) should be available to make computer-supported project work a more collaborative experience. ICT should support interactivity among the human actors in the club in a broader sense, including non-linguistic means of communication. Games and portals should be designed in order to attract attention from the different ethnical, gender and age sub-groups. Therefore, we plan to design a Turkish-German portal which makes mix-cultural content about the neighborhood accessible, and therefore, fosters inter-cultural communication.

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