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A Framework for Children's Participatory Practices in Virtual Worlds

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Abstract

In recent years, participation of children in virtual worlds has grown and children are also the largest number of users of virtual worlds (KZero, 2009a). This growth in participation in virtual worlds has brought out discussion about their effects on children's lives. In this article, we consider opportunities of virtual worlds to engage and educate children about their civic life.

The aim of this paper is to establish a framework for participation in virtual worlds and to test the framework by looking at current participatory practices in virtual worlds. In this paper we present a framework for children's participation in virtual worlds which is based on research review. Our framework sees children in virtual worlds as social actors, learners of civic participation and as citizens. Results of a survey conducted to find the participatory practices of children in virtual worlds are also presented. The results indicate that children are highly interested in socializing with friends and engaging in avatar related activities. It was also found that traditional forms of civic participation are not very common in virtual worlds. Thus, there is a need to promote traditional forms of civic participation and at the same time look at new opportunities presented by virtual worlds for civic participation.

Keywords: virtual worlds; virtual participation; civic participation; civic education; children's participation.

A Framework for Children's Participatory Practices in Virtual Worlds

Virtual worlds captivate children with imaginary, immersive and collaborative environments. In recent years some of the virtual worlds have seen an exponential growth in the number of users. Most of this growth has come from child-centered virtual worlds aimed at 10-15-year-old children as is revealed through a comparative analysis of registered user accounts of virtual worlds for the first quarter of 2009 and at the end of fourth quarter of 2009 (KZero, 2009a). As virtual worlds and other virtual spaces such as games and websites have become almost a natural part of children's daily life, their supposed positive as well as negative effects on children's lives have been discussed. Some people have argued that virtual spaces contain many risks for children, related to inappropriate content and social interaction, while others have emphasized the possibilities of virtual spaces for children's agency and participation (Livingstone & Haddon, 2009).

Altogether, there has been growing interest in developing virtual worlds that could enhance children's participation and contribute to better learning by motivating, inspiring and supporting while having fun. Stranius (2009) has argued that the huge potential of collective participation is accumulated in online communities and it is only a matter of time as this power is extensively launched. Virtual spaces have been seen as new arenas for children's participation because traditional ways of participating, such as voting or organizational activities, do not encourage young people to participate anymore (Torney-Purta, Lehmann, Oswald, & Schulz, 2001; Bennett, 2008; Loader, 2007). The potential of virtual spaces has been related to their competence in allowing children to express their opinions and in offering children opportunities to construct their identities as well as learn civic skills such as deliberation and decision making (Bers, 2008; Stern, 2008; Kotilainen & Rantala, 2008). At the same time, the viewpoint of children as passive consumers of technology and media has changed (Jenkins, 2006) and they are now seen as active content producers and participants of virtual communities.

Although the potential of virtual spaces has been recognized, the focus of previous research has not been on virtual participation. Research on virtual participation has been in its infancy and for example internet access, use, interests and activities have received more research attention than participation in virtual worlds. According to Donoso, Ólafsson and Broddason (2009), only eight percent of studies related to children and their online practices

have focused for example on civic or political participation while 83 percent of the studies include information about online usage. Research on children's online practices and their media use in general has dwelt on how children are at risk online and are thus in need of protection, instead of considering them as active participants who have some autonomy in developing their own online experiences and practices (Ponte, Bauwens, & Mascheroni, 2009).

Given the current research landscape, our aim in this article is to establish a framework for participation in virtual worlds and to test the framework by looking at current participatory practices in virtual worlds. Additionally, we look at how these participatory practices can be used to enhance civic participatory skills.

Framework of virtual participation

The research field of virtual participation is quite young and the concepts related to virtual participation are not yet established among researchers (Pessala, 2009). Different concepts such as participation, civic engagement and influence are used in the research field. Virtual participation also refers to participation in different contexts, for example virtual worlds, net pages or social media. In this paper, we focus specifically on children's participation in virtual worlds. Use of virtual worlds is very popular among children but research on virtual participation has focused more on websites and other technologies than on virtual worlds. A lot of research has been conducted on children's participation as well, mainly focusing on methods for enhancing children's participation in different environments. However, the focus on virtual worlds has been missing. In this article, we seek to fill this lacuna by proposing our framework of virtual participation.

Virtual worlds as arenas of participation

Theis (2010) observes that the concept of participation has been criticized as it does not specify the meaning or forms of participation. Participation simply means "taking part" but the definition leaves open an essential question "taking part in what?". As participation does not take place inside a vacuum (Polat, 2005), we have to define the context of participation. One way to approach the concept is to recognize the distinction between participation as social activity and participation as influencing or creating change in political

or societal processes (Sotkasiira, Haikkola, & Horelli, 2010). Considering virtual worlds, both of these viewpoints are important and useful. Use of virtual worlds is usually social action and can thus be considered as participation. On the other hand, use of virtual worlds may have effects for example on users' opinions, attitudes and behavior, when the concept of participation refers to the effects which emerge as a consequence of the social activity. If participation refers to a process of influencing which is focused on a group of people or on a community, we may talk about civic participation (see Montgomery, Gottlieb-Robles, & Larson, 2004). In this section, we will look more into these two viewpoints that form a basis for our framework of children's virtual participation. We will first present a figure of the framework and then explain it.

The framework consists of four levels (Figure 1). The first level describes the two above-mentioned forms of participation: participation as social activity and as a process of influencing. The second level represents the child's roles as participant in virtual worlds which will be considered more closely in the next section. The third level describes the roles of virtual worlds in the process of participation and the fourth level illustrates the affordances of virtual worlds for children's participation. By affordances we refer to intrinsic features of technologies that support actions people intend to take with the technology (Gibson, 1986; Nardi & O'Day, 1999). Affordances may be intentional, for example virtual worlds' affordance is to provide people a place for social interaction and playing games. On the other hand, some of a tool's affordances emerge during use, unanticipated by designers (Nardi & O'Day, 1999). Considering virtual worlds, unintentional affordances may refer, for example, to participatory features. Intrinsically virtual worlds were not designed to enhance user's civic participation or their civic skills but today we may see that virtual worlds have great potential for civic participation as well.
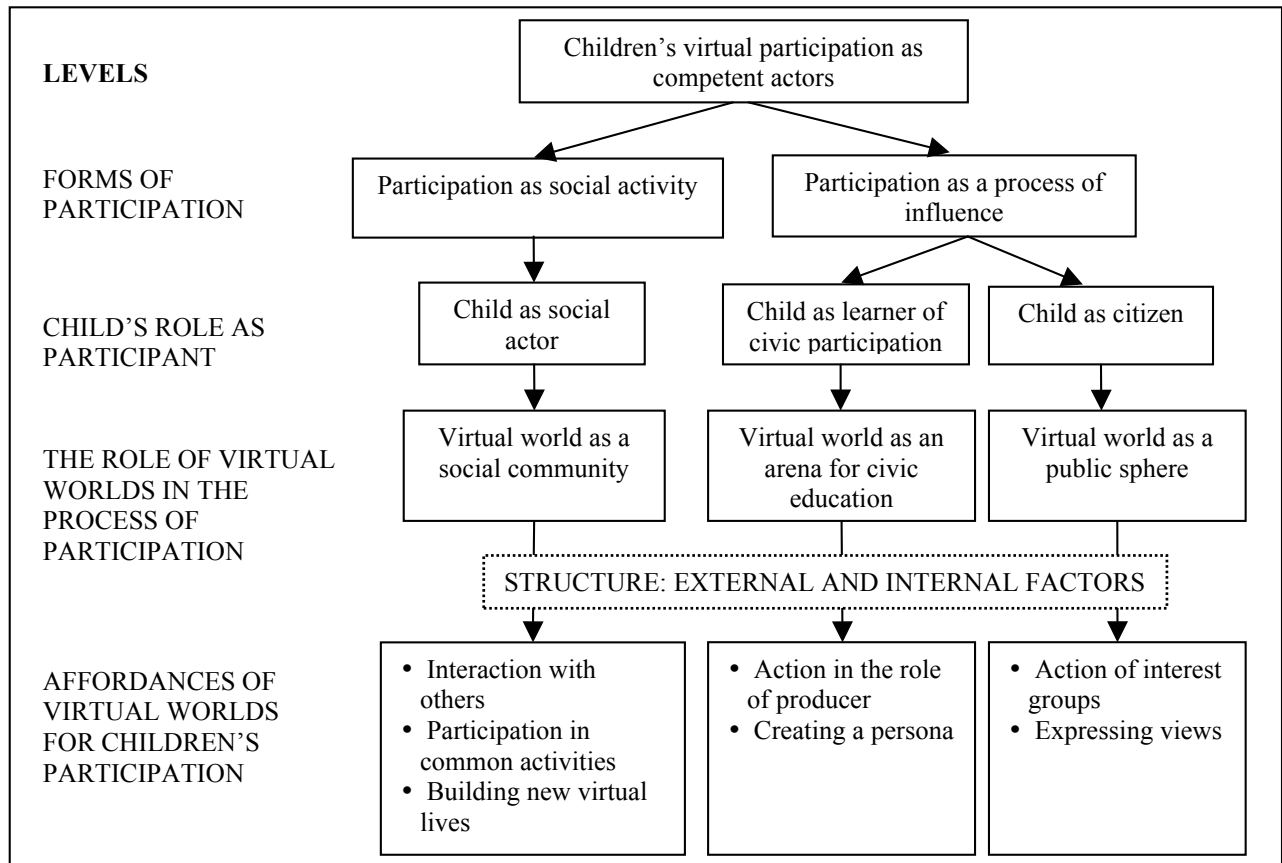
LEVELS	Children's virtual participation as competent actors		
FORMS OF PARTICIPATION	Participation as social activity	Participation as a process of influence	
CHILD'S ROLE AS PARTICIPANT	Child as social actor	Child as learner of civic participation	Child as citizen
THE ROLE OF VIRTUAL WORLDS IN THE PROCESS OF PARTICIPATION	Virtual world as a social community	Virtual world as an arena for civic education	Virtual world as a public sphere
	STRUCTURE: EXTERNAL AND INTERNAL FACTORS		
AFFORDANCES OF VIRTUAL WORLDS FOR CHILDREN'S PARTICIPATION	• Interaction with others • Participation in common activities • Building new virtual lives	• Action in the role of producer • Creating a persona	• Action of interest groups • Expressing views

Figure 1. Framework of children's virtual participation.

The significance of virtual worlds as arenas of participation lies in their intrinsically social nature. Virtual worlds are conducive to groups coming together and spending time together, with people going to virtual worlds to seek sociability, interact with others and participate in a common activity of play or work (Noveck, 2006). Virtual worlds stimulate social experimentation and encourage people to create new virtual lives and to build new virtual cultures and identities. They are full of social cooperation but also social conflicts at the same time – in this respect virtual worlds present all the opportunities and risks of social order we find in real space (Balkin & Noveck, 2006). According to earlier surveys, social activity is one of the main reasons for using the virtual worlds (KZero, 2009b). Most of the Habbo users, for example, use the virtual world to meet and discuss with friends or to help others. In addition, the virtual world holds a specific social value for those people who may otherwise be passive, insecure and shy: virtual worlds as well as the Internet in general are important for fulfilling their social needs. (Global Habbo Youth Survey, 2006.)

A process of influence always demands that other people are involved (Kiilakoski, 2008). Thus the view of virtual participation as a social activity creates a basis for

considering virtual participation as a process of influencing. However, if the definition of participation as social activity is fairly unambiguous, defining the concept of influence is not so simple. Influence may refer to achieving certain transformations in the social or political processes or through decision making (Sotkasiira et al., 2010; Anttiroiko, 2003). In this regard, virtual worlds may be considered "public spheres". Participation takes place within a public realm (Polat, 2005) and virtual worlds have been seen as arenas for interest groups and activists to act in public. They organize meetings and events to engender public debate and in this way, seek to accomplish something together (Noveck, 2006). These meetings and events may be organized for the community of practice interested in issues ranging from transportation to clean air (Noveck, 2006). As civic engagement is understood as expressing one's views in order to participate and influence public life (Bachen, Raphael, Lynn, McKee, & Philippi, 2008), virtual worlds may be seen as arenas of civic participation as well.

It has been argued that the significance of new media for participatory activities lies in the shift from the "traditional" public sphere to everyday active participation in a networked, highly heterogeneous and open cultural public sphere (Burgess, 2007; Kalmus, Runnel, & Siibak, 2009). Since 'public sphere' has traditionally referred to the places of formal politics, such as elections and party activities, interactive net environments have expanded this sphere to everyday life and practices (Burgess, 2007; Rinne, 2008; Bennett, 2008). At the same time, forms of participation have become more personal and open: people can express their personality, values and lifestyles in a way they want (Rinne, 2008). This refers to opportunities of technology and virtual worlds as well. Virtual worlds have expanded children's environments, like other online participatory spaces, from school, home and hobbies to an extensive, world-wide virtual community and public sphere.

On the other hand, a process of influence may point to more abstract transformations in skills, attitudes and identities. According to Bers (2008), children may learn new concepts and ways of thinking about identity and civic life by using the virtual world. This is based on the ways in which the virtual world works. For example in Zora, which is a three-dimensional multiuser environment, children are put in the role of producers instead of consumers: children are engaged in thinking about issues of identity by inviting them to construct their own virtual homes and populate them with their most cherished objects, characters, pictures, stories, and personal and moral values (Bers, 2008). Another important characteristic of virtual worlds for identity construction is the avatar, the simulacrum of self within the game space. Creating a persona to represent oneself realizes the idea of freedom and autonomy and

on the other hand, forces users to think about how they want to appear as a member of a community. Thus creating an avatar is akin to assuming the role of citizens: avatars think and act as members of a game community rather than as private individuals (Noveck, 2006). In this case the significance of virtual worlds lies in their potential as arenas of civic education: virtual worlds are seen as a context for learning civic skills.

As we talk about public sphere and learning civic skills in virtual worlds, we come close to the concept of "civic participation" which can be defined in many ways. From the narrow viewpoint, civic participation refers to formal and traditional forms of participation, such as voting and taking part in demonstrations. The broad viewpoint extends the definition to active participation by community members, their interaction with others and their rights and responsibilities as community members (Montgomery et al., 2004). According to Levine (2008), civic engagement comprises even participation in shaping a culture which can mean many kinds of activities. In our study, civic participation is considered rather from the broad viewpoint though we will also look at the traditional forms of participation in virtual worlds.

The viewpoints of virtual participation as a social activity, and as a process of influence also define the roles of children as participants. Children can thus be considered as social actors, citizens or learners, depending on the context of their participation. If participation is defined as a social activity, participants may be seen as social actors in the first place. Children are social beings (Smart, Neale, & Wade, 2001) and technology, including virtual worlds, is one of the contexts in which many children fulfill their social needs. Defining participation as a process of influence, for one, sets children in the role of citizens. Children may be seen as citizens at this moment and thus virtual worlds are seen as public spheres and arenas for bringing out their own views and experiences. On the other hand, children may be seen as citizens in the future when the emphasis is on learning civic skills for the future. Thus, children are seen as learners. In the next section, we focus more on children's roles as participants in virtual worlds.

Children as participants in virtual worlds

Our examination of virtual participation is focused on children which entails some specific aspects. Children are always slightly special related to adults and hence things connected to children's well-being generate a lot of discussion, sometimes laden with moral panics. In recent years, discussions of children's use of technology, including virtual worlds,

have been intensifying. According to Ponte et al. (2009), the discussion has oscillated between two contradictory approaches to children's competence. Children have been seen as autonomous and fully-developed social actors on the one hand and as immature and incompetent agents on the other. Children's autonomous and social character has been emphasized especially in political and academic circles. Ponte et al. (2009) have recognized children's use of technology as part of their own culture and everyday life and based their argument on the United Nations Convention on the Rights of the Child which entitles every child to participate in their own culture and in all matters affecting the child. The traditional discourse, on the other hand, has been based on a view of children as incompetent beings. People using this discourse have associated children's online activities with negative feelings, problems and risks and thus brought out a critical view of effects of technology on children's well-being (Ponte et al., 2009).

The view of children's competence forms a basis for understanding their roles as participants in virtual worlds. Our basic argument is that a starting point for considering children as participants is the view of children as competent agents. We found this argument in one of the main theses of sociological childhood studies whereby children's competence justifies their roles as social actors and citizens. According to this thesis, children have the competence to be involved in the construction of their own social lives as well as of the societies in which they live (James & Prout, 1997; Smart et al., 2001). Thus, children are seen as social actors and as actual citizens here and now, not only in the future (Roche, 1999; Jans, 2004). According to Jans (2004), for example, children are strikingly sensitive about global social themes like the environment and peace. Children have a lot of thoughts and experiences and virtual worlds may provide an arena for bringing out these views. On the other hand, considering children as competent participants do not mean that adults give all the power and responsibilities to children. The fact of adult power is and will be inescapable as children always need protection from adults (Roche, 1999; Jans, 2004). What is being argued, however, is that the definitions of participation as social activity and as a process of influence intrinsically involve the view of children as somewhat competent agents.

The question about children's competence and their roles as participants can be contextualized by Giddens' notions of structure, which refers to rules and resources, and agency, which refers to people's capability of doing things (Giddens, 1984). Children have traditionally been considered as passive agents, first because they were seen as vulnerable and incompetent people (Smart et al., 2001) and second, because they have not been very

active for example in organizational activities (Myllyniemi, 2009). However, current research is beginning to indicate that today's children are indeed engaged in civic life and interested in participation, but in different ways than previous generations. Children tend to choose activism, volunteerism and virtual participation, as opposed to formal forms of participation such as participating in organizational activities (Bers, 2008). This means that children may also need new kinds of structures in the process of participation. Nevertheless, the potential of virtual worlds, for example, has not been fully realised. The potential of virtual spaces for enhancing children's participation has been noted and emphasized in many agendas (for example Lansdown, 2001; Inter-Agency Working Group on Children's Participation, 2008) and some preliminary studies have also shown the potential of new technologies to engage young people in online civic life. However, there is still a need for more research looking at *how* technology-based interventions, virtual worlds for example, can promote participation (Bers, 2008).

On the other hand, the notion of structure and agency can be considered as a viewpoint on virtual worlds. In virtual worlds, the structure may point to the external factors such as parental guidance, rules and restrictions on the one hand (Kalmus et al., 2009) and to the written rules of the virtual world on the other (Bartle 2006). Agency, for one, may refer to children's competence to participate in virtual worlds. Crucial to the children's participation in virtual worlds is the relationship between structure and agency. To what extent are children allowed to freely express themselves and discuss their opinions and experiences, for example? As we consider virtual participation from children's viewpoints, we base our framework on the view of children as competent actors. The way children's agency can be enacted relies, however, on the internal and external structures of the virtual world. It is crucial how the virtual world is constructed, the rules and restrictions which are set for their participation and the external factors which may have an impact on children's use of virtual worlds. At its best, the relationship of structure to agency is in balance so that the structure of the virtual world supports children's agency.

Defining clear bounds of virtual participation is not possible as the concept of participation is so fuzzy itself. However, we have now constructed our four-level framework of children's participation in virtual worlds, based on research literature on participation, virtual worlds and childhood. We will next present the study which sought to test the framework.

Methods

The aim of this study was to test the framework by looking at children's current participatory practices in virtual worlds. The study was carried out as an empirical survey study. A survey was conducted online at two Finnish schools in February 2010. It was distributed to schools through email with clear instructions for teachers and participants and a letter for parents. Most of the participants filled the survey in the computer labs of their schools with a teacher available for assistance. The total number of participants was 126.

The aim of the survey was to find out children's participatory practices in virtual worlds. The survey consisted of three parts: the first part asked the children about their background, the second part about their virtual world usage and the third part about their participation in virtual worlds. The first part included six questions related to name, gender, age, municipality, parents' education and leisure activities. It was followed by a question in which participants were asked about their knowledge, use and experiences of virtual worlds. We asked whether participants knew what virtual worlds were; whether they had used virtual worlds or not; and if they were currently using virtual worlds. Based on the answers to these questions the participants were directed to other parts of the survey. Those who were still using virtual worlds were asked to identify the virtual worlds they were using and answer different questions related to participation in those virtual worlds. Those who had stopped using virtual worlds were asked to identify the virtual worlds that they were using and give reasons for abandoning virtual worlds. We asked these questions in order to understand what contributes to the lack of participation in virtual worlds.

The main aim of the survey was to find out what participants are interested in within virtual worlds and what participants do in virtual worlds. The third part of the survey was designed from this point of view. We constructed the questions using earlier studies on motivations and experiences of using games and virtual worlds as a basis. For example Yee (2005), Schuurman, De Moor, De Marez and Van Looy (2008) and Tychsen, Hitchens and Brolund (2008) have studied motivational factors of games and listed the features and activities such as competition, socializing, creating and customizing character, group achievements, exploration, role-playing, game mechanics and freedom as motivational factors in games. Also Iqbal, Kankaanranta and Neittaanmäki (2010) have studied the motivational features and activities of virtual worlds and listed socializing with friends, developing the character, playing games and exploring new places as the most popular and

interesting activities in virtual worlds. As these earlier studies have not focused especially on participation, we also used our framework to get the viewpoint of participation in the questions. We listed the features and activities based on the affordances of virtual worlds for children's participation, for example expressing views refers to voting and action of interest groups refers to taking part in demonstrations in virtual worlds. As we did not want to confine participants' thinking to the features and activities that we chose, we also gave them a possibility to write on an open field about interesting things and their activities in virtual worlds.

Eventually, the third part contained four main questions. First of all, participants were asked which features of virtual worlds they were interested in. The participants were presented with 13 features and given three options (not interested, a little interested, very interested) for each feature. Secondly, the participants were asked about the activities they perform in virtual worlds through a series of three questions. There were three options, 'never', 'sometimes' and 'often', for each of the 15 activities. The features selected in this survey were not exactly the same as the activities, for example role playing was listed as a feature but not as an activity. This was done because we understand that the features and the activities have slightly different meanings. 'Feature' refers to the capacity of virtual worlds to make it possible to execute or facilitate an activity, whereas 'activity' refers to the practical process of doing things in virtual worlds. Thus every activity is facilitated by a feature but not every feature can be transformed into an activity. In this part of the survey, we also asked the participants about what kind of benefits they had perceived in using virtual worlds and what kinds of virtual worlds they would like to use.

The survey data was analyzed using both quantitative and qualitative methods. SPSS was used to collate descriptive information about participants' background, virtual world usage and participatory practices in virtual worlds. In order to deepen the understanding of participatory practices in virtual worlds, we also used qualitative classification method in analyzing participants' answers to the open form questions.

Results

General information about participants

As earlier studies have shown that certain background factors such as age and gender have an effect on virtual world usage and children's roles as participants in virtual worlds (Global Habbo Youth Survey, 2006; Johnson & Toiskallio, 2007), we also inquired about the childrens' background information. Roughly one third of the participants were studying in primary school and most of the participants were at the upper level of comprehensive school. Some of the participants who answered the survey were from higher secondary. However, these participants were very few in numbers and their impact on results is negligible. Gender distribution among the participants was even. There were almost equal numbers of boys (52%) and girls (48%). Most of the participants (84%) were 11-15 years old. In order to find out if the educational level of children's parents has an effect on virtual world usage, we also asked the children about this. Most of the participants' parents (60%) had passed either vocational school or upper secondary school and a third of the parents had graduated from university or polytechnic.

The most popular leisure activities among participants were outdoor activities and spending time with friends. A clear majority of the participants reported doing those activities more than four hours a week. More than half of the participants also reported watching television, spending time with hobbies and playing with computers or consoles more than four hours in a week. Considering leisure activities, there were no significant gender differences except that markedly more boys (71% of all boys) than girls (31% of all girls) reported playing with computers or consoles more than four hours in a week.

In order to find out if some background factors have an influence on virtual world usage in our data, we also conducted cross tabulations. They showed that participants who use virtual worlds at the moment tend to be predominantly 11-14 year olds. This is in accordance with the KZero (2009a) report which reveals that 10-15 year old children constitute the biggest age group of virtual world users. Secondly, we wanted to examine if the educational of participant's parents has an effect on use of virtual worlds. However, we were not able to find any conclusive or significant results based on this factor.

Virtual world usage

The results of the survey showed that 25% of the 126 participants use virtual worlds at the moment. Furthermore, 41% of the participants reported that they have used virtual worlds but stopped utilized them. There were also participants who reported that they know

what virtual worlds are but they have not used them (27%) and participants who did not know what virtual worlds are (6%)[1]. The most popular virtual worlds among the participants who use virtual worlds at the moment were Runescape, Habbo, Club Penguin and Aapeli. Other virtual spaces that were named but which are less popular were GoSupermodel, World of Warcraft, Travian, PollyPocket, Atlantica Online, Fishville, Farmville, MoiPal and Stardoll. Interestingly, many worldwide popular virtual worlds such as Poptropica, Neopets, Barbie Girls, Girl Sense and Weeworld were not used by the participants of our survey.

The most common reason for not using virtual worlds seems to be a lack of interest. Two-thirds of the participants who have not used virtual worlds mentioned this reason. In addition, slightly less than one-third of the participants reported that they want to be in contact with others, for example friends in other ways. The same reasons were mentioned when we asked participants who had stopped using virtual worlds to explain their reasons for doing so. The most common reason was that they were not interested in the virtual world anymore, mentioned by 62% of these participants.

There may be several reasons for the lack of interest in virtual worlds and the other reasons mentioned by the participants, for example, the need for money in order to enjoy the virtual world and a lack of understanding of how the virtual world works, may account for their lack of interest in virtual worlds. One fairly natural explanation for the lack of interest is that some young people have just grown out of the children's virtual worlds. For example, some participants mentioned the childish appearance of some virtual worlds as one reason for abandoning them. The most common virtual worlds which participants had stopped using were Habbo, Stardoll and Club Penguin. Habbo is a virtual world aimed at 13-year-olds or older but Stardoll and Club Penguin are virtual worlds aimed at 6-7-year-old children. This may not motivate all 11-15-year-olds to use the virtual worlds.

Participation in virtual worlds

The questions related to interests in different features and frequency of activities in a particular virtual world received 54 answers for each feature or activity. This is higher than the number of participants who answered these questions (32 participants) because each

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[1] Percentages are rounded off to the nearest whole number due to the removal of decimals. Therefore these numbers add up to 99 %, instead of 100 %.

participant was allowed to provide answers for more than one virtual world. The percentages for each feature and activity were calculated based on 54 answers.

The results indicate that the participants are very interested in socializing with friends in virtual worlds. Chatting and doing things with friends was shown as a very interesting feature in two-thirds of the answers. Another interesting feature in virtual worlds seems to be creating one's own avatar which was considered as a very interesting feature in 60% of the answers. In slightly less than half of the answers, features such as the sense of being there or being part of, and competing and challenges were considered very interesting. One interesting result is that the participants are not very interested in expressing opinions which is one of the most essential features of civic participation.
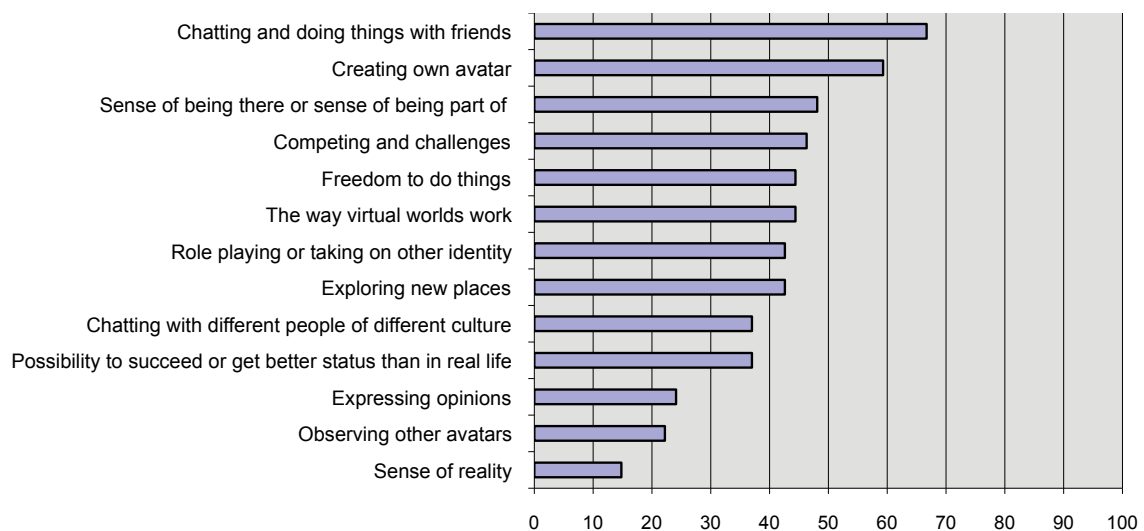

Figure 2. Percentages of features which participants were interested in.

The results related to activities that participants frequently perform often in virtual worlds are quite similar to the results of interesting features. Chatting and doing things with friends is clearly the most popular activity in virtual worlds as it was reported in nearly 60% of the answers as an activity that is performed often. Playing games, changing the appearance of the avatar or exploring new places were mentioned in about 40% of the answers. The interesting result is that again, the participants do not either perform activities that are related to the public sphere and which can be regarded as formal forms of civic participation in real life. Indeed, most participants do not participate in group activities or in voting often and

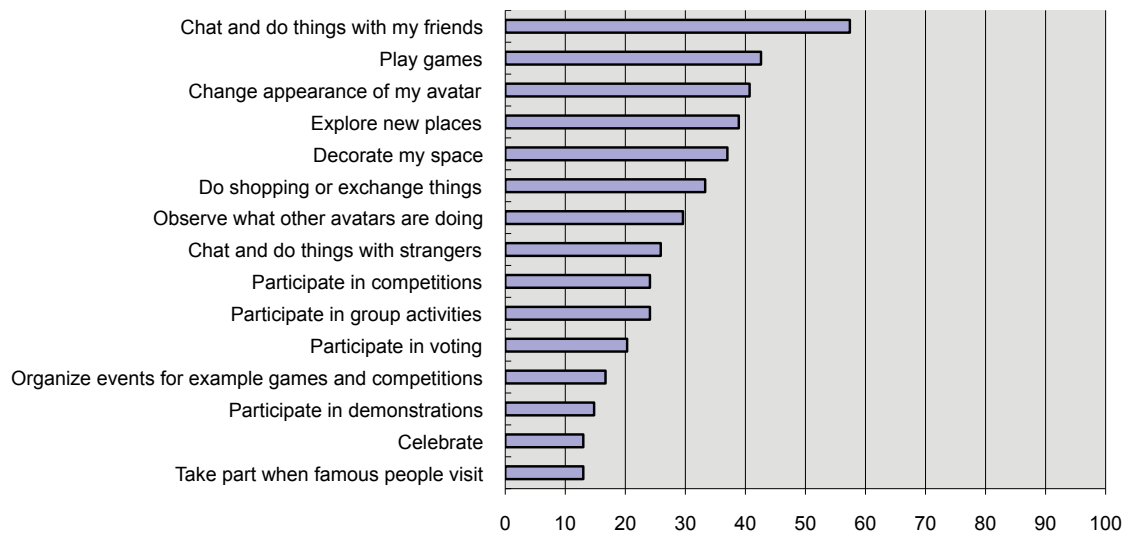even fewer participants organize events or participate in demonstrations frequently in virtual worlds.

Figure 3. Percentages of activities which were performed frequently.

In order to deepen our understanding of interests and activities in virtual worlds, participants were given the opportunity to talk about their interests and activities freely in an open form question. The answers did not, however, differ much from the results presented earlier. Socializing and chatting with other people (14) and playing games (11) were clearly the most oft-mentioned features among the 32 respondents. The same answers were given when we asked about the activities that participants perform in virtual worlds. Playing games was mentioned by 22 participants and socializing or chatting with others by 17 participants. Other features and activities were mentioned only one to three times. In this respect, answers given to open form question resonate with the findings presented earlier.

The affordances of virtual worlds for children's participation were explored more closely with a question on the benefits of using virtual worlds. The participants who were currently using virtual worlds were asked about their perceived benefits for a particular virtual world and they were allowed to choose multiple benefits for a virtual world. A total of 167 answers were received pertaining to benefits of different virtual worlds and the percentages are calculated based on that. In this analysis, we did not consider the benefits for each virtual world. The results show that the participants have derived many learning benefits from using virtual worlds though the most commonly mentioned benefit is entertainment.

The participants reported that being entertained (23%); learning to use computers and the internet (14%); making new friends (12%); and learning new languages (13%) were the most important benefits they had gained from virtual worlds. Some of the participants also reported benefits that can be related to civic participation, for example participants had the opportunity to express themselves (10%), learn new things about themselves (9%) and learn new cultures (8%). Thus, whether intentionally or otherwise, some of the participants were engaging in civic participation or in activities that can teach them civic skills.

Conclusion

The aim of the study was to test the framework by looking at children's participatory practices in virtual worlds. Figure 4 presents the three roles of virtual world in a process of participation and the affordances of virtual worlds for children's participation which have been specified with the lists of features and activities that children perform in virtual worlds. As we now reflect on our results on the framework of virtual participation, we may make three main conclusions.

The survey results related to interesting features and often performed activities in virtual worlds show that the participants are very interested in many features and engage in many activities relating to virtual worlds as social community. For example chatting and doing things with others and creating or changing the appearance of one's own avatar were in the top of the list as participants were asked about the features they found interesting and the activities they performed frequently . The finding is in accordance with earlier studies which have revealed that sociability, interaction with others and participating in common activities are the most interesting activities and features in virtual worlds (Noveck, 2006; KZero, 2009b). Thus, our first conclusion is that virtual worlds can be considered as arenas of participation, as far as participation is seen as social activity. Affordances of virtual worlds for children's social activity are clearly intentional, which means that children were intentionally looking for social activities..

On the other hand, the participants were not very interested in features and did not often engage in activities related to the virtual world as a public sphere, for example participating in demonstrations or expressing opinions. In this sense, our results support earlier examinations which have revealed that traditional ways of participating do not encourage children and young people to participate (Torney-Purta et al., 2001; Bennett, 2008;

Loader, 2007). Virtual worlds may not be seen as public spheres in a traditional sense which is our second main conclusion. This does not mean, however, that virtual worlds would not serve as public spheres for children for example to express their opinions. Children may fulfill these affordances unintentionally, by chatting or being in social interaction with other people, both of which are popular activities in virtual worlds.
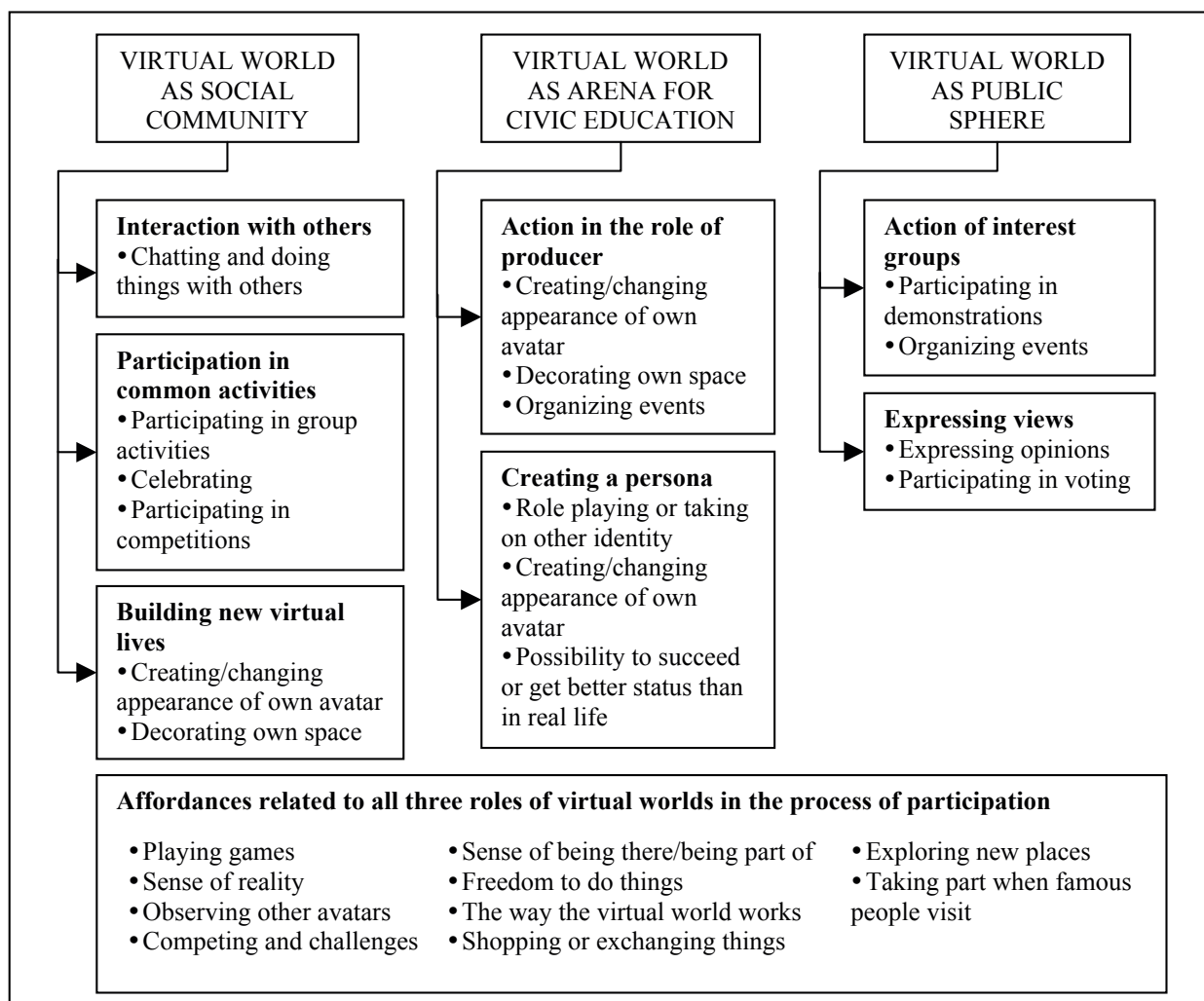
VIRTUAL WORLD AS SOCIAL COMMUNITY	VIRTUAL WORLD AS ARENA FOR CIVIC EDUCATION	VIRTUAL WORLD AS PUBLIC SPHERE
Interaction with others • Chatting and doing things with others	**Action in the role of producer** • Creating/changing appearance of own avatar • Decorating own space • Organizing events	**Action of interest groups** • Participating in demonstrations • Organizing events
Participation in common activities • Participating in group activities • Celebrating • Participating in competitions	**Creating a persona** • Role playing or taking on other identity • Creating/changing appearance of own avatar • Possibility to succeed or get better status than in real life	**Expressing views** • Expressing opinions • Participating in voting
Building new virtual lives • Creating/changing appearance of own avatar • Decorating own space		

Affordances related to all three roles of virtual worlds in the process of participation

• Playing games
• Sense of reality
• Observing other avatars
• Competing and challenges

• Sense of being there/being part of
• Freedom to do things
• The way the virtual world works
• Shopping or exchanging things

• Exploring new places
• Taking part when famous people visit

Figure 4. The affordances of virtual worlds for children's participation, according to the three roles of virtual world in a process of participation.

Participants' interest in the features and activities related to virtual world as arenas for civic education varied according to the feature or activity. Creating or changing the

appearance of one's avatar was one of the features participants found most interesting and that they performed most often but participants were not very interested in possibility to succeed or in role playing, both of which can be classified into features related to civic education. Interestingly, the potential of virtual worlds as arenas for civic education was also raised by some participants when we asked them about the benefits of using virtual worlds. The most often mentioned benefit was entertainment but some participants also mentioned the opportunity to express themselves and learn new things about other cultures. Some children mentioned that they have learnt new things about themselves as well. This may be due to social interaction but it may also derive from developing one's identity as a member of a community by through managing the appearance of one's own avatar. According to Noveck (2006), creating a persona to represent oneself in virtual worlds forces users to think and act as citizens and members of a community. Based on these results, we may argue that virtual worlds indeed have the potential to serve as an arena for civic education though the main aim of using virtual worlds is not to learn civic skills and not all children may be aware of this potential. This is our third conclusion.

Discussion

Hitherto, virtual worlds have not been extensively researched from the viewpoint of children. Also the focus on participation has been missing from studies related to virtual worlds. This has been problematic because the use of virtual worlds is growing rapidly among children and more information is needed about activities that children perform in virtual worlds. There is also a growing interest in the potential of virtual worlds to enhance children's participation as research has shown that children do not engage in traditional forms of participation in real life (Torney-Purta et al., 2001; Bennett, 2008; Loader, 2007). According to Kirby, Lanyon, Cronin and Sinclair (2003) and Kiilakoski (2008), many negative trends such as isolation from society can be prevented by promoting children's participation. The Convention on the Rights of the Child also obligates adults to take into account the interests of the children and listen to their opinions. The first step in promoting children's participation is to go where children spend their time, for example virtual worlds,

find out what is happening there and then consider what could be done to enhance children's participation in virtual worlds.

Our study has shown that virtual spaces have the potential to serve a place for children to fulfill their child-sized citizenship and acquire civic skills. This should, however, be made more concrete and noticeable in virtual worlds. As chats and games are the most interesting activities in virtual worlds, they could be utilized for example by creating games about civic skills and organizing public chats about matters that are closely related to children's own lives. Also adults could take part in these chats. Sometimes the obstacles to children's participation can be, however, in structures of virtual worlds which limit users' agency and their behavior (Bartle, 2006). This is probably one reason why children do not utilize the affordances of virtual worlds as public spheres: it is not even possible in all virtual worlds for example to vote or take part in demonstrations. Hence it is important in the future to conduct research about structures of virtual worlds and how they limit users' behavior.

On the other hand, the result of children not utilizing the affordances of virtual worlds as public spheres may be taken as a reminder of the fact that children are always somewhat incompetent and immature agents and citizens when viewed in relation to adults. Children do not have the right for example to vote in real life and thus, these traditional ways of participating are not familiar to children in virtual worlds either. Instead, children seem to be more interested in expressing themselves in chatting and other social activities. On the other hand, it has to be remembered that there are always differences between children as well. There were children in our study who reported being interested in expressing opinions and taking part in voting and demonstrations often in virtual worlds. We also have to accept that all children are not interested in virtual worlds at the moment. In many cases, the reason for abandoning virtual worlds is natural: they have grown out of them. Thus, the task of researchers and developers of virtual worlds is to consider how virtual worlds could be developed so that young people's interest in them can be preserved and virtual worlds would serve as an arena for young people to participate.

Our aim in this first phase of the study was to establish a framework for children's participation in virtual worlds and to test the framework by looking at current participatory practices in virtual worlds. In this article, we have presented one way to look at children's virtual participation and our study still continues. Based on this first phase of our study, we may argue that children are socially active in virtual worlds, which creates many opportunities to educate children about civic participation and to prepare them as citizens of

real world by enhancing citizenship in virtual worlds. However, these opportunities can only be realized when the activities and features for civic participation and education are social in nature and have a fun element to it. Thus, there is a need to carry out further research in order to enhance civic education and participation in virtual worlds.

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