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PARTICIPATORY, VISIBLE AND SUSTAINABLE

Designing a Community Website for a Minority Group

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Abstract. This paper tackles three aspects of community-based technological initiatives aimed to support minority groups' public expression and communication: participation, visibility and sustainability. *Participation* requires the active involvement of the community members in various project phases (from design to evaluation), sharing decisional power with project leaders. *Visibility* refers to the capacity of community messages to reach a relevant audience outside the boundaries of the community itself. *Sustainability* indicates the capacity of a project to continue, under the control and management of the local community, beyond its "supported" lifetime. The mutual influence of these three dimensions is examined in general and also in the light of a specific case study: an initiative involving a Romani community in rural Romania, having as main outcome the development of a community website (www.romanivoices.com/podoleni).

1. Introduction

This paper discusses the potential of digital media for supporting the expression and communication goals of minority cultures. In particular, it looks into means for ensuring that initiatives concerned with giving visibility to minority ethnic groups are relevant to community upheld views, reach proper communication goals, and have a potential for continuity beyond the lifetime of a project. We identify and explicate three core concepts that we deem essential for the success of such initiatives: participation, sustainability and visibility. *Participation* refers to a community's involvement in an initiative, spanning different stages (from project design to evaluation), and at various levels (from consultation to collective action, Kanji and Greenwood, 2001). The concept of *proper visibility* indicates the capacity of a communication project to reach the target audience and to deliver the messages reflecting adequately a minority community's views. *Sustainability* designates the capacity of a project to continue beyond its lifetime under the control and management of the local community.

The paper discusses the above issues in general and also in the light of a specific case: designing a community website with and for a Romani community in rural Romania. The case data are used for exemplifying and critically assessing practical as well as conceptual relations among the three constructs introduced: participation,

visibility and sustainability. These aspects can be mutually reinforcing (e.g. the relation between participation and sustainability), but they can also generate a tension that needs to be calmed (e.g. the relation between people's control over the content production process and the quality of the final content).

2. Research Background and Rationale

Investigating the potential of Information and Communication Technology (ICT) for minority cultures, two characteristics of the latter should be considered: (1) the existence of unique cultural systems and the constant challenge in perpetuating them, against pressure towards assimilation from a majority culture (Verkuyten, 2005: 120), and (2) disempowerment at economic, political and social level, coupled with domination, marginalization or oppression from majority groups (Meyers, 1984: 7).

Minority cultures are bearers of genuine cultural and knowledge systems often in danger of being assimilated. Digital media can support the systematic documentation, interpretation, archiving and publishing of cultural productions, in particular intangible heritage (stories, dances, performances, songs, etc.). Possible outcomes include digital archives for restricted community use (e.g. Christen, 2008), websites for a larger audience, or networked spaces for enabling geographically dispersed communities from the same ethnic group to communicate and share content (e.g. Srinivasan, 2006).

In addition ICT can be used to alleviate minorities' condition of marginalization, oppression or disempowerment. This condition can be synthesized in the notion of 'voice poverty', where voice is illustrative of lack of power to express and be heard at a social, cultural and political level (Tacchi, 2008). Technological solutions can enable access to information, boost literacy and digital literacy skills, and support advocacy campaigns and communication with relevant stakeholders, e.g. regional authorities.

This paper reports on research involving a particular minority culture, the Roma. The term 'Roma', and its derivatives 'Romani' or 'Romany', have replaced the traditional 'Gypsy' designation and are now widely adopted by international organizations as the label of a heterogeneous ethnic group inhabiting different nations across Europe, but also in the Asian, Australian, and American continents. The Romani ethnic group needs to be distinguished from the Romanian population, inhabitants of Romania, with a completely different history and culture. Romani studies trace the origins of the Roma in India, wherefrom they fled in several migration waves, whose exact whereabouts are still object of scholarly dispute (Fraser, 2003). At present, they may be considered a national minority as they enjoy citizenship status in their host countries, but also a transnational minority (Tcherenkov and Laederich, 2004).

Romania had over 600'000 citizens of Romani ethnic origin officially registered in the 2011 Census (INS, 2012), while unofficial numbers are considered to be much higher, since many Roma are not legally registered. The studies conducted from the 1989 Revolution until the present on the situation of the Roma in Romania span issues ranging from poverty, unemployment and lack of professional qualifications (Zamfir and Zamfir, 1993); illiteracy and lack of formal education, especially for Roma women (ibid.); poor hygiene and housing conditions, discrimination and violent assault (Szente, 1996); and social and educational segregation.

The study presented in this paper focuses on the potential of ICTs for supporting minority communication, spanning cultural expression as well as developmental concerns, e.g. poverty. We address issues related to public, rather than intra-group communication, and employ a community-centred approach, focused on the generation of long-term benefits. The main questions posed by this study are:

(1) Can specific processes and methodologies ensure that digital media solutions for minority public communication have the proper impact on the target audience, while being respectful of local epistemological and cultural protocols?

(2) Are there discernable cause-effects relationships between processual elements of ICT-based initiatives and the community benefits envisaged?

The questions do not require a Yes/No answer, but compel us to dig into the methodological and practical intricacies of technology interventions in minority contexts for understanding the relations established among features of the local context, features of the intervention and the measurable effects of such interventions.

2.1. CONCEPTUAL CONSTRUCTS

Let us examine some general features of the constructs investigated.

Participation

Participation concerns the engagement of a community's members in the various phases of a technological initiative. Drawing on Kanji and Greenwood (2001), community involvement can happen at one or several of five program stages: Agenda definition; Proposal development; Preparation; Implementation; Analysis of results; and/or Dissemination and Action. Engagement can be defined at five different levels: Compliance, Consultation, Cooperation, Co-learning and Collective action.

Proper visibility

In its general sense, "visibility" refers to enabling public awareness of communication products. For minority cultures two specific concerns must be considered: (1) Is content (with respect to meaning and the form of presentation) aligned to the views of the minority culture expressing it? (2) Are the intended messages effectively transmitted to the target audience?

These concerns are grasped by the concept of "proper visibility", which we tackle in this paper with respect to three dimensions: (a) Correctly identifying the external audience (e.g. Regional authorities? Central government? General public?) (b) Correctly identifying the "key messages" to be delivered to the audiences. (c) Selecting the proper technologies (e.g. TV, radio, web, social spaces, etc.)

Sustainability

Sustainability can be defined as "the ability of a project or intervention to continue in existence after the implementing agency has departed" (Harris et al. 2003, p.2). Sustainability depends to a great extent on a community's openness to the initiative and the acknowledgement of its usefulness and relevance. A community's social capital, inclusive of communal values and aspirations, needs to be taken into account as a key factor for sustainability (Simpson, 2005). Simpson proposes that a sustainable

community-based technological initiative needs to take into account the interplay among four essential components:

- Physical infrastructure: the physical equipment and its distribution in the community.
- Soft technology: relevant knowledge and skills for managing the initiative, which can be boosted through education and training.
- Social infrastructure: local organisations, institutions, networks, services and resources that enable social communication and networking.
- Social capital: intangible social features, e.g. sense of community; collective values and visions.

3. Case Study: Romani Voices

"Romani Voices" has been part of a doctoral research project concerned with assessing the conditions for the introduction of ICTs in minority contexts for enabling knowledge production, expression and communication practices aligned to a community's communication needs and goals. The applied part of the study included a pilot and two community-wide content production initiatives with Romani people in rural Romania. The project called for formulating an ICT-based communication solution for each community's communication needs, and moved to implement the community solution through the participation of its members. The case reported in this paper involved a community of settled, or assimilated, Romani people in a village with a mixed Romanian-Roma population.

3.1. THE COMMUNITY

Podoleni is an agricultural village in South-Eastern Romania, with a significant percentage of Romani people. (47,08% Romani people were officially registered in 2009, according to the Urbanization Plan of the commune Barcea, to which the village pertains.) The Roma inhabitants work mainly in agriculture, constructions, gardening, or have seasonal unqualified jobs; the village has a long musical tradition and some of its members also draw revenues from singing by voice or instruments.

The Romani community inhabits a segregated area of the village. Most social interaction takes place among the Romani members, however peaceful relations are maintained as well with the Romanian villagers. With respect to educational facilities, the village has a primary school in its premises and access to secondary education is ensured in the commune Barcea. The main problems faced by the Roma in the village revolve around poverty and the difficulties of daily life: the lack of housing sites (as a result many nuclear families live in the same building), potential danger of flooding, and severe unemployment.

3.2. METHODOLOGICAL FRAMEWORK

The intervention aimed to provide a technological solution for the community's communication needs, and to enable effective participation of members in setting up and implementing the communication intervention during the course of the project. This

process involved: (1) Activity design: shaping the workflow leading to the construction of an effective communication artefact; and (2) Product design: designing the communication artefact.

The methodological framework blended ethnography, Participatory Action Research (PAR) and user-centred web design methods across three intertwined phases: (1) Ethnographic research; (2) Content production; and (3) Design of the web portal. The combination of ethnography and PAR enabled a flexible design of the initiative, in which the outcomes of each phase were used to inform the design of the subsequent phases (Table 1).

Table 1. The methodological framework.

	Phase	**Methods**	**Outcomes**
1.a.	Ethnographic research (researcher-led)	Data collection: observation, semi-structured interviews, focus groups, analysis of site documentation	A socio-cultural and media usage profile of the community
1.b.	Ethnographic research (collaborative)	Data collection: focus groups, camera interaction (observation, retrospective reporting)	Content themes An oral history guide Cooperation patterns in technology usage
2	Content production	Production: Inquiry cycle modified through PAR techniques Data collection: observation, group discussions	Database of audio-video contents Final list of content themes
3	Content organization	Web design methods: card sorting	Website information architecture Edited digital content

3.2.1. Ethnographic Research.

The main purposes of this phase were to (1) build relations with local people, (2) stimulate participation, (3) spread awareness of and negotiate potential project benefits, and (4) collect requirements for the design of the initiative. Research included two different directions: researcher-led ethnography and collaborative ethnography.

Researcher-led ethnography used as main data collection instruments emergent and semi-structured interviews, focus groups, participant observation, and analysis of site documentation. Emergent interviews were used at the beginning of the fieldwork, as a means for allowing local themes and issues to emerge from participants, rather than being imposed externally. The analysis of these themes was further used to inform the design of the other data collection tools. Semi-structured interviews (n=30) and focus groups (n=4) examined patterns of socio-cultural participation, as well as media usage.

The *collaborative ethnography* phase marked a first step towards placing the power over interpretation into the participants' hands. The event that marked this transition was handing over a recording kit that contained a digital photo camera, an audio recorder and a video camera with a tripod, along with training in using the devices. The kit was given to the main informant family in the project, whose members

were encouraged to use it themselves and to give it to other members of the community when there were significant happenings to be recorded.

The data collected in this phase encompassed: (1) people's opinions on the relevant community subjects to be documented (gathered through focus groups); (2) people's direct indication of meaningful local subjects (gathered via interaction with ICTs); and (3) the actual dynamics created around the use of recording devices (gathered via interaction with ICTs). The key dimensions of analysis can be synthesized into seven questions: (1) (What?) Priorities for expression; (2) (Who?) People involved; (3) (In what form?) Media preference; (4) (How?) Production process; (5) (To whom?) Audience envisaged; (6) (For what purpose?) Expectations and return; (7) (Ethical issues) Privacy and data protection. Data resulting from this phase were synthesized into three outcomes that had a bearing on the design of the content production experience: (1) a list of themes for the content production experience; (2) an oral history guide that could be used as a questioning route in interviewing storytellers; and (3) an assessment of the dynamics of cooperation in using digital media.

3.2.2. Content Production.

Content production followed a cyclical pattern based on PAR and an interpretation of the content creation model designed by the Community Informatics research centre at the University of Illinois at Urbana-Champaign, "The Inquiry Cycle" (Bruce and Bishop, 2008). After an initial experimentation with the original version of the model, based on a cycle of five steps (Ask-Investigate-Create-Discuss-Reflect), we arrived at a six-step model which was employed all throughout the content production phase: Inquiry-Planning-Creation-Observation-Discussion-Reflection.

(1) Inquiry was conducted as a collective endeavour, focused on identifying and discussing the aspects to be tackled in a subsequent creation session.

(2) Planning was done with main informants, or following leads from the community, and oversaw the organization of the subsequent creative sessions.

(3) Creation referred to sessions in which stories, testimonials, interviews and events were recorded. These sessions were organized in the presence of the main facilitator or managed entirely by the community.

(4) Observation was done as part of collective sessions for reviewing content.

(5) Discussion sessions were focused retrospectively on the creation process.

(6) Reflection was triggered by observation and discussion sessions.

3.2.3. Design of the Web Portal.

Content was edited and organized in accordance with the usage prefigured by the community: online publishing. Design involved taking decisions for:

(1) Content granularity: what is the unit of content consumption?

(2) Information architecture: what is the overall organization form?

(3) Content mapping: how are content chunks distributed on the structure?

Card sorting methodology (Spencer and Warfel, 2004) was used for designing the information architecture. In the initial card sorting session, content samples were presented on cards and were also made available for playing on the computer; the content themes resulting from the content production phase were presented on different cards. Participants (n=4) were given the task of defining the main categories of the

website taking into account the existing themes and the content samples. Based on the results in this initial design activity, a mock-up of the community website was created.

The second design session had as specific objectives: to approve the final information architecture; to investigate the possibility of using an alternative path of access, based on keywords; to define the page design; to clarify the logic of relating content to categories; to define the granularity of content chunks and agree on 'model' content pieces. The main tools used were: a mock-up of the website, sample content playable on the computer, and a taxonomy of sample content by category and by keyword. We discussed the points connected with each of the objectives listed while browsing the website mock-up and playing sample audio-visual content on the computer. Based on the results of this session a first version of the website was created.

The third design session had as its main purpose to approve the final website architecture and page design, as well as check content mapping. The main tools used were: the provisional version of the implemented website; content published online; and a taxonomy of content themes according to category and keyword. This session format was based on an open discussion triggered by a list of points drafted by the researcher, while reviewing the provisional version of the website and online content pieces. Based on the result of this session the final version of the website was implemented.

3.3. FIELDWORK RESULTS

For space constraints, this section will focus on salient relevant results related to: (1) Communication goals; (2) Content production and organization strategy; and (3) Website management.

(1) Communication goals. There was wide consensus that the best way to respond to the community's needs was to create a platform for public expression. Other options that were presented and discussed, such as for instance a digital archive for internal community usage, have been dropped in unanimity. The communication platform was intended to meet two goals: generate awareness of people's poverty and precarious life conditions; and improve the image of the Romani community, by allowing an insider's view of genuine life, vivid traditions, and the values that the community held.

(2) Content production and organization strategy. The project gave particular attention to ensuring genuine representation of community views and concerns not only at the level of the content produced, but also with respect to its organization in the final communication artefact. To ensure that the taxonomy used for content organization in the final website was based on a genuine reflection of community views, meaningful content themes were identified early in the project, starting with the collaborative ethnography phase. The list of themes was enriched and checked at key points with community members throughout the content production phase. This list was used during the first web design session, and it contained 35 themes, indicating values, daily life patterns, traditions, aspirations and issues faced by the community. The running themes that stood out the most were *Poverty, Education,* and *Music*, indicating a strong problem, an aspiration, and a featured tradition. During the first design session, a series of six core categories were identified and became the main website sections: *Reintegration, Dialogue, Romani identity, Cultural traditions, Religion,* and *History*. The list of themes was levelled to 32 keywords and further refined in subsequent

sessions to fit publishable content. The content themes were used in the final website as keywords or tags, providing an access path to content alternative to browsing by category.

(3) Website management. Once the project gained acceptance by community members, and especially by opinion leaders and community representatives, an agreement was set that the website will be managed by the local community on project completion. To make this feasible, a core group of persons has been appointed to take charge of the website. To enable effective training, the process of producing and publishing content (especially video content) was broken down into three parts: content production, editing and publishing. Guidelines were prepared for each of these three parts, used as part of training and for preparing a written practical guide.

3.4. WEBSITE REALISATION

The best way of realising the website design was identified by assessing the potential of existing technological options against requirements generated in the website design phase.

3.4.1. Requirements

Visibility. Having a website does not necessarily mean that it is going to be visible: content has to be easily crawled by search engines and syndicated across other websites. Regarding search engine optimization, content has to be semantically annotated, and the entire information architecture should be automatically translated into a dynamic sitemap suitable for search engines. The syndication could be done with the generation of an RSS feed. Integration with social media for facilitating content spreading was also taken into account.

User friendliness. The technological solution had to be easy to use, and provided with a contextual help mechanism that would keep training costs low, considering that the website would continue to be managed by local people.

Sustainability. The initial cost and the maintenance cost had to be kept low, especially for the point at which the website management would be completely left to the community.

Content. The website had to be very flexible on content taxonomies and content organization. Given the large amount of multimedia items, storage and efficient streaming were also a significant concern.

Multilingualism. The technological solution needed to provide content-level translation and interface translation for both end-users and content editors.

3.4.2. Desirable Technology Options

The technological solution was based upon a Content Management System (CMS) for its potential to speed up the development process and facilitate maintenance. In addition, CMSs provide additional functionalities like content syndication (chunks of contents can be made available for other websites), content versioning, multilingual support, different type of styling (theming), etc.

An initial selection shortlisted Joomla, WordPress and Drupal. In the end Drupal was selected for a number of reasons: overall efficiency; capable of representing and

managing taxonomies, in an easy and effective way; possibility of customizing the administration interface (including contextual help), therefore dropping the learning curve for non-technical users.

3.4.3. Implementation

Two broad categories of pages were identified: static pages and compound documents.
Static page: the content is generic (e.g. disclaimer, credits, etc.) and weakly structured. The internal structure consist of a title and a body whose content can vary from text to images. These pages are 'static' in the sense that they are likely to vary very little over time.
Compound document: these represent the core of the website and are structured in four different blocks:

- *Basic information*: these segments contain a title, a subject (sometimes this can be the name of the storyteller), an author or producer, the production date and the location where the information has been collected.
- *Description*: this can include the transcript of an audio or audio-visual piece of content, or a comment; in addition to text it can also contain media files, but without a predefined structure.
- *Media*: these segments host multimedia resources, including a preview image (mainly used in listing pages), a set of images (used to build a gallery), a video file, an audio file and a document. For a number of reasons, and especially in order to ensure fast streaming, we decided to rely on YouTube for video storage. In addition each video is completely annotated on YouTube and linked to the website, thus fostering incoming connections.
- *Classification*: comprising categories and tags. Categories (identified during the core card sorting sessions) are used to hierarchically classify compound documents. Tags (identified during content production work) are used to create additional groupings of compound documents based on community-relevant themes.

The *website information architecture* provides three different levels of navigation: static pages, categories and tags. In addition, a free text search mechanism was added in order to facilitate finding resources, for example by looking into specific attributes of the compound document (i.e. author, dates, etc.).
There are four types of pages being displayed:

- *Homepage*: this displays an introductory video that describes the community and three featured articles chosen by the website manager from the compound documents (Figure 1).
- *Static pages:* they are displayed as standard webpages, with a title and a description. The latter can be a rich description including images and videos, but without a predefined structure.
- *Lists of compound documents*: these pages are displayed after selecting a category/tag or as a search result. A page displays the list of compound documents belonging to the selected category/tag or that satisfy the search criteria (Figure 2).
- *Compound document details*: these pages display all the content of a compound document. Video files are embedded from YouTube; images are rendered as a gallery; audio files can be listened through an audio player; and additional documents can be downloaded as files (Figure 3).

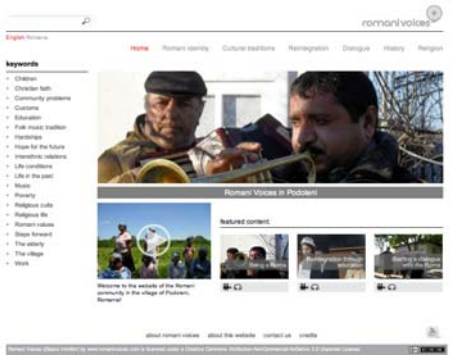

Figure 1. Homepage, Romani Voices in Podoleni website.

Figure 2. A list of compound documents generated for the tag "Folk music tradition".

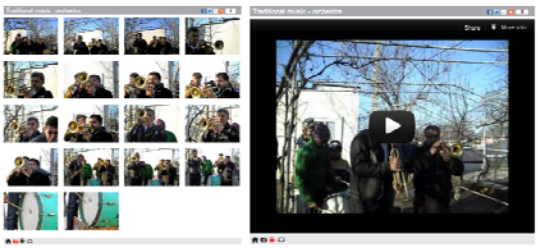

Figure 3. Details of a compound document: a gallery of images (left) and a video file (right).

4. Discussion

This section critically discusses the results of the case study, in the light of the research questions introduced in section 2.

4.1. PARTICIPATION, VISIBILITY AND SUSTAINABILITY: THE FORMULA

4.1.1. Local Participation and Project Ownership

Local participation encompassed the direct involvement of the members in all phases of the initiative, including project design, content production and website design. Activities included communication (being informed on project progress and solicited feedback), consultation, negotiation and decision-making (deciding over the course of action in each project phase), and involvement in content production (e.g. filming, being interviewed). With respect to Kanji and Greenwood's (2001) ladder of participation, it is to be noted that involvement was not situated at the same level for all members. Participation went from *consultation* with community members to *cooperation* with a core group that had a fundamental role in bringing everything to completion. It was during the last project phase, when the provisional version of the website was shared with community members, that participation went toward *collective action*: the field researcher together with the core community group identified the last steps to be taken for completing the website and ensuring the smooth transition of its management into the community's hands.

The participation formula was designed to contribute directly to cultivating members' feeling of *ownership* of the initiative. "Ownership" refers to the sense of owning the initiative, subjectively felt by participants. In Romani Voices, ownership was cultivated by encouraging people's participation starting from the project design phase and the definition of the project goals. Aside from participation we identified three factors that can influence the sense of ownership: role in the project, know-how, and perceived self-efficacy (Bandura, 2000). A high degree of ownership was visible in the members that had a key role in the project, participated in important activities and with the necessary know-how for running parts of the process. Key roles were played by the main informant family (which had a constant involvement all throughout the project) and the local councillor for the Roma (who had a fundamental role in ensuring collective approval of the initiative and led the website design phase).

4.1.2. Proper Visibility

Ensuring proper visibility boiled down to understanding the optimal match among three dimensions: local content, audience to be reached, and technological solution. As far as content is concerned, community members were involved in identifying the main content themes (starting from the collaborative ethnography phase), producing associated content (during content production), and selecting it and deciding how content pieces were related and categorized in the final website (website design). The identification of the audience was a collaborative process involving the community and the field researcher during the collaborative ethnography phase. The technological options were assessed by the research team, including the field researcher and a technical expert, in the light of the communication goals, the type of content produced

and the audience to be reached. Visibility per se (audience expansion) was considered a priority requirement; the technological solution was designed with a view to search engine optimization and social media were used for content spreading.

4.1.3. Sustainability

Romani Voices has been thought out from its inception with a view to sustainability. Drawing on Simpson's (2005) model of sustainable Community Informatics initiatives, we point to the following elements:

(1) Physical and technological infrastructure. It was important that local people and especially the website management group had access to technology for producing content, publishing it and viewing it online once published. For content production, the recording kit initially given to the informant family was left on-site on project completion, and a new HD video-camera has been entrusted with the website management group. With respect to computer and Internet facilities, the village has a library which offers computer services; in addition, a small number of Roma people in the village have an Internet connection, and this number is on an ascending curve.

(2) Soft technology. Digital literacy was extremely low in the community; also, community members lacked the skills needed to run a community website. To ensure project continuity, a core group of people with media literacy skills have been identified; with respect to management, the local councillor for the Roma took upon himself the task of continuing to manage the website, helped by his daughter who was a skilled computer and Internet user. The customized CMS has been designed to be user friendly, and its delivery to the community was accompanied by a set of guidelines, workflows and instructions for content production and website management. To smooth the transition to community management, the researchers offered free support for one year after the project's end.

(3) Social infrastructure. Most social interactions in the village are based on informal friendship and kinship relations. It was as a result of these relations that the project gradually gained entrance and acceptance. One of the most important elements was, however, its acceptance at the top-level of the Romani local administration, by the local councillor and the local expert for the Roma. One event which marked acceptance and interest in the community-managed continuity of the project was the public presentation of the website during a socio-cultural event organized in the village on occasion of the International Romani Day, celebrated on April 8.

(4) Social capital. One of the reasons for the continuity of the project was its being able to match the ethics and values of the Romani people. On the one hand, it provided a channel for expressing who they really were and enabled them to fight discriminatory portrayals. On the other hand, communication and expressive arts are part of the traditional culture of the Roma. Being able to run an instrument for constant communication met community values and aspirations; it is to be noted however that full acknowledgement of the project's benefits was only realised in the circles of people that knew enough about digital media and communication to understand its potential. Their role was crucial in spreading consensus among other members.

4.2. PARTICIPATION, VISIBILITY AND SUSTAINABILITY: RELATIONS

This part examines the relations among the three key factors tackled in this paper: participation, visibility and sustainability.

4.2.1. Participation and Visibility: Striking a Balance

Community participation is paramount to ensure that an *authentic voice* is used to express the values of the Romani community. In addition, in order to reach a wide audience, community-produced content needs to compete on the World Wide Web with compelling and aesthetic content, produced by professionals. To stand a chance, local content needs to share similar compelling qualities. The relation between participation and visibility can be questioned as: *Should participation over-rule quality content production, or the other way around? What is the right balance to be struck?*

The experience of Romani Voices indicates that the standard according to which these decisions are made should be subsumed as well to community goals. The Romani community involved in this project had a key concern with presenting an authentic image of their life, including both problems and positive aspects, coupled with the desire to reach a wide audience. Faithful portrayal of community concerns was as important as successfully reaching an audience. These two imperatives have been met by creating content truthful to real Romani life, and attempting to embed it in forms appealing for a target audience. The content production strategy was designed to capture people's concerns and translate them into the digital content produced, as well as the manner of structuring it for online publishing. Researchers' involvement has been higher during content editing and preparation for publishing. A professional graphic designer was hired, for instance, and briefed to produce a relevant yet simple and visually compelling website.

4.2.2. Participation as a Step towards Sustainability

When designed thoughtfully, participation results in a sense of *ownership* of an initiative, which in turns heightens its potential for sustainability. In our experience, ownership has proven to include key components of sustainability, especially soft technology (in particular know-how) and social capital.

With respect to *know-how*, we have observed that the development of a sense of project ownership corresponds with the development of members' capacity to understand and manage parts of the process. People who had a key role in the project and learnt how to manage parts of it had a greater sense of ownership demonstrated through taking the initiative.

With respect to *social capital*, we note that the sense of ownership develops at *collective level* when there is correspondence between a project's goals and the values, norms and aspirations of the people involved - key components of social capital. The definition provided by Ramirez (2008), "ownership of the problem and its solution" points to one core aspect of a sustainable initiative: By making local people part of a project, involving them in the identification of a problem and the formulation of a solution, not only will the community derive a feeling of owning the project, but it will also have learnt the intricacies of acting towards goal fulfilment, which counts as a key ingredient for managing the same or similar projects in the future.

5. Conclusions

Let us remind the reader of the two research questions we have defined in section 2. The first question inquired whether we can identify methodological approaches for minority communication interventions that can ensure striking a balance between adequate reflection of community's views and having an impact on the target audience. With respect to *reflecting community views*, we outline the importance of grounding the initial design of an intervention in local data, and the usefulness of employing ethnographic techniques. Secondly, we confirm the effectiveness of participatory approaches for gaining local approval, cultivating project ownership and building towards sustainability. The value of ethnographic and participatory methodologies resides in their capacity to properly link the approach and course of an initiative to local needs, goals, possibilities and constraints. *Having an impact* on the target audience requires, on the other hand preparing a qualitative communication product and distributing it through the right channels. The approach taken in the Romani Voices case study for meeting both goals was to blend a local focus (relying on ethnographic and participatory methods for content production and content organization) with interventionist team expertise (especially for establishing editing and publishing protocols). All throughout this process constant consultation rounds with community members were devised in each phase. The final product (www.romanivoices.com/podoleni) reflects this balance achieved through community direct participation (e.g. content produced and its taxonomy) and interventionist team expertise (e.g. graphic design, content editing, choice of the technological platform).

The second question we addressed concerned the possibilities of establishing cause-effects relationships among elements of an intervention workflow and its achievements. To reduce the scope, we conducted an in-depth investigation of selected dimensions of technological initiatives for minority public communication: participation, visibility and sustainability. With respect to the relation between local participation and visibility, we noted that high or exclusive local participation and control over the communication intervention may affect the quality of content produced and its capacity to attract and maintain an audience. The concept of "proper visibility" (which considers the optimal delivery of the relevant community messages through the right technology platforms to the selected audience) can be employed as a means for identifying the right balance to be struck between ensuring local participation and building towards a qualitative communication product. A strong relation of reinforcement has been verified between participation and sustainability. This relation is particularly strong when participating members will have developed a sense of ownership of the initiative, and the capacity to control and run it collectively. Ultimately, the more people perceive the project as their own (e.g. acknowledge its benefits, and feel able to manage it) the more chances the latter has to continue beyond its supported lifetime.

We can ask ourselves whether and to what extent the above findings, drawn from a specific case study, are generalizable. In our opinion several methodological and practical clues (see section 3 and discussion in section 4) can be applied to other projects with similar aims and in similar contexts. From the subjects discussed in the

paper, we point to the importance of two issues for further research investigating the potential of ICTs for supporting minority communication:

Participation vs. visibility. Local participation is a measure for ensuring that the authentic identity of a minority community is represented in the content produced. The outcome might not necessarily, however, coincide with a desirable reflection of the community to the outside world. On the contrary, if positive image-building is pursued, the community might not recognize itself and its values in this representation. The relation of these two aspects with local people's education and training for media literacy, and the bearing of the semiotic codes pertaining to distinct socio-cultural systems, could be subjects worthy of further investigation.

Project ownership and sustainability. Many minority-oriented projects collapse after the outside support is over. Ensuring project sustainability resides in fulfilling a complex set of requirements, depending on the local participants and conditions as much as on the team managing the intervention. We strongly believe that local embedding of an initiative is one of the most important factors, especially when it manages to cultivate a sense of project ownership in local participants. The Romani Voices case indicated that the development of a sense of project ownership can be related to other dimensions besides participation, such as know-how, role in the project and perceived self-efficacy; and that in turn these dimensions can be linked with two key aspects of sustainability – soft technology and social capital. Further research could explore more in-depth these issues and probe the relations among these concepts in different contexts.

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