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MEDIA DEVELOPMENT

Audience research in Media Development

Overview, case studies, and lessons learned

Imprint

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Overview, case studies, and lessons learned

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Contents

Executive summary

This publication takes a look at current developments in the field of audience research in media development and presents three case studies testing innovative methods that can be of use for research, monitoring, and evaluation. They are meant as an orientation and inspirational source for future projects in this domain.

Based on the information assembled in this study we make the case that media development needs audience research to improve its projects. Media development actors need to know more about the impact on their final beneficiaries if they want their work to be truly successful.

However, it does not always make sense for media development actors to conduct or commission expensive and broadly representative research. Budgets and project sizes are limited, and often the results of market or academic research efforts are only of very general use to a particular media development project in question. Therefore ways have to be found to conduct focused audience research in media development – in order to gain specific and relevant knowledge directly related to the interventions.

The three case studies we present in this publication are directly related to ongoing media development projects. They apply tailor-made approaches to a particular setting. On top of this, we have assembled more general knowledge from the literature and past studies in audience research that are of relevance here.

The main ambition for this project and publication was for DW Akademie to gather in depth practice-related knowledge. We want to share our lessons in a transparent manner. Therefore, we do not only present convincing approaches and positive results. We openly discuss pitfalls, limitations, challenges, and ways forward.

Definition and functions

Audience research in media development is defined here as any rigorous empirical enquiry into the behavior, knowledge, and attitudes of persons in the developing world receiving, engaging with, and/or non-professionally contributing to media content, on the basis of social science methodology and/or technical measurement. Audience research in media development can have functions for exploring potential target groups, monitoring the progress of media projects, measuring the outcome of media projects, evaluating the impact of media projects, or contributing to the sustainability of media outlets. It is of special relevance to the media development practitioner, wanting to gain meaningful insights about the beneficiaries of media development projects.

Results of three case studies

The aim of this project was to gather experience in the field of audience research. Three case studies were conducted for this purpose, seeking answers to different research questions,
utilizing different innovative methodologies, and located in different parts of the developing world. The results have both implications for media development practice as well as for how audience research ought to be conducted.

The first case study dealt with the measurement of Media and Information Literacy (MIL) of young media users aged 12 to 16 years in the Palestinian Territories (West Bank). From the media development perspective, the following insights were gained:
- The schools that had taken part in MIL courses (project schools) fared slightly better than those that did not, though the differences were smaller than expected.
- Girls fared much better than boys. Project school girls also received significantly better test results than their non-project compatriots.
- The project school participants fared worse than their non-project counterparts at only three skills (source transparency, source diversity, and respect of privacy).

Lessons learned from a methodological audience research perspective were:
- Measuring MIL in this age group requires hands-on testing. Abstract questionnaires do not seem to have the same validity as practical tests.
- Media examples and item language have to be adjusted to the levels of juvenile age groups.
- Absolute comparisons of test items are not possible because it is almost impossible to construct MIL questions that are exactly of the same difficulty. Thus, relative comparisons should be drawn between different groups of pupils.

The second case study focused on the impact of radio broadcasts on women and land rights (station: Nam Lolwe) in Kenya. It was designed as a quasi-experiment, comparing listeners of the radio stations to potential listeners and non-listeners. The findings in terms of media development practice included:
- It is of utmost importance that media development organizations monitor the content and its quality. This is the pre-condition to achieve impact.
- Personal communication and radio were found to be the main sources of information for all participants.
- Age has a significant influence on people's attitudes towards land rights and women, elderly people tending to be more conservative and favoring paternalistic traditions.
- No significant differences in levels of knowledge, opinions, and activation levels were found between listeners and non-listeners of the radio station. An exception was getting involved in a social group that addresses land rights questions, which was significantly more often the case for listeners of the programs.

For audience research purposes, the following lessons were gained amongst others:
- In quasi-experimental designs, special attention has to be given to the selection of the treatment and the control group, making sure that the distribution of socio-demographic and other relevant variables is similar.
- The stimulus should be clear and focused and of considerable duration in order to have an effect.
- When measuring the impact of media, it is imperative to document the contents themselves, to match the questionnaire items with the content, and to make sure that the content has been distributed at all.

The third case study addressed the social media strategies of two community radio stations (Granada Stéreo and Contacto 10) in Colombia. It used focus groups, a survey, and Digital analytics methods. The main findings useful to DW Akademie's media development practice were as follows:
- While Granada Stéreo generated a great deal of interaction with listeners on social media, Contacto 10 used social media primarily to distribute information.
- Readiness by (potential) users to engage on social media was found to be highest for topics with a local reference, but there was also considerable interest in the peace process and the associated recent history.
- Social media content was found by the participants to be most engaging if it focused on a wide variety of topics, both informative and entertaining. Photos and videos were especially popular.

Lessons learned in terms of audience research practice included:
- When drawing up a mixed methods design, the contribution of every method should be reflected to ensure that the data complement each other to deliver in-depth insights not possible with stand-alone methods.
- Provisions should be made to ensure that samples across focus groups are comparable and all segments of the target group are represented in the sample, e.g., quota plans or random sampling.
- If remote management is necessary, when the principal investigators cannot be on location all the time, monitoring at key intervals in the research process should ensure that agreed upon research designs are implemented in accordance with agreements laid down at the outset.

In all cases, close cooperation between project partners and media development organizations was imperative because the partners knew the beneficiaries best and could tailor methods to suit their interests and behaviors. It is important that common standards be defined together from the outset in order for audience research to live up to the necessary requirements in terms of validity and reliability.

The Palestinian MIL test and the methods mix tested in Colombia proved to be cost-effective and can be used to strengthen partners' capacities in monitoring and evaluating their activities or improving their activities to be more in line with beneficiaries' needs. The Kenyan research design was more complex and profited from long-term capacity building with partners in terms of methodological know-how (e.g., random route sampling).

Overview of audience research in media development

Beyond the case studies, the publication also sketches out the current field of audience research in media development: A content analysis of 163 studies in the field identified five sources of import to people involved in media development:
- Research conducted by members of the Conference of International Broadcasters' Audience Research Services (CIBAR) provides the most valid data available on media access, use, and attitudes in the developing world, though the detailed research results are only available at a financial cost.
- Studies by state bodies and NGOs, especially prevalent in Latin America, can also deliver valuable information for the media development practitioner.
- Media and market research can be a cost effective way of obtaining audience research results, though publicly funded research is not as readily available as it should be.
- Academic studies are most useful, when they test research methods that might be used in a media development context.
- Media development organizations themselves deliver research of varying quality and have very different approaches in terms of the transparency of their research.

Challenges

Audience research in media development presents researchers with specific challenges. The researcher should at least reflect on the following points when conducting a study:
- **Cooperation with partners:** To what extent can project partner organizations be involved in the planning, implementation, and analysis of the research? Is it viable and sensible to involve market research or academic institutions?
- **Monitoring of implementation and analysis:** Have organizations involved understood the goals and methods of the research correctly? At what intervals should this be monitored?
- **Preparing and adjusting the instruments for the target group:** What specific features of the target group have be taken into account when developing research instruments and sampling strategies? When and how should a pretest be conducted to test the research instruments?
- **Mixed methods approaches:** Can different methods be applied to gain insights in an efficient way that would not have been possible with a stand-alone method? Can the data from the methods be combined in such a way, that findings are coherent?
- **Designing audience research:** Have methods been tested under similar conditions? Are they valid and viable?
- **Effects of audience research:** What (negative or positive) effects might the audience research have on the media development environment in which it is to take place?

Introduction

It's a warm September morning in the Palestinian village of Jaba'. School is beginning. As children rush across the courtyard to get to class on time, a group of children already sit, listening attentively to an instructor in the computer room, explaining to them what to do. They're taking part in a Media and Information Literacy (MIL) Test, drawn up by DW Akademie and organized by project partners Pyalara. Just as the youngsters lean over their computer keyboards, considering what answer to type into the online questionnaire, the lights go out. Power shortage.

While the children react calmly, as they are used to this happening, the researcher's adrenaline levels rise as the room goes dark. Months of preparation threaten to go down the drain: Developing, translating, and pretesting the questionnaire, achieving government and school consent for the MIL test, the logistics of getting kids from six schools to Jaba', organizing the technical equipment, etc.

Audience research is a challenge. It can be hampered by all sorts of difficulties. Telephone or computer-assisted surveys depend on technical infrastructure and equipment that might not be available. Statistical data is often non-existent or unreliable, making it hard to judge the quality of audience samples. The degree of professionality amongst market research companies varies from country to country and region to region. This is also true for the amount of experience and the reliability of enumerators, interviewers, or instructors sent out to conduct interviews or administer other research methods. And results can either be predictable or flawed in some way.

If research confirms the assumptions of practitioners, it is often seen as superfluous. What is the use of conducting research if one finds out what one thought to know already? On the other hand, if the research does not confirm the assumptions of practitioners, the approaches and methods are questioned. And indeed, if data are flawed by sampling mistakes, social desirability biases, or faulty techniques of data analysis, decisions will be based on invalid or unreliable information. It cannot be disputed that all of these things can and do happen.

Despite all these potential problems, there are certainly two things one can do: Realistically appraise the general situation in the target country and choose research methods that take restricting factors into account; and develop a Plan B.

In the case of the Palestinian MIL test, paper and pencil questionnaires were Plan B. Though the test would have been easier using the online questionnaire, the data could also be collected by means of ordinary questionnaires. So all was not lost on that morning in the West Bank. The test could proceed, levels of MIL could be measured, leading to results that enabled DW Akademie to improve activities for the benefit of the children taking part in the test.

This publication takes a look at current developments in the field of audience research in media development and presents three case studies testing innovative methods that can be of use for research, monitoring and evaluation. They are meant as an orientation and inspirational source for future projects in this domain – as they yield a wealth of information on what works, what does not, and why.

Thus this publication is not meant as a handbook for audience research. The reader will find other books more suited in that respect (e.g., Mytton, Diem, and van Dam, 2016). This is a work-book for people interested in actively improving media development projects through research and evaluation.

Chapter one defines audience research in media development, outlining its functions and defining criteria for good practice. It is argued that audience research today has to take both active and passive roles of media audiences into account, relying on traditional social science data collection methods and digital metrics to obtain a valid description of the behavior, wants and needs of viewers, listeners and readers. The overview chapter also looks at the current field of audience research in media development. Based on a review of studies published over the course of the past six years, the chapter identifies typical features of research and innovative methods. Research from members of the Conference of International Broadcasters' Audience Research Services (CIBAR), the various media organizations in the field, national survey organizations, NGOs as well as academic studies are included in the overview.

Chapters two to four present three innovative case studies conducted by DW Akademie. The first case study deals with measuring the impact of Media and Information Literacy (MIL) courses in the Palestinian Territories with an MIL test. The second one focuses on a local radio station in Kenya. A quasi-experimental design was used to find out how much impact its reporting has on people's knowledge, attitudes and behavior regarding women and land rights. Finally, the third case study was aimed at researching social media activities connected with community radio stations in Colombia. A mixed methods design consisting of Digital analytics, a survey and focus groups was used to explore user activities related to two community radios.

Chapter five summarizes the findings and lessons learned, giving recommendations for future audience research in media development and identifying aspects that deserve further attention. The authors wish to thank project partners Charles Nyambuga (Kenya), everyone involved at Pyalara (Palestinian Territories) and at the University Antioquia (Colombia), as well as DW Akademie country managers and associates Jutta vom Hofe (Kenya), Verena Wendisch / Mona Naggar (Palestinian Territories) and Matthias Kopp (Colombia) for their great support. Special thanks also to Kerstin Weisbach and Johanna Wergen from Deutsche Welles market and media research unit for their support involving training on digital analytics. Thanks also go to Lois Aspinall from BBC Media Action for providing us with information on the media development charity's innovative audience research methods.

1. Audience research in media development: an overview

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1.1 Defining audience research in media development

Audience research in its classic form is devoted to finding out more about who is listening, watching, or reading at the end of the line. That line traditionally has been mass media communication via channels such as television, radio, or printed newspapers/magazines. Today, with the advent of digitally mediated communication, audiences can be defined as any group of people receiving, forwarding, and/or sharing entertainment or information content by technical means. The definition of media has changed, too. The monopoly of the incumbent media has been broken, new players have entered the scene. Relevant information is provided by a myriad of sources nowadays. However, despite several attempts at redefining the media user as a "prosumer" (Anderson, 2003), "produser" (Bruns, 2008), or "co-creator" (van Dijck, 2009), some authors speaking of "the former audience" (Gillmor, 2004) or "the people formerly known as the audience" (Rosen, 2006), media audiences have not become extinct. Even in digital contexts, not everyone takes on the role of a producer and there is a tendency to consume media contents rather than co-produce them, whether it be via video or streaming websites or via social networks.

Nonetheless, there have been changes in the media landscape, driven by phenomena such as social media and real-time mediated interaction, and this has prompted Michelle J. Foster (2014) to develop a new model of the role of audiences in media development. In a study for the Washington-based Center for International Media Assistance (CIMA), Foster argues that audience research should focus on an engagement model rather than on the traditional exposure model. The exposure model, on the one hand, corresponds to the way audience research is usually conducted, defining an area within reach of certain media, determining a point in time for the survey, and then drawing a random sample of target groups, asking them to indicate how they used media in the past. The engagement model, on the other hand, focuses on the changes in the media ecology brought about by digitalization. Therefore, Internet-based audience research focuses on analytics and metrics (Cherubini and Nielsen, 2016), defining audiences, and measuring their media use on the basis of their actual real-time online behavior.

The model is interesting because it draws attention to the fact that audience-related data is continually produced on the Internet. This data is rarely used, even though it is, for the most part, readily available and the metrics give information on actual behavior rather than subjective estimates. It does seem, however, that the diagnosis of a paradigm shift from the exposure to the engagement model is premature, especially considering the status quo in developing countries. According to the

International Telecommunications Union (2016), less than five percent of the population of eleven sub-Saharan African countries had access to the Internet in 2015. Thus, digital analytics and metrics are relevant primarily in regions where digital access is wide-spread. Even if Internet access is common, as in many parts of the Middle East, Latin America, and parts of Asia and Africa, it should be borne in mind that people active on the Internet are not identical with the population as a whole. And in the end, the aim of audience research in media development is to go where the beneficiaries are, and not vice versa.

As a consequence, digital media and the more active role audiences are playing should be seen as a complement to the traditional media that still are in place and whose reach often exceeds digital modes of communication. The result is a complex new media landscape, in which the number of voices and opinions being circulated has increased exponentially, with traditional media existing alongside other modes of communication. Rather than viewing the exposure and the engagement models as mutually exclusive, they should therefore be seen as two perspectives of audiences that reflect the complex new media ecology in which audiences use both digital and traditional media, in which they can take on both passive lean-back or active lean-forward roles, in which audiences remain part of local communities and can nonetheless interact with others across regions. Thus, audience research should draw on both traditional data collection methods – surveys, focus groups, guided interviews, observations – as well as digital methods of data collection. The methods complement each other and each has its advantages and its drawbacks. While social science type empirical research is resource-consuming and often based on self-report, digital methods are limited to certain forms of behavior and there is no way of finding out why people behave the way they do.

Audience research in media development is rigorous empirical enquiry into the behavior, knowledge, and attitudes of persons in developing countries receiving, engaging with, and/or non-professionally contributing to media content, on the basis of social science methodology and/or technical measurement. It can be conducted at a cross-national level, national, regional, local, or media house level. Often in media development, research has to be pinpointed to small segments of the population, since the beneficiaries of projects are seldom the national population of a country as a whole.

Audience research has increased in media development over the course of the past decade. This has to do with the general aid effectiveness debate in development and a stronger focus on the impact and outcome of interventions. The Paris Declaration on Aid Effectiveness states: "Managing for results means managing and implementing aid in a way that focuses on the desired results and uses information to improve decision-making." (OECD, 2005: 7) With media development increasingly focused on impact instead of output, the focus of project monitoring and evaluation has invariably shifted from documenting the media projects themselves to finding out,

what (positive) effects the projects have. Without reliable and efficient tools for measuring this, results will stay elusive and managing for results will remain a concept with little potential of being put into practice.

To judge what (longer term) effects media development projects have caused or contributed to, there is no alternative but to take a look at what changes have taken place amongst the eventual beneficiaries, ordinary citizens on the street. This is in line with the human rights based approach to media development, which views citizens as holders of rights such as free access to information and freedom of speech (Reineck and Lublinski, 2015). It is the degree to which these freedoms are upheld and furthered by media development projects that ultimately provides the scale for measuring their success.

Two kinds of audience research in media development may be discerned: Intervention-oriented and media-outlet-oriented research. These two research approaches can have diverse functions. Depending on which function is prioritized, they can be subdivided into five distinct types of research.

Intervention-oriented research aims at
- exploring potential audiences for media-based projects,
- providing valid and reliable audience monitoring information to allow for informed project decisions,
- measuring the total reach or circulation of media in connection with project activities as an outcome, or
- measuring the impact of project activities for evaluation purposes.

Media outlet-oriented research, on the other hand, is primarily aimed at
- enabling the financial sustainability of local media outlets.

In the latter case, measuring the reach or circulation of media is sometimes not directly related to project activities, but is a means for generally establishing a common currency in a developing advertising market.

A classic example of the first type of exploratory research to find out more about potential audiences is a nationally representative study by BBC Media Action, conducted to find out more about how young Cambodians' access and use media as well as their civic engagement (Harris and Gowland, 2014). Though the study showed some predictable outcomes, such as an urban-rural divide in terms of television and internet access, or a dependence of mobile phone and internet access on levels of income and education, it also revealed that using mobile phones for listening to radio broadcasts was the second most popular function of mobile phones for young people.

A study by German media development organization DW Akademie conducted in 2014, designed to find out about media consumption patterns of young media users in Uganda (Fiedler and Meyen, 2016), is a further example of this type of research, showing how audience research is capable of providing media development practitioners with audience information that

goes beyond impressionistic assessments. The representative sample of 13- to 24-year-old media users in four provinces yielded interesting results, showing that television was being watched more in the urban surrounds of Kigali than expected. DW Akademie's strategy in Uganda was developed based on these findings. Thus, the study allowed for informed decisions, rooted in knowledge of actual patterns of behavior, preferences and needs, rather than on assumptions based on a more or less thorough comprehension of what is going on.

As stated earlier, the strength of the argument relies on the quality of the data. Recent trends towards enabling non-experts to conduct do-it-yourself research should be encountered with caution. Bad quality data can lead to wrong decisions with costly consequences (Jerven, 2013). Good quality data, on the other hand, provide practitioners with a legitimate base for setting goals and planning activities. Thus, ownership in audience research presupposes a common understanding of standards of research, making sure that all partners comply with quality standards throughout the research process.

Quality criteria for audience research
Good quality audience research data depends on a number of factors, the most important of which are:
- Defining the goals of the research in a clear manner, as research questions or hypotheses;
- Defining the target group or segment of the population to be researched comprehensively;
- Choosing the appropriate research design to answer the research questions or test the hypotheses;
- Developing a data collection instrument (e.g., questionnaire, interview guide, observation instructions) that produces valid and reliable data;
- Choosing the appropriate method for drawing the sample out of the population (or a subsection thereof);
- Administering the research instruments with the help of trained staff;
- Analyzing the data using appropriate methods of analysis (e.g., statistics);
- Visualizing and reporting the results in a transparent manner, making it easy to understand how the research questions or hypotheses were answered.

The second type of research, often involving smaller scale monitoring or midline studies, focuses on the audience in order to improve the appeal, quality and/or effectiveness of project related media. For instance, media and market researcher InterMedia conducted a survey and focus groups with inhabitants of Papua New Guinea in 2011, primarily to adapt National Broadcasting Corporation's radio program to the needs of the population. The station was being supported by InterMedia at the time (Debeljak and Bonnell, 2012). They found stark differences in reception depending on whether inhabitants lived

in the highlands or on the surrounding islands. This led to recommendations on improving access to information and catering for the different segments of the population.

One of the most common uses of audience research in media development is the third type, i.e., measuring the reach or circulation of media products in connection with development projects or programs. In media for development projects, this method is frequently used to find out how many persons of a target group were reached by a specific media message. For example, the BBC World Service Trust, predecessor of BBC Media Action, used a survey in 2008 to find out whether programs addressing health issues such as HIV/AIDS, tuberculosis, and malaria had reached the Cambodian population in six provinces. The findings confirmed that indeed 86 percent of respondents had encountered HIV/AIDS content on television and 73 percent had heard it on the radio over the course of a year (BBC World Service Trust, 2009).

Over and above basing media development activities on evidence rather than hearsay, audience research also has an important role to play in the assessment of these activities, which is the fourth, impact-oriented type of audience research. Audience research is one of the most important fields of action when it comes to evaluating and measuring the impact of media development projects. If the aim of media development projects is to have a broader influence on society as a whole, then it is imperative to find out more on how media development projects improve audiences' knowledge and participation levels, and change their attitudes, opinions, and practice in a positive way.

An attempt in this direction was a study by US media development organization Internews, focusing on the contribution of community radio stations to development in South Sudan. On the basis of surveys with 150 radio listeners each at five community radio station sites in South Sudan, a total of 750 interviews, and 15 focus groups. The survey consisted of 104 questions and was based on an indicative rather than a representative sample of listeners. The results, however, could show that the listeners themselves believed that the community radio stations had a positive influence on voter participation, more girls attending school, less gender-based violence, reduced incidences of community conflict, or the election of a woman governor. It was, however, not possible to statistically test these attributions by the interviewees. This would have either required a random sample or a quasi-experimental design. Additionally, social desirability could have played a role in how respondents answered the questions.

However, audience research is not only a source of knowledge for media development practitioners but also a prerequisite for sustainable media funding. This fifth type of audience research tries to overcome the lack of transparency of advertising markets as one of the major reasons why media companies in many countries find it hard to generate revenues. "[P]otential advertisers are reluctant to invest much in buying space and airtime on media outlets – both printed and electronic – whose scope and influence are unknown", as Marie-Soleil Frère points out (Frère, 2013: 20). Independent audience research is a way of giving media markets and advertisers an information base to work from (Spurk and Dingerkus, 2015).

In 2014, Gavin Anderson of development consultancy The Springfield Center and Paul Haupt of the Pan African Media Research Organization (Pamro) presented their DFID-funded efforts to introduce a common audience measurement system for the radio advertising market in Nepal at the Forum Media and Development (FoME) Conference in Germany. The background was that 43 percent of Nepalese radio stations stated that it was likely or possible that they would close down in the next 5 years and more than half believed radio was not a profitable sector to be in. Advertising expenditure was very low compared to countries of a comparable population size such as Sri Lanka and Uganda and most of the money was being spent on printed media, while radio had a considerably greater reach than newspapers and magazines. The hope was that a common currency of audience reach would lead to a redistribution of revenue that corresponded more closely to the actual audience distribution in the media market (Anderson and Haupt, 2014). Such a common currency had been absent since Reuters had previously withdrawn its ratings system from Nepal. [1]

Despite audience research fulfilling important functions in media development, the extent to which such research is conducted and the budgets available for such research are fairly limited, as research departments from media organizations can attest to (compare: Cauhapé-Cazaux and Kalathil, 2015). Audience research in media development tends to suffer from the same tension that characterizes monitoring and evaluation (M&E) programs in general: the clash between the implementation and the compliance sides of work (Natsios, 2010). On the one hand, media development programs have to be put into practice and this in itself bares many challenges. From this perspective, M&E represents an additional burden, binding the attention and time of actors who sometimes think they could be doing "more productive" work in the field, as well as binding resources that are thought to be better invested in capacity building or other measures on the ground. It should, however, be emphasized that audience research is essential for guiding those practical activities on the ground. Many things can go wrong if activities are not based on sound analysis and evidence. M&E activities do not only serve purposes of accountability, but also of organizational and project learning.

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[1] *Similar efforts are currently underway in South Sudan, conducted by US-based Forcier Consulting for Internews. In Uganda, a system for conducting regular radio listener surveys has been successfully installed.*

On top of this, the most fundamental argument on behalf of audience research in media development remains: Legitimacy for media development ultimately depends on proving what good projects have achieved for the bearers of human rights. And this evidence can only be achieved through good quality research that is adapted to a given media lanscapes and also oriented towards the questions that are of relevance to development interventions.

1.2 Current audience research in media development

Audience research has always had an economic and a political side. In the beginning, audience research was an exercise carried out by media houses themselves, driven by the need to comprehend their audiences and to attract advertising revenue through convincing descriptions of who was receiving their media messages. This type of economically motivated research then led to the establishment of national ratings systems, measuring the circulation of newspapers and magazines as well as ratings and reach statistics for television, radio, and internet-based media.

On the other hand, audience research can also be connected with political interests. Some actors want to find out more about the effectiveness of political messages. This research was usually funded by state or other international institutions interested in knowing to what extent and with what effect political messages were being received by whom.

Both directions of audience research are still predominant, though audience research in media development has developed as a small but growing additional field in recent years. Of course, economic and political agendas also influence and shape research in this field. But a common denominator of efforts in media development is that audience research is aimed at the betterment of the situation of the beneficiaries themselves. So audiences are more than a research object to be exploited economically or to be influenced politically – they are holders of human rights, to be strengthened and to be served by the means of media development. The aim of this chapter is to provide an overview of the field and to identify shortcomings that can be addressed by the case studies conducted by DW Akademie and presented in chapters two to four.

The following overview is based on a sample of 163 studies published between 2010 and 2015, publically available by April 2015. The sources include the Conference of International Broadcasters' Audience Research Services (CIBAR), media development organizations, research by state bodies, and market researchers as well as academic studies.

Because of the indicative nature of the sample, few percentage points but rather trends in the data are reported: 16 studies were of CIBAR providence, 33 studies stemmed from academic sources, 13 from state bodies and market researchers, and 100 studies were from diverse media development organizations.

The starting point for drawing the sample was the resource center at the Catholic Media Council website, which holds more than 12,000 publications on media development (Cameco, 2016). The websites of organizations in the database were then visited to supplement the studies found at Cameco. The sampling criterion was that each study had to be of an empirical nature and would have to deal with media in at least one developing or transition country, defined roughly as a country in Latin America, Africa, Asia, Oceania, or Eastern Europe.

1.2.1 CIBAR: International Broadcasters' Media Audience Research

CIBAR's (**C**onference of **I**nternational **B**roadcasters' **A**udience **R**esearch Services)[2] broad purpose is to establish and maintain technical and audience research standards for international broadcasters. The data produced on behalf of CIBAR are amongst the most rigorous and reliable data available on media use in developing countries, though they are not collected with a media development purpose in mind. The data sets are available for purchase and results are only rarely published. Due to the fact that radio and television of state-funded international organizations like Voice of America or Deutsche Welle are broadcast abroad, they inevitably gain deep insights into the media landscapes of their target countries. While the focus initially was on radio, now all electronic media are covered, including listener- and viewership on mobile phones.

CIBAR research focuses on Subsaharan Africa, Middle East North Africa, the Former Soviet Union, as well as South East Asia and South Asia. The main data source within CIBAR's International Audience and Research Program (IARP) is Gallup's World Poll. This survey series is currently the largest source of worldwide, nationally representative data on media use in countries of the Global South. The current IARP is based on data from 38 country surveys (Diego-Rossel, 2014). 15 country reports, showing the main findings, are available on BBG's homepage.[3]

CIBAR's preferred method is quantitative surveys based on national representative samples. Regular sample size is about 1,000 respondents. In the case of smaller countries, samples of around 500 inhabitants (e.g. Haiti, Suriname, North Cyprus) are possible; representative surveys in larger countries with heterogeneous populations like Russia, Nigeria, Indonesia and Pakistan require larger sample sizes. For instance, the 2015 survey in India had some 3,000 respondents.

Respondents 15 years and older are usually interviewed. Interviewing method is the face-to-face paper-and-pencil or face-to-face oral interview aided by computers. Topics in the questionnaire range from media usage habits, classic media radio and TV and – increasingly important – internet access, mobile phone usage and social media, to attitudes towards news and topics of interest like politics, health, economy, environment, or sports and music.

The strength of CIBAR's audience research stems from the large amount of timely representative country surveys based on standardized questionnaires. This methodological approach enables the big international broadcasters to have exact descriptions of long-term trends concerning media usage, access and attitudinal or behavioral change, both in the total population as well as in subgroups. CIBAR also publishes comparative data in coordination with Gallup, such as the study "Women & Media: Africa in Focus" of 2014, based on seven surveys (Gallup, 2014).

Media development practitioners will find the published CIBAR data useful to contextualize and legitimize their work. The data is as representative as possible and can thus be used as a sound basis for decision making. The drawback is that the numbers are only published in an aggregated form, reporting media access, usage and attitudinal data for world regions or countries. This means that only broad statements can be made, without being able to break the data down to parts of the country or segments of the population. The original data sets are only available for purchase and quite expensive. Nevertheless, if resources are available and long-term projects with a broad focus are planned, it can make sense to acquire and use CIBAR data sets for exploratory or baseline purposes. Also, CIBAR surveys may exist for regions such as Iraq or Afghanistan, where own research is not viable (see the overview of data sets at: http://www.gallup.com/services/177797/country-data-set-details.aspx).

1.2.2 Studies by state bodies, NGOs, or private market research organizations

In several countries, notably in Latin America, state funded agencies and bodies are responsible for nationwide audience research. For instance, the Peruvian Consejo Consultivo de Radio y Televisión conducts surveys on television and radio use every couple of years (Concortv, 2014) and several Latin American countries have Observatorios de Medios – often funded by local NGOs – which also collect data on media use in Bolivia, Nicaragua, Colombia, or Mexico amongst others (see the Bolivian example: ONADEM, 2013). This might explain why media organizations are less active in terms of their own audience research in Latin America, where national audience research is often run by state organizations, universities, or local NGOs.

Most of this type of audience research is done using large scale representative surveys, conducted at intervals of every two to four years. The samples often reach sizes of more than 5,000 respondents, with a bias slanted towards urban dwellers which in most cases is reduced by weighting the respondents according to census data. In Chile, for example, all respondents to a survey on television use were chosen from the biggest city in each province (CNTV, 2014). Generally, there is a strong focus on television in Latin America, though internet consumption has received more attention in recent years. There is also considerable interest in the media consumption of younger age groups.

Worldwide media and market researchers conduct surveys on a variety of topics. Often, such national surveys pertaining to the media are aimed at establishing or maintaining a common advertising market currency. The Pan-African Media Research Organisation (PAMRO) is engaged in setting up national surveys in various countries in Africa to establish a common currency for the advertising market (Haupt, 2014) and market researcher Ipsos runs an All Media & Products Survey (AMPS) in Kenya, Uganda, Tanzania, Mozambique, Zambia, and Ghana at regular intervals (Ipsos, 2014). The results of these surveys, once established, are rarely published, since they are expensive and for exclusive use of business customers (media outlets, advertising industry). An example of short-term audience research aimed at helping TV and radio stations generate advertising revenue is a survey done by the US-based International Research & Exchanges Board (IREX, 2011) in Kosovo, finding out what market shares the stations have.

The ICT surveys by the International Telecommunication Union (ITU), collecting data on the use of telecommunications and information technology in over 200 countries and regions, are an example of internationally comparative studies (ITU, 2015). Closer to classic mass media audience measurement, mobile survey provider GeoPoll distributes SMS based surveys to find out about the reach of media messages. The company advertises being "the largest provider of overnight media ratings in Africa" (GeoPoll, 2016), though sampling issues could draw the representativity of the findings into question.

Both national and international studies conducted by media and market researchers are aimed at generalizing the results to the national population. This requires representative samples, which is why the studies often employ random sampling and aim at large samples of more than 1,000 respondents. Unfortunately, country methodologies are seldom reported in detail for internationally comparative studies, so the reliability of the data in most cases is impossible to ascertain. On the other hand, the trustworthiness of national surveys meant to provide advertising markets with a common currency depends precisely on reliable data and transparent methodologies. Though the data are seldom provided to the public, it may be assumed that they are based on considerable methodological rigor.

The sources of audience research data – state funded, NGO driven or conducted by media and market researchers – can serve different purposes in media development. The national data generated by state funded bodies or NGOs in Latin America can be used for exploratory or baseline purposes. While disaggregated CIBAR data are only available at a cost, it is conceivable that media development organizations could obtain detailed data sets of national surveys if the government in question is willing to oblige. Media and market research, on the other hand, is the most effective way of conducting audience research, if the research organization has the experience and professional know-how in the field. It comes at a cost and thus most data sets are not readily available. Data published are only at the consent of the funder. Since many media development organizations are publicly funded, there is no reason why they should not make their data readily available to the public. Also, media development organizations can themselves engage in audience research capacity building. In its most advanced form, this can entail installing a professional audience measurement and ratings system able to make media sustainable by giving the advertising market a common currency. Here, media development practitioners go from being audience research data recipients to enablers of data production.

1.2.3 Academic studies

While international broadcasters and media development organizations pursue their own agendas, academic institutions, at least in theory, generate knowledge beyond strategic interests. The most extensive research interest is directed towards finding out about access to and/or usage of digital media, especially social media since 2012, sparked by the so-called Arab Spring. This is in contrast to the media focused on by CIBAR and media development organizations, indicating that universities are more interested in media innovations and communication flows beyond the classic media channels. Topics related to social issues such as health, education, or environment, however, receive considerably less attention in academic research projects. There was little focus on impact, since academic studies are rarely done for evaluation purposes. The most active universities, according to our findings, came from the Arab region, perhaps because these are developing countries with the highest levels of education and the best funding for universities.
A range of methods from focus groups, in-depth interviews and online questionnaires to experiments or observations were used and there was no clear preference for quantitative or qualitative methodologies. The studies dealt with diverse target groups. The minimum sample included 10 participants at a women-led farming cooperative in Lesotho who were provided with mobile phones (Vincent and Cull, 2013), while the maximum number of respondents included representative samples from 22 countries (Salem, Mourtada and Alshaer,

2014). In the following, the findings are sorted according to the geographical regions where the universities which carried out the studies are located.

Most studies in the sample stemmed from British and American universities and research institutes. The main topic was social media, with a special focus on information and communications technologies for development (ICT4D). Innovative studies included interviews of radio station audiences via SMS on social topics from the Center for Governance and Human Rights at Cambridge University, and a study on citizen journalism gaining insights into the perceptions and uses of voice-based tools in rural and remote parts of India (Preeti, Donner and Thies, 2012).

Numerous studies also came from universities located in the Arab region. Especially the Mohammed Bin Rashid School of Government in Qatar but also the United Arab Emirates University, the Northwestern University in Qatar, and the Dubai School of Government were interested in big comparative studies in six or more countries in the region. The fields of research were predominantly access to and use of the internet in Arabic countries, the increasing connectivity between government and citizens through social media and the role of social media in the transformation process. The most popular method of data collection was quantitative online questionnaires. The number of people interviewed varied from 320 to 10,000. Qualitative methods were seldom utilized. Methodological innovations were rare. An example might be the tool developed to measure digital literacy for Arab Internet users (Dun and Mutassem, 2014).

Numerous studies have been conducted by Latin American academic institutions. An interesting overview of audience research in Latin America is provided by Jacks, Marroquin, Villaroel, and Ferrante (2011). The predominant mode of data collection was quantitative surveys. The main focus was on media use in general or on internet access and use. Other topics, often related to poverty were reporting on elections, media credibility, reading behavior and prejudices, and the responsibility of media. Most of these studies looked at traditional und digital media. The target groups were mostly 15 years or older. Where it was recorded, the number of participants differed from 600 to 24,000. The few studies in the sample that used a mixed methods design with a strong qualitative focus were on digital media and especially aspects of the digital divide (Pittaluga and Rivoir, 2012) and ICT4D.

Far less studies in our sample were published by Asian and African universities. The Asian studies focused on the usage of mobile phones (Media Asia special issue, 2010) and there was no preference for qualitative or quantitative methodologies. The African studies were qualitative studies, addressing issues such as health communication in Ethiopia (Worku, 2013) and the use of mobile phones for agricultural purposes in Lesotho.

For media development practicioners, academic studies can be a source of information as well as an inspiration for innovative research techniques. Our review found that universi-

ties tend to pick up on new trends of media usage faster than media development organizations, perhaps because they are purely interested in research and the research is rarely associated with media development interventions. Depending on the country and academic tradition (especially in terms of empirical research), academic institutions can be a good partner for media development practitioners. This ensures that the academic research done is useful for the project at hand.

Of course, not every academic journal is of interest to people involved in media development. Relevant articles are rare in top academic journals such as the Journal of Communication, Public Opinion Quarterly, or New Media and Society. Journals focusing on media development or global communication (e.g., Media Development Journal, Journal of Development and Communication Studies, Information Technologies & International Development, Global Media Journal) are quite small but can contain topics of interest to the practitioner. Finally, journals that focus on certain regions can contain context specific information useful for justification of media development decisions (e.g., Journal of African Media Studies, Asian Journal of Communication, Asia Pacific Media Educator, Comunicación Y Medios, Central European Journal of Communication).

1.2.4 Media development organizations: diversity in quantity and quality

Media development organizations have a specific geographic and/or topical focus (e.g., journalism training, media education, government consultancy) that requires matching audience research methods. Often, the resources available for audience research are limited, which means that the scale and scope of audience research are smaller on average as compared, for instance, to CIBAR research. This, however, not only has to do with limits in funding but also with the fact that more detailed information is sought on specific target audiences in specific locations or regions, information that surveys at the national level are not always able to provide.

A notable exception is BBC Media Action, whose research division regularly conducts studies that rival CIBAR research in the sheer scale of the research. An example is the Climate Asia Project, focusing on environmental/climate issues and communication and based on a sample of over 33,000 interviews conducted in seven countries (BBC Media Action, 2013).[4] Of course, doing research does not automatically mean it gets published. For instance, Geneva-based Fondation Hirondelle is quite active in evaluating projects by means of audience research (Lechien, 2014) but the results rarely are made known to the wider public.

BBC Media Action not only conducts more audience research than any other media development organization, relatively speaking, but also regularly tests innovative methods that go beyond the standard methods repertoire in the context of media development related audience research. Examples of the past (and present) include, but are not limited to:

– **Most significant change technique:** Form of participatory monitoring and evaluation, involving participants in data analysis and the selection of sorts of change to be recorded in order to document (unanticipated) impacts (employed, for example, in Myanmar);
– **Participatory video technique:** Documentation of evaluation, empowering participants by letting them tell their stories in more personal ways by making their own videos (employed, for example, in Myanmar);
– **Community observation (transect) walks:** Guided walks through rural or urban dwelling by an expert (such as a village elder), to help understand the social and physical context of audiences targeted and documented in a transcript of the conversation during the walk, the researcher's assessment and observations, including a sketch map of the vicinity (employed, for example, in Afghanistan);
– **Propensity score matching:** Statistical matching of viewers and non-viewers in program evaluations, to ensure that differences in knowledge or actions are not due to self-selection or other intervening factors but due to the program itself (employed, for example, in Kenya);
– **Randomized controlled trials:** Experimental designs, comparing a treatment and a control group to find out how effective programs are at conveying messages and influencing attitudes (employed, for example, in Bangladesh);
– **Structural equation modelling:** Measuring the reciprocal effect of factors of influence in a predefined setting on each other – mostly employed to measure the reciprocal effects of media message and audience properties on the effectiveness of media messages (employed, for example, in Bangladesh).

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4 *The surveys were conducted in Bangladesh, China, India, Indonesia, Nepal, Pakistan and Vietnam.*

An important aspect of audience research by media development organizations is monitoring and evaluation. Audience research frequently yields baseline and endline data for such projects, sometimes also mid-term data. The underlying rationale generally is that changes in knowledge, attitudes, and behavior can be attributed to the media development interventions. But organizations go about finding proof of outcome and impact in various ways, audience research being only one of them.

An evaluation study under the auspices of Washington-based NGO Search for Common Ground, for example, measured the effects of the radio and television program "The Team" by asking respondents whether they had the impression that their conduct with people of other ethnic backgrounds had changed (Abdalla, 2012). There are a couple of problems with this way of going about measuring impact. Besides the fact that apparently no baseline was conducted to measure the level and quality of interaction between people of different backgrounds before they had listened to or seen the show, there is the problem of social desirability (compare Carlson, 2014). Ethnic bias and "tribalism" are officially frowned upon in Kenya, so respondents were bound to answer accordingly. In comparison, a study funded by American development organization USAid and conducted by Internews in Kenya used a baseline and an endline to document that the proportion of the population that had understood the constitutional reforms had increased by 27 percent (McCallum, 2013).

It is, however, interesting to note that we did not come across many experimental or quasi-experimental designs, or randomized treatment and control designs in our sample, although these are considered the most effective means for measuring impact (Leeuw/Vaessen, 2009). Exceptions include a large scale cluster-randomized design, realized by BBC Media Action in Burkina Faso (Head et al., 2015).

Most media development organizations employ quantitative methods for audience research more often than qualitative ones. These are predominantly quantitative surveys (69 percent), followed by focus groups (19 percent), and qualitative interviews (11 percent). An example of large scale quantitative studies was Intermedia's AudienceScapes research program. The program included publicly accessible data on media use from four African countries (Ghana, Kenya, Tanzania, and Zambia), before being taken offline in 2016 because the studies had been discontinued. It is interesting to note that BBC Media Action, though famous for large-scale quantitative research, in fact utilizes qualitative methods more often than quantitative ones. A content analysis, conducted by us, of 45 research summaries published until April 2015 revealed that 58 percent were based on qualitative, 22 percent were based on quantitative methods and 20 percent were based on a mixed-methods-design. This emphasizes that qualitative methods not only have their merit but can produce thorough insights into audience behavior and motivation.

Sample sizes of quantitative surveys vary according to purpose. Nationally representative studies are often based on more than a 1,000 respondents, while project-specific surveys of smaller target groups in certain locations can have samples of less than 1,000 or even less than 500 respondents. The AudienceScapes samples, for example, range from 1,566 to 2,051 respondents. In contrast, two baseline surveys conducted by Search for Common Ground in Pakistan (Search for Common Ground, 2012a) and Nepal (Search for Common Ground, 2012b) in 2012 had sample sizes of 500 and 806 people respectively. Since telephone based samples are seldom an option, most surveys are conducted as face-to-face interviews. The Afrobarometer surveys, currently conducted in 34 African countries, including various political and development indicators (see for example question 12 on media use in the Ugandan survey Afrobarometer, 2015), are generally set at 1,200 respondents.

Sample sizes for guided interviews often depend on whether a mixed methods approach is chosen or whether the qualitative interviews are meant as a stand-alone method. The same applies to focus groups. In combination with quantitative surveys, samples of less than 50 in-depth interview partners and less than ten focus groups are quite common. In this case, the qualitative methods are mostly used to illuminate the reasons behind the distribution of media usage or evaluation patterns found in larger scale surveys. For instance, East African media development organization Panos Grands Lacs used focus groups and in-depth interviews to complement a large scale survey on media use in Burundi (Frère, 2012). As a stand-alone method, in-depth interviews can reach maximum sample sizes of 100 and more while the number of focus groups were found to range from 6 to 45. The purpose of stand-alone qualitative methods is to find out about the context of media use and information needs, linking both aspects to the daily lives of the beneficiaries of specific media development projects. A good example is a project done by a consortium of development organizations headed by the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), in which focus groups were conducted in three cities in Iraq to gain in-depth insights into the information and communication needs of refugees (Quintanilla et al., 2014). Stand-alone qualitative methods are often employed in regions with security issues such as Syria or Somalia.

Unfortunately, many studies do not report openly what precise sampling techniques are used. Representative studies require random samples and most large scale quantitative samples try to get as close to random samples as they can. It is no secret that in many countries, geographical and security constraints prevent every citizen from having the same likelihood of getting into the actual sample. The most common sampling technique is dividing countries or regions up into quadrants or provinces (stratification – stratified sample), selecting a random number of villages, towns, or cities within each quadrant or province (clusters – cluster sample) and then randomly selecting individual participants from those

selected clusters (randomization – random sample). However, convenience samples ignoring the principles of random sampling, are quite common. For instance, a survey under the auspices of Internews in the three largest cities in Chad saw interviewers requesting every third person they met on the streets of the cities (200 respondents per city) to take part (Samuel and Bakirdjian, 2014). This amounts to a convenience sample with no possibility of making any inference to the population as a whole. If random sampling is not an option, quota sampling is often seen as a sensible alternative, but many authors doubt the results of quota sampling studies are generalizable.

Over the past couple of years two trends in audience research amongst media development organizations can be discerned, one concerning the media focused on and the other concerning what target audiences are studied. While Internet use has received considerable attention over the past decade, recent studies also focus on mobile and smartphone usage. This trend is illustrated by a 2014 survey on feature phone use in Ethiopia, Ghana, Kenya, Nigeria, and South Africa, conducted by the telecommunication consultants at Balancing Act (2014). Nevertheless, the focus of most of the studies done by media development organizations is still on radio and television use, with newspapers, magazines, and digital media playing only a marginal role.

Regarding the second trend pertaining to target audiences, refugees and their information needs have increasingly been focused on, no doubt as a consequence of the growing intensity of conflicts, in Syria, South Sudan, and other regions. US consultancy Forcier Consulting has, for instance, done surveys in cooperation with Internews in several refugee camps in South Sudan, finding out what information needs refugees have and which sources of information they use (e.g., Forcier, 2013). And the Danish media development organization International Media Support (2014) published a study on the humanitarian information needs of Syrian refugees.

Geographically, there is a definite focus of media development organizations' audience research on sub-Saharan Africa. More than half of the BBC Media Action research summaries as of April 2015 referred to a sub-Saharan African country. Studies from this region also accounted for over half of media development organizations' studies in our sample. Because of recent developments such as the Arab Spring revolutions and the Syrian conflict, the Middle East and North African region has also been in the limelight of audience research studies in recent years. Other regions, including Latin America, Asia, Oceania, or Eastern Europe, are focused on considerably less.

1.3 Conclusions

Considerable efforts have been invested into audience research over the course of the past six years. Most studies are aimed at assessing the needs of beneficiaries or measuring the reach and impact of media development activities. A great deal of research follows the same routines, asking media users to detail the way they use media, testing their knowledge, requesting their topic interests and information needs, and asking how they judge their local media. Innovative approaches are rare – with the exception of BBC Media Action *(see text box on page 13)*. Specifically, most audience research is based on the exposure rather than the engagement model of audience research. Digital data available from various internet sources for analysis are seldom used. Furthermore, samples tend to be biased toward adult audiences, while children and adolescents do not feature very prominently in research, though they make up a significant proportion of the population in developing countries. Mixed methods, often professed in theory, are seldom found in practice. Tests and quasi-experimental designs, quite common in social scientific research, are almost absent in audience research in developing countries. While measuring impact is often professed in word, many studies do not go the extra mile to draw the methodological consequences for achieving it. Simply measuring the reach of an intervention or asking people whether a program was good or had an impact, is not enough.

Some of these deficits will be addressed by the following three studies, conducted by DW Akademie during the course of 2015 and designed to further our knowledge and repertoire of innovative methods as well as enabling intervention-based insights to be used for DW Akademie's activities in the countries they were conducted in. Thus the regional and thematic specifics were not only determined by gaps identified in current research, but also by the shape and the needs of specific media development projects currently underway. The research was meant to supplement country specific work in the field, while making sure that there was a certain regional and thematic diversity. The following three chapters present the three case studies conducted.

2. Case Study 1: Critical media and information literacy: testing a test in the Palestinian Territories

Dennis Reineck

Case study fact sheet

Goals of the case study: To test the viability of a Media and Information Literacy (MIL) Test and to evaluate MIL related work in a development project context in the Palestinian Territories.

Research questions:
– Do the project schools obtain better results than the non-project schools?
– Does gender have an influence on the results obtained in the MIL test?
– Does the test for measuring Critical Media and Information Literacy work?
– What is the relationship between a MIL skills test and asking participants direct MIL skills questions?

Method: Test Survey

Sample: 81 participants aged 12 to 16 years of age from six schools in the Palestinian West Bank

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Innovative aspect/approach: Using a skill and competency test rather than a conventional abstract questionnaire based survey

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Challenges: Finding Arabic media examples and developing a questionnaire suited to the age group

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Main results:
– The validity of the MIL test is higher than that of conventional MIL surveys.
– Project schools obtained slightly better results than non-project schools.
– Gender has a strong influence on test performance, with girls faring much better than boys.

2.1 Introduction

Media and Information Literacy (MIL) is a key concept in media development. According to UNESCO, "the cultivation of a media- and information-literate population is essential for the sustainable development of society, requiring the individual person, community, and nation at large to obtain a diverse range of competencies" (UNESCO, 2013: 31). These competencies include abilities to access information, to use, evaluate and create media and information, participate in media,

knowing how media work, and demanding good quality, independent media (Reineck and Lublinski, 2015: 5). In this sense, MIL is the set of skills and attitudes citizens need to make informed decisions in their everyday lives and to take advantage of their rights to access of information and freedom of expression. Furthering MIL in developing countries thus has repercussions not only for the awareness of these rights but also for the degree to which these rights can be put into practice.

One of the challenges of media education in general and MIL oriented work in particular is evaluating its outcome and impact. As opposed to common literacy (reading and writing), MIL requires a more complex measurement tool because it is a composite of very different competencies. For instance, an MIL study commissioned by the European Commission included 59 indicators measuring various aspects of MIL (EAVI and DTI, 2011: 11). This kind of complexity is often not viable and can produce too much data, preventing unitary interpretation of the results (Bulger, 2012). Rather than trying to harness the overall complexity of MIL in a single tool, monitoring and evaluation of media development projects should focus on the aspects of MIL specifically relevant to the case at hand. This pragmatic approach requires identifying which fields of MIL are relevant for a specific target group in a specific regional, national, and/or cultural context and aiming to measure MIL proficiency in these fields.

The following is a case study involving an MIL measurement tool tested in the Palestinian Territories. Media literacy education in the Arab region "remains in its infancy struggling to affirm its importance" (Melki, 2014: 77). The Palestinian Territories (PT) are a special case, since the Israeli-Palestinian conflict has had and continues to have specific effects on how media and other information sources report on current affairs. From 1967 to 1994, Israeli authorities exercised tight censorship over Palestinian media in the West Bank and Gaza Strip (Bishara, 2013: 263). After the Oslo Agreement, for the first time Palestinian media companies were allowed to operate in the PT. However, the Palestinian Authority and the dominant Fatah and Hamas political factions have had considerable influence on the media (Berger, 2013: 6). Therefore it is not surprising that a BBC Media Action survey in 2012 found that the Palestinian participants "expressed a strong desire for trustworthy programming covering local issues" (BBC Media Action, 2012).

Beyond the national media, the young generation is especially keen on international Arab satellite television and social media. Though a great amount of information spread via social media is unverified and the web has been a preferred vehicle for spreading hate speech and propaganda (for example by IS in Iraq and Syria), a lot of Palestinian youngsters consider the social media to be trustworthy (Studio Social, 2014), which provides a further argument for the necessity of MIL efforts in the PT. It is the critical, evaluative dimension of MIL that is relevant here, since media users need to be able to gauge and judge the quality of information provided. This enables them

to evaluate the media according to certain criteria (e.g., source diversity, independence, transparency) and demand media to conform to these standards.

Local NGO Pyalara has been working in the field of MIL in the Palestinian Territories since 1997 and DW Akademie launched long-term MIL projects in cooperation with Pyalara in 2014 at four boys' and four girls' project schools in the West Bank. It is in the context of these activities that the proposed tool for measuring MIL to be presented here was developed.

Research questions of this study, which features a test for Critical Media and Information Literacy, are as follows:

RQ1: Do the project schools obtain better results than the non-project schools?
To illustrate how the test is analyzed and produces results, the research question at the heart of the MIL test in the Palestinian Territories is addressed, namely whether the schools involved in DW Akademie's MIL project fare better than their non-project counterparts. Thus, research question 1 is concerned with the results of the MIL measurement.

RQ2: Does gender have an influence on the results obtained in the MIL test?
The second research question deals with the gender of the participants in the MIL test. While it is possible that male participants had preferential access to technical equipment such as smartphones, project partners PYALARA reported girls doing better and being more disciplined at MIL activities. A clear hypothesis could thus not be derived and it remains to be seen whether gender plays any role at all in the distribution of levels of MIL.

RQ3: Does the test for measuring Critical Media and Information Literacy work?
The third aim of the study is to test the tool. If it is found to be of use, the test will most probably be transferable to different contexts, i.e., different countries and different media users. Two criteria for a good test are applied here: objectivity and validity. Reliability could not be measured here since methods such as test-re-test – testing the same skills with the same participants again after a short interval – were not a viable option due to time and organizational constraints.

RQ4: What is the relationship between the skills test and direct skill questions?
The test to be described below requires participants to use and judge media in much the same way they do on a daily basis. The more straightforward, easier alternative would be simply to directly ask the participants about these properties. If the test items and the abstract questions were to correlate highly, this would mean that the test would be superfluous because the abstract question would be just as capable of measuring an MIL skill as the test. As Eszter Hargittai (2005) has pointed out, the test of actual MIL skills always has a greater validity than abstract questions. It is only when tests and abstract questions correlate highly, that replacing the test by abstract questions makes sense.

2.2 Research methodology

To measure MIL realistically, a test was drawn up, based on previous research on the MIL of children and adolescents (Sowka et al., 2015; Arke and Primack, 2009). The test consisted of ten assignments rather than abstract questions and each MIL skill was tested using a two-step-procedure. Often, MIL tests directly ask participants to evaluate certain properties of media (e.g., Arke and Primack, 2009). The test applied here first seeks to find out whether the participants recognize the media properties at all and only then requests them to evaluate the properties. This prevents the test from producing non-opinions, i.e., opinions that are voiced without the participants understanding what they are being asked to judge. A further innovation was introduced by comparing the skills of participants who had taken part in MIL classes with ones who had not. Such quasi-experimental methods are seldom found, though these sorts of designs are of particular use in measuring the effectiveness of development projects (Leeuw and Vaessens, 2009: 23).

Thus, the rationale of the test was to first find out whether the participants actually recognize what is wrong (or right) with a news item and then to find out if they evaluate it accordingly. An example: A news item only makes reference to one source. The first question would be: Do the participants notice that only one source is referenced? And the second one: If they notice this, do they evaluate it negatively, showing that they are aware that source diversity is a good thing, or don't they see the problem? Whether the youth recognize and evaluate media correctly was tested for the following aspects of media and reporting: [5]

– **Product placement:** Do participants recognize product placement and evaluate it negatively?
– **Balanced reporting:** Do participants recognize balanced reporting and evaluate it positively?
– **Independent reporting:** Do participants recognize political dependency in reporting and evaluate it negatively?
– **Transparent communication:** Do participants recognize insufficient source transparency and evaluate it negatively?
– **Relevance of reporting:** Do participants recognize topics of low importance to society and evaluate them negatively?

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[5] *The competencies were derived from previous tests (esp. Sowka et al., 2015) and literature on the quality of journalism (e. g. Arnold, 2009). Thus the skills tested certainly are strongly oriented towards Western standards of journalism. It would be worthwhile to research to what extent different cultural values can lead to different quality criteria and which quality standards can be regarded as universal.*

- **Topic diversity:** Do participants recognize topic diversity in reporting and evaluate it positively?
- **Opinion diversity:** Do participants recognize lack of opinion diversity in reporting and evaluate it negatively?
- **Source diversity:** Do participants recognize lack of source diversity in reporting and evaluate it negatively?
- **Respect of privacy:** Do participants recognize reporting that invades people's privacy and evaluate it negatively?
- **Protecting sources:** Do participants recognize reporters' right to withhold information on sources and evaluate this positively?

Figure 1: Excerpt of the Critical MIL Test questionnaire

In order to test to what extent the participants actually recognize and evaluate these aspects, as they should according to MIL theory, ten examples of television, radio, or online reporting, Facebook posts, YouTube videos and scenarios were collected and/or produced *(see questionnaire in annex)*. The procedure then was to let the participants view an example and consequently let them answer the corresponding items in the questionnaire before going on to the next example. The sum of the responses was then added up to a Critical Media and Information Literacy (CMIL) index score, since the skills tested were specifically chosen to measure the critical, evaluative aspects of MIL. The maximum score was 20, the minimum 0 points. It is important to stress that the test did not measure MIL as a whole, but one aspect of MIL, namely critical analysis and evaluation of media and information sources. Critical analysis and evaluation of media and information sources is especially relevant in the Palestinian Territories because of the specific slant of the media in connection with the Israeli-Palestinian conflict and the strong affiliation of the media to certain political and religious factions. Also, the test did not measure a unitary scale, i.e., it was not assumed, that all skills measured the same underlying construct. Rather, each skill measured a different aspect of CMIL.

The sample of the study consisted of 80 youngsters aged 12 to 16 years from six schools in the Palestinian West Bank. 39 were recruited from schools that were involved in extracurricular MIL classes administered by partner organization PYALARA under the auspices of DW Akademie and 41 were from non-project schools. There were 37 girls and 43 boys. The pretest in June of 2015 found that the test was too "grown-up" for the pupils to understand (Reineck, 2015). Several media examples were exchanged for more age conform ones, the language was simplified and comic figures and a coherent story line were introduced to lead the pupils through the questionnaire. After these alterations, the actual test took place from 19 to 22 September 2015 at a school in the West Bank village of Jaba'.

2.3 Findings

RQ1: Do the project schools obtain better results than the non-project schools?

The first question compares the results of the project and non-project schools with each other. The MIL test was developed precisely to enable this kind of comparison between the 41 participants who hadn't taken part in extracurricular MIL activities and the 39 participants who had. A direct comparison between the average scores of pupils from project schools and non-project schools would suggest that project school participants have a higher critical MIL proficiency than non-project scholars taking part in the test. The project school pupils scored an average of 12.05 points, while the non-project school participants obtained 10.85 points on average. The best scholar, receiving 20 out of 20 points, was from a project school. So were the top seven participants. On the other hand, the worst participant was from a project school as well. The differences were not statistically significant (p > .05).[6] This means that the mean scores of the project and non-project scholars are not sufficiently different to rule out they came about by chance. There is a difference between the scores, but it is quite small.

A closer look at the ten skills shows that the project school participants fared better at seven of the ten skills. Two skills, however, were practiced slightly better (recognizing and condoning source transparency, recognizing and sanctioning violations of the private sphere) and one was practiced considerably better (recognizing and sanctioning source bias) by the non-project pupils *(see Fig. 2)*.

The results seem to imply that indeed the MIL training for the pupils has produced small comparative benefits in selected areas. The project schools fared slightly better on the whole compared to their non-project counterparts. One possible reason is that MIL courses can only achieve so much improvement and that there are limits to the degree to which MIL activities can bolster pupils' achievements. Education systems and general levels of education, media systems and distribution of media technologies all have an influence on MIL performance and these factors transcend what pupils are taught in MIL

Figure 2: MIL Test Scores of Project and Non-Project Participants in Comparison

Note: Maximum score per skill of 2, minimum score of 0

courses. This explains why the scores for the skills are quite similar for both project and non-project candidates. Also, the participants come from difficult socio-political backgrounds, stemming from underprivileged and politically volatile areas of the West Bank. Therefore, there are also contextually determined limits to the scores students would be able to achieve under these circumstances. Additionally, the MIL classes were mainly concerned with producing media products such as wallpaper magazines or intercom reports. There was less of a focus on critical media analysis.

It cannot, however, be ruled out that the differences between the project and non-project schools already existed before they started learning MIL, or that they can be attributed to general levels of education rather than the specific MIL courses. To rule this out, pupils obtaining MIL tuition would have had to be chosen at random from all schools. This was not done for logistical and organizational reasons. But the limitation has to be borne in mind, so as not to overinterpret the results.

RQ2: Does gender have an influence on the results obtained in the MIL test?
Research question 2 addresses gender differences in the MIL test results. 37 female and 43 male participants took part in the test. The girls obtained considerably better results than the boys. The average score of the girls was 13.22, as opposed to the boys' average of 9.83.[7] The best score of 20 out of 20 points was achieved by a female participant, while the lowest score of 4 out of 20 points was reached by a boy. The differences between

the groups were highly significant ($p<.001$). The girls obtained better results than the boys on all ten skills, with big differences being registered for journalists' respect of privacy, the relevance of topics, and opinion diversity *(see fig.3)*.

Considerably more boys did not see anything wrong in paparazzi taking photos of the children of famous people, found trivial news to be relevant, and did not recognize a biased report that only cited opinions in line with the journalist's own views. These might be departure points for future MIL courses.

RQ3: Does the test for measuring Media and Information Literacy work?
The third research question addressed the viability of the tool for measuring MIL. Power shortages and safety issues due to unrest at the time the test was conducted in Jaba' hampered the execution of the main survey. However, objectivity was ensured by reverting to paper and pencil instead of the original online questionnaires for all participants. Furthermore, all tests were conducted at the same venue with participants being transported to and from the school by shuttle busses.

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6 *However, the results were indeed significant for female participants (see footnote 7).*

7 *Interestingly, while the girls that took part in the MIL courses had significantly higher results than their non-project counterparts (14.67 vs. 11.90), the same is not true for the project school boys compared to the non-project boys. The project boys in fact fared slightly worse than boys who hadn't received MIL education (9.81 vs. 9.86).*

Figure 3: MIL Test Scores of Female and Male Participants in Comparison
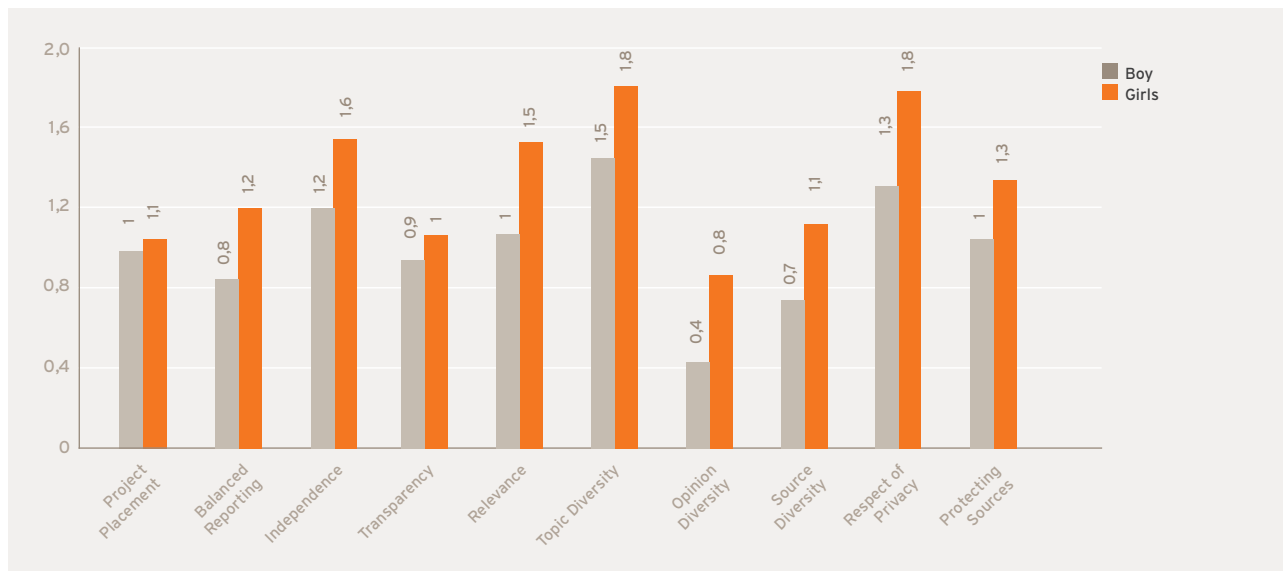
Note: Maximum score per skill of 2, minimum score of 0

The media examples were shown on laptops and read aloud to all participants to ensure that everyone knew the examples before being asked to judge them. The instructors had detailed written manuscripts and were told not to assist the participants in any way (except for technical assistance), to prevent them from prompting the correct answers. The data was analyzed in a unitary manner throughout. All these measures contributed to the objectivity of the results.

Validity and viability of the MIL test was ensured by making sure that experienced project partners PYALARA judged the media examples and questionnaire items as suitable for the age group (face validity), that the skills were independent of each other, which was tested with Cronbach's Alpha and intercorrelations between the different skill items (construct validity), that the variance of test results across participants was big enough for each item, and that the distribution of difficulty across the items was even (viability). Only recognizing and evaluating product placement turned out to have quite low variance, and there were slightly easier than difficult questions in the questionnaire. The detailed results can be found in the annex. Overall, however, the results suggest that the test for measuring CMIL is useful.

RQ4: What is the relationship between the skills test and direct skill questions?

If test assignment items and abstract survey questions were to correlate perfectly, this would mean that they measure the exact same thing. In this case, the test could be discarded because

Table 2: Correlations between skill scores in the test and skill scores with direct questions

Product Placement	0.15
Balanced Reporting	0.43
Dependence	0.10
Intransparency	-0.07
Irrelevance	0.02
Topic Diversity	0.24
Opinion Diversity	0.00
Source Diversity	0.05
Respect of Privacy	0.05
Source Protection	0.04

Note: Bivariate Correlations between items of skills test and direct skill questions (Pearson's r); 1 = perfect connection; 0 = no connection; -1 = perfect inverse connection

it would be much easier to simply ask the participants directly about their skills/attitudes. If, on the other hand, the correlation is low (less than .25), the ability of the direct questions to measure corresponding MIL skills/attitudes would also be low. In this case, the test would be an absolute necessity since how a question about balanced reporting, for instance, is answered would have nothing to do with whether balanced reporting is detected and condoned in practice.

As it turns out, balanced reporting is the only test skill that is predicted well by the responses to the direct questions in the questionnaire. All other direct questions are not capable of predicting whether the participants are able to identify and evaluate the corresponding examples of bad or good journalism. This result shows that asking young persons 12 to 16 years of age questions about good or bad journalism instead of letting them watch/read/hear journalism "hands on" and then letting them judge it is, for the most part, not a viable option. Young media users require methods that are suited to their capabilities and these are practical, not abstract empirical methods.

2.4 Conclusions

The Critical Media and Information Literacy (CMIL) Test found that participants who had had some form of MIL training fared slightly better than participants that had not. This was to be expected and can be regarded as a success for the MIL project of DW Akademie, at least for the female participants, who fared significantly better than their non-project compatriots. The male participants from project schools were only on a par with the boys from non-project schools. In this sense, the results should be used to probe different methods of conveying MIL, focusing on gender-specific requirements. Males fared considerably worse than female pupils in every category, though this could also be attributed to general educational and developmental differences between girls and boys at this age. The only skills boys were almost as good at as girls was spotting and evaluating product placement and recognizing and evaluating the transparency of Facebook postings. Project partners PYALARA informed the researchers that female pupils generally were obtaining better results at school than boys, suggesting that MIL performance might be highly correlated with general school performance. It was also reported that the results were in line with their impression that girls' MIL knowledge and skills proved to be more extensive than boys' in the MIL courses themselves.

Two research questions addressed the viability and appropriateness of the MIL test which consisted of twenty items paired together to measure ten CMIL skills. The test was found to be viable for measuring MIL. Skills were found to be independent of each other and almost all skills in the test could discriminate high MIL scorers from low ones quite well. The test could be optimized by reducing the number of easy skills

and including more difficult ones to obtain an even distribution of difficulty. Also, the reliability of the MIL test should be put to the test, for example by running the test more than once with the same participants.

Recommendations for MIL practitioners in the Palestinian Territories
– Future MIL efforts might want to focus on issues of source transparency, source diversity, and respect of privacy, issues which project school pupils fared worst at. This is especially true for conveying the importance of having different sources in news reports.
– Since the scores also varied from school to school, a closer look at deficiencies at the school level should give additional insights into which areas should be addressed. [8]
– One consequence of the gender gap in MIL levels should be to intensify MIL efforts at boys' schools. The strongest deficiencies were found pertaining to the relevance of news and the respect of privacy. This might be the focus of further MIL courses.
– MIL courses at the project schools have been focused mainly on producing own media like wallpaper magazines or intercom formats. The results suggest that more attention should be paid to critical analysis of media with methods such as comparisons of the perspectives of different media on the same event.

Recommendations for researchers
– The comparison between direct questions and the MIL test shows conducting tests is worth the effort. Children and teens apparently need support to understand what they are being asked to do and the best way of giving them support is by constructing a test that connects with and draws on their everyday media consumption.
– The test requires media examples that are suitable for the age group and that provide valid examples for testing the appropriate skills. At the same time, the skills have to be easy to measure. This implies simplifying the skills (and the answer possibilities) involved to get comparable results.
– The pretest should be used to make sure that the difficulty of the items is distributed evenly. Testing ten skills was found to be compatible with the concentration capacity of young participants of an average age of 14. With older target groups, more – and more sophisticated – skills could be tested, including for instance issues of online privacy and data security.

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[8] *Results were also analyzed at the school level, but are not included in this chapter for reasons of brevity and relevance.*

– Tests should restrict themselves to the aspects of MIL relevant to the intervention context. The MIL test presented here focused on Critical MIL. MIL consists of a number of other aspects that could be included in other contexts depending on target groups and media landscapes.
– MIL tests should be used to draw relative comparisons, not direct comparisons across MIL skills. Only comparing the results of MIL trained participants with those of people without MIL training can reveal something about how well each group fared in the MIL test.

In summary, the MIL test has proved useful for studying Media and Information Literacy competencies. The results should be taken as an opportunity for improving and refining the methods for conveying MIL, especially at boys' schools. Future research will have to focus on testing the reliability of the tool, applying it to different settings, populations, and testing other sorts of MIL related knowledge and skills.

For media development organizations, the results hold two important insights. On the positive side, Media and Information Literacy is measurable. If relevant competencies are identified, the research design presented here can be adapted to the context of other cultural and national settings and the quantitative results can serve as reliable and valid indicator measurements.

On the challenging side, a test is more difficult to construct than a standard survey questionnaire. Close cooperation with project partners is essential in choosing good media examples and making sure the technical equipment and logistics are in place. The budget for the study did not exceed 10,000 Euros, making it a relatively cost effective way of measuring, for instance, baselines for Media and Information Literacy projects.

3. Case Study 2: Impacts of listening to radio. The "Land Rights and Women" radio program at Radio Nam Lolwe in Kisumu, Kenya

Christoph Spurk, Charles Nyambuga

Case study fact sheet

Goal of the case study: To measure the impact of a Kenyan radio program on land rights and women on the knowledge, opinion, and actions of listeners.

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Research question:
– What are the differences between the treatment group (Radio Nam Lolwe listeners to the LRP series) and the control group (non-listeners) regarding knowledge, opinion and activation levels?

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Method: Quasi-experimental design with quantitative survey

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Sample: 300 (potential) listeners of Nam Lolwe radio station in Kisumu and Migori districts

- -

Innovative aspect/approach: Quasi-experimental design comparing (potential) listeners and non-listeners

- -

Challenges: Identifying and sampling comparable groups; remote management of audience research

- -

Main results:
– It is of utmost importance that media development organizations monitor the content and its quality. This is the precondition to achieve impact.
– Personal communication and radio were the main sources of information on land rights and women.
– Age has a significant influence on people's attitudes towards land rights and women.
– No significant differences in levels of knowledge, opinions, and activation levels were found due to listening to the Land Rights Programme.

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3.1 Introduction

This study seeks to analyze the role of Kenyan radio in influencing listeners to change their perspectives on an emotionally charged topic: the land question and the related rights of women. The aim is to analyze what effect radio messages may have on attitude, knowledge, and behavior.

The research is based on the premise that Nam Lolwe radio, a radio station based in the West Kenyan town of Kisumu, has broadcast special land programs that seek to expose listeners to constitutional land inheritance requirements. The program seeks to inform, educate, and mobilize them to change their behavior on land issues. Therefore, radio may be playing an important role in the acquisition of land knowledge.

The question of media effects is highly relevant for media development organizations. Both to know and then improve the way they work and to justify their work to donors and the general public. One potential impact of media support is that the target groups of specific media start to gain in knowledge, to change their opinions or attitudes and to finally start taking action in various ways, as inspired by the improved reporting or media coverage. It is evident that media coverage cannot be the only factor triggering those changes, but it is important to get to know the contribution by media in concert with all other influences. These intervening factors include but are not limited to the education sector, provincial administration, and the religious sectors.

In the literature there are several indications that radio has an influence in Africa. Tsegyu and Asemah (2013) assert that community radio broadcasting can be used to bring about positive attitudinal change in rural areas. Its programming reflects local interests and contributes towards the development of rural women by educating them about banking, child health, and government policies among other issues.

There are also authors that come to the conclusion that exposure to the media can influence citizens' involvement in various forms of electoral participation. Women's exposure to the media has the potential to enable them to acquire information on land rights which might lead to more interpersonal discussion and ultimately to practice in accordance with the new land inheritance regulations. Prior studies have established that exposure to the media promotes individuals' engagement in interpersonal discussions (Norris, 2000; Tian, 2011). These discussions facilitate participation by providing land information and triggering interest among listeners (Eveland and Scheufele, 2000). Further, Isaksson, Kotsadam and Nerman (2013) indicate that past studies in Africa have established that access to information which is based on radio ownership is positively related to behavior.

Radio is the most popular mass medium used by Kenyans (Schmidt, 2014). Their usage of radio has transcended age, education level, or rural/urban context. Local radio stations have specifically mushroomed in the last ten years, often broadcasting in vernacular languages and thus attracting new audiences at the local level. The number of households owning radio sets in Kenya has increased at a fast rate with the calculated percentages showing an increase from 70 percent owning radio sets compared to 20 percent owning TV sets in 2005 to 79

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[9] As stated in the overview in chapter 1, quasi-experimental designs are rare in media development. BBC Media Action has recently employed full-fledged experimental designs in Burkina Faso (see Head et al., 2015) and Bangladesh.

percent of households owning radios sets against 30 percent owning TV sets in 2010 (Kenya National Bureau of Statistics, 2010). More than any other mass communication medium, radio often transmits its programs in the language and accent of its community (Odhiambo, 2002).

These stations have the potential of triggering debates on political and social issues, enhancing participation of ordinary people, and thus fostering democratic space. This way they can work as an instrument for strengthening the human rights based approach to development, providing rights holders with relevant information and thus empowering them to bring about societal change. However, the level of professionalism in these radios is still limited, and since 2014 DW Akademie supports ten local radio stations in strengthening both professionalism and economic sustainability. Professional deficiency has been particularly seen in the quality of their programs and also in the presentation of the same.

DW Akademie was interested in knowing whether the impact of a radio station's reporting can be demonstrated by implementing concrete measures. Therefore, exploratory research was undertaken with a view of determining those potential media effects. It used one specific radio program/series, broadcast by one radio station in the Western part of Kenya, namely the "Land Rights and Women" Program (LRP) of Radio Nam Lolwe.

The question of land rights is of utmost importance in Kenya, as access to land was one of the major causes of violent conflict in the country as was witnessed in 2008. In 2010 the Kenyan constitution was changed, giving equal rights to women in many areas, but also in land rights. This is of practical relevance, as many women still don't know their rights and lose access to land when their husbands pass away as – according to Luo customary law – the land then can be claimed by the male family members of the spouse (Whitehead and Tsikata, 2003).

The project was mainly interested in the following research questions:
1. What are the differences between the treatment group (Radio Nam Lolwe listeners to the LRP series) and the control group (various areas with different non-listeners) regarding
 – Knowledge level on the topic of land rights and women
 – Opinions and attitudes regarding land rights and women
 – Activation level regarding land rights (stronger participation by listeners?)
2. All these items should be differentiated by gender

The underlying assumption of the project was that well-structured and well-presented information on land rights and women will significantly increase the knowledge about land rights of those who listen to the program, might change their opinions on various issues and ultimately lead to some action, for example in terms of debating with other people, solving contentious cases of land inheritance or supporting laws to protect land rights of women.

3.2 Research methodology

The method used in this research was not completely new. It was a questionnaire which comprised of closed and open-ended questions regarding:
– socio-economic characteristics of interviewees
– media and especially radio use
– sources of information regarding the question of land rights
– practice of land rights and inheritance
– knowledge of land rights
– attitudes on land rights
– activities regarding land rights.

In order to find out about the impact of the radio program on land rights the project applied a comparison between a treatment and a control group. Radio Nam Lolwe is one of the three most listened to radio stations in (former) Nyanza province, the area close to Lake Victoria in Western Kenya (Spurk, 2014). The project took advantage of the fact that Radio Nam Lolwe has an excellent technical receivership in almost all areas 50 kilometers around Kisumu, Kenya's third largest city, where Nam Lolwe is situated, but cannot be received in a specific area (a depression where the signal cannot be transmitted to) close to the small town of Migori. This area was expected to be very similar to the Kisumu area in terms of poverty levels, language, and cultural patterns. It is populated by people of the same ethnicity as in the Kisumu area, where the same land inheritance customary laws apply.

Therefore, comparing the different parameters of interest (*see research questions*) in the two areas of Kisumu and Migori could yield the contribution the radio broadcasts have had regarding knowledge, attitude and practice on land rights and women, thus making a contribution to solving the attribution problem in evaluation. The differences between the average of listeners and non-listeners in Kisumu and Migori (where there are only non-listeners) is the contribution of Nam Lolwe to the knowledge, attitude, and action levels.[9]

To apply this approach, the researchers had to distinguish three groups in the sampling:
1. Listeners of Nam Lolwe's Land Rights Program (LRP) in the Kisumu area (with good reception)
2. Non-Listeners of Nam Lolwe's Land Rights Program (LRP) in the Kisumu area
3. Interviewees in Migori area (all non-listeners, but including potential listeners)

One might ask why non-listeners in Kisumu are not the "appropriate" control group. The reason is that listening to a radio station is a matter of choice. Therefore, non-listeners might have other characteristics than the Nam Lolwe listeners that strongly influence knowledge, attitude, and activity regarding land rights, for example political orientation, traditional attitude, etc. So, we cannot say whether a difference between those groups is only caused by listening to the radio or by other factors. Nevertheless, the comparison between those groups can be relevant to

observe the magnitude of differences and also to compare with the differences between the treatment and control group.

In both areas the respondents were selected by a combination of a cluster approach and strict randomization within the cluster. In Kisumu, 100 listeners and 100 non-listeners of Nam Lolwe and in Migori 100 non-listeners were recruited using the random walk and Kish grid sampling techniques *(see Annex for details)*. While the inhabitants in both cluster areas were similar, the Kisumu cluster was closer to a big town while the Migori cluster was more rural. The final sample included 301 respondents.

The questionnaire was developed by Kenyan and Swiss researchers using local knowledge on land rights. Nevertheless, the interview questions with regard to knowledge and attitude needed to be very specific in order to show that the information in the radio was related to the knowledge of that respondent.[10]

Monitoring of the content produced revealed that the messages being sent out were at first somewhat confusing and contentious, which is why it was decided to do additional training before proceeding with data collection. The data already collected were used as a pretest for the main survey. There was no monitoring of the subsequent programs, raising doubts about the exact quantity, quality, and content of reporting after the second training phase. Administrative problems also postponed data collection, so that more than six months lay between the first broadcasts (May 2015) and the survey (January 2016). This may have had an adverse effect on the extent to which listeners could remember the information.[11]

The research team had received recordings of six Nam Lolwe program on land rights, broadcast in Luo in May and June 2015 and produced transcripts in English. It was discovered that the information in those broadcasts was rather confusing and contentious, missing a clear and basic description of facts regarding land rights and other laws. Also, experts in talk shows contradicted each other without the presenter intervening or clarifying the issues. The supervision team recommended stopping the exercise because the relation between the information provided by the radio and potential knowledge level of listeners was very weak or non-existent.

It was then decided to conduct an additional training for Nam Lolwe's radio staff before further data was collected. The objective was to first and foremost improve the clarity and correctness of information, and only then conduct the field phase of research, because only with the right information is there a chance of discovering the associations between listening and knowledge or attitude.

The additional training was conducted in September 2015, and a new series of programs was planned to be broadcast. The research team only got information about the radio productions already broadcast during the training, but not about any further programs, despite repeated, but in the end, futile efforts to receive them. This raised some doubts about how many (if any) programs were finally aired, during which period, and what the exact content was. This made it additionally difficult to develop sufficient specific knowledge and attitude questions

for the interview. When the decision to temporarily suspend the research exercise was taken, the local team in Kenya had already been in the field to do interviews. These interviews were later used as a pretest and helped tremendously to streamline the questionnaire. Ten questions were deleted that were perceived as repetitions and had confused the respondents.

The original plan was to conduct the field phase with interviews in November 2015 at the latest, right after a period of six weeks of continuous broadcasting about land rights and women. Due to administrative difficulties the research team in Kenya could only go into the field in January 2016, which can be seen as a little late. Interviewees might have forgotten some information they would have remembered when asked earlier. On the other hand this timing ensured that not only short-term media effects were identified.

3.3 Findings

In total the sample is comprised of 301 respondents, distributed as required in the three different clusters, and also well distributed regarding gender. The only mismatch to be noted is that one area in Kisumu (Nyahera) had 73 Nam Lolwe listeners (only 50 were required). But the more important number of listeners to the Land Rights Program (LRP) shows a good distribution and a good relation between what was planned and what was realized *(see Annex for details)*.

In the entire sample, 67 respondents had listened to LRP in Kisumu while there were 134 in Kisumu who had not listened to the Land Rights Program. In Migori the entire 100 respondents had not listened to the LRP *(see table 1/page 26)*.

The **importance of personal communication** and information by radio is confirmed in all areas. Family (78 percent), the local chief, and public meetings (60 percent) are mentioned, but with an almost equal number radio (58 percent) is mentioned as an important source for information about land and land rights. Migori is a bit different with higher shares of family and social groups, and less use of radio.

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[10] *If the information in the radio is rather general the chance is high that the knowledge of the person comes from any other source, not from that radio program.*

[11] *For a more detailed description of the problems associated with the study, compare the digital annex.*

Table 1: Sample description with regard to listening to LRP

	Listener LRP Kisumu		Non-Listener LRP Kisumu		Non-Listener Migori		
	Treatment		Self-Selected		Control		
	Women	Men	Women	Men	Women	Men	Total
Planned	50	50	50	50	50	50	300
Realized	35	32	70	64	51	49	301

To check the **structural differences** between the different areas socio-economic data and basic knowledge data were collected. These data point to the fact that the differences between Kisumu and Migori are rather large: Respondents in Migori are less formally educated, they are significantly younger,[12] they are definitely poorer, but they have the same general political knowledge[13] as people in Kisumu. Table 2 also shows that women are less formally schooled than men in both areas.

We also see a difference in the **practice of land ownership** between the areas. Migori hardly knows the ownership of land by women, whereas in Kisumu it is already practiced, at least a little. This might influence the impact of listening to radio. The same is valid for the fact that in Migori many respondents are fine with the opinion that it is ok for men owning all the land in a family. Migori has more of a traditional rural setting as compared to Kisumu.

The differences between listeners and non-listeners of LRP in Kisumu are much less accentuated. Listeners are slightly better off economically and they are significantly older: 50 percent of the listeners to the LRP belong to the elderly (51+) whereas the non-listeners are younger with only 30 percent belonging to this age group *(please see table 2)*.

In the following we will first describe the correlations between the outcome variables (knowledge, opinion, practice) and the predictor variable (listening to LRP), before we check for other potential explaining variables by simply looking at different bivariate correlations. At the end of the findings section we will then use multiple regressions to look at all potential predictor variables to identify the contribution of listening to radio.

Gaining knowledge through listening to LRP?
If we compare only Kisumu and Migori on some knowledge questions we see large differences. But as already said the differences in terms of age, education, and poverty levels look too big to attribute those differences to listening to the LRP. These doubts are strongly enhanced by the fact that the differences between listeners and non-listeners within Kisumu are rather small, so the contribution can hardly be as big as suggested. Table 3 summarizes the results of some knowledge questions.

We see that for some questions the results show small differences between listeners and non-listeners in the expected direction (for example on the constitution question (Q 17)). But the differences between listeners and non-listeners are very small (5 percentage points) and they are not significant.

On top of this there is contrary evidence. Sometimes respondents in Migori achieve the highest levels (Q 18 and Q 19) or non-listeners know facts better (for example Q 25 about knowing the right institutions where one can get free legal advice[14] and Q 27 about writing a will to protect women land rights) than the listeners to LRP.

This shows that the results of the effects of the LRP program on knowledge of listeners are very small at best, but they are not consistent regarding various knowledge questions. So, we would rather say that there is no effect that can be proven.

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[12] *That can be explained by the distance tot he nearest urban agglomeration, young people in Kisumu having more chances to migrate to town than their Migori counterparts, who had a tendency to stay in their home region.*

[13] *Computes three political knowledge questions (president, senator, former president) in one figure. There are no differences between regions, but between men and women.*

[14] *Although these questions were explicitly addressed in one of the broadcasts produced during Nam Lolwe training in September 2015.*

Table 2: Differences between Kisumu and Migori

Factor	Operationalization	Area	
		Kisumu	Migori
Education	Low education level (none + primary up to 8)	54% (Female: 67%)	67% (Female: 82%)
	Medium level (secondary)	39%	23%
Age	Age groups (share young (up to 30) vs. elderly (51+)	20% vs. 36%	31% vs. 25%
Socio-economic level	Poverty level (share of very poor + poor)	47%	84%
Political knowledge in general	Share of people having all three questions right	69% (87% men, 52% women)	68% 82% men, 53% women)
Practice of ownership of land	Land owned by men only	80%	94%
Attitudes	It is proper for men to own all land belonging to a family (strongly agree + agree)	36% (women: 28%)	73% (women: 72%)

Table 3: Results on knowledge questions

Question	Listener LRP Kisumu	Non-Listener LRP Kisumu	Migori
Q 17 New constitution allows equal rights for men and women Share of right answer YES	91%	86%	55%
Q 18 Are women allowed to own assets in home? Share of right answer YES	78%	79%	86%
Q 19 Spouse is entitled to sell land without consent of other Share of right answer NO	85%	93%	99%
Q 20 Contradiction between constitution and customary law Share of right answer TRUE	88%	84%	89%
Q 21 Contradiction between constitution and practice regarding gender equality – Share of strongly agree + agree ALL	73%	70%	91%
Men	78%	84%	92%
Women	69%	57%	90%
Q 25 Where can people go for free legal advice? Share of right answers (Chief and Fida)	37%	42%	18%
Q 27 What can be done after death of spouse to protect women rights? Share of right answer: Writing a will	78%	84%	90%

Changing attitudes and opinions through listening to LRP?
A few questions tested the attitude of respondents to important questions regarding women's land rights. Table 4 summarizes the results, differentiated also for gender.

The overall result is similar to the one on knowledge. We see rather small differences between listeners and non-listeners. For some questions (Q 22, and Q 23) it looks as if listeners are a bit more encouraged towards a pro-equal rights attitude, but it is the other way round in another question: Whether it is proper for men to own all land, we have the lowest figures (= being more positive towards gender rights) from non-listeners. So the non-listeners show a more positive attitude than the listeners to LRP, which is a bit disturbing as LRP was championing women's rights.

Further computations revealed that the attitude towards women's rights on land depend a lot on age. Elderly people are in general more conservative, i.e., less in favor of women rights and the listener group in Kisumu is older than the non-listener group *(see above)*. So age might be the reason for the differences seen here, not listening to LRP. [15]

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[15] *The elderly people in Kisumu are much more in agreement with men having all property (50 percent +) whereas other age groups think a bit more modern (only 31 percent with young and 26 percent in middle age group think it is ok with men owning all land) . So, it is mainly age that influences thinking on women's ownership of property.*

Table 4: Attitude questions

	Listener	Non-Listener Kisumu	Migori
Q 22 Men and women should be treated equally with regard to land inheritance – Share of strongly agree + agree ALL	69%	64%	60 %
Men	63%	64%	59%
Women	74%	64%	61%
Q 23 Politicians should positively champion women rights Share of strongly agree+ agree ALL	73%	66%	49%
Men	69%	62%	35%
Women	77%	70%	63%
Q 24 Proper for men to own all property – Strongly agree + agree ALL	39%	35%	73%
Men	47%	44%	75%
Women	31%	26%	71%

Table 5: Recent activities with regard to land rights

	Listener	Non-Listener Kisumu	Migori
Q 26 Having visited an office to seek legal advice? – Share of YES	28%	22%	14%
Q 28 Recently talked and acted – Share of YES	37%	27%	30%
Q 30 Engaged in social group – Share of YES (significant: p = 0.047)	11%	3%	3%
Action was inspired by Nam Lolwe?	27%	1%	0%

Triggering activities through listening to LRP?

Various questions were asked about activities respondents did with regard to land rights (talking, looking for help, becoming active in a group).

Table 5 (*see page 28*) shows that the listeners of LRP perform a bit better on these activities, but the differences are small and not significant. Only the question whether respondents got engaged in a social group that addresses land rights questions, shows a big difference, and it is significant. Surely, those who acted and were LRP listeners said they were inspired by listening to Nam Lolwe to do so. At least the results on activities are much more consistent among each other than those on knowledge and attitudes.

There were also open answers that were recoded to assess them. They show that the topic of land rights is relevant in all areas: Land disputes are mostly mentioned as a topic (46 percent), followed by the topic of "how to divide the land" (33 percent), and the issue of "title deeds" (12 percent). There are hardly any differences in those topics in the different areas.

On the question of what can be done to protect women's property, the answers of LRP listeners favored equal treatment (27 percent compared to 20 percent with non-listeners and thus supporting the law) and were less negative (nothing can be done: only 6 percent compared to 15 percent with non-listeners). Respondents in Migori favored the solution of giving women title deeds, and seeking protection through new laws, maybe not being aware that the laws already exist.

In order to see what has contributed significantly to the outcomes in knowledge, attitude and practice and what the relative contributions of those factors were, we also computed several multiple regressions using SPSS (see Annex for details). All three outcome levels showed similar results in the sense that listening to LRP did not play a role at all, but instead gender, education, and sometimes the location (Kisumu or Migori) were the most important determinants. Therefore, the multiple regressions confirmed our findings from looking at simple correlations: "Listening to LRP" was not a significant contributor to better knowledge, attitudes or practice.

3.4 Conclusions

The study could not attribute the levels of knowledge, attitudes, or practice in a consistent way to the listening of the LRP program. The differences seen between listeners and non-listeners were rather small and mostly not significant and could sometimes be better explained by other factors like education, gender, or the rural-urban divide. In other words, the potential beneficiaries of the land rights program did not receive the help they need from the broadcasts to better put their rights into practice.

This has various reasons:

a) One reason is that the originally planned design – having Migori as the area of the true control group – was not possible. It turned out that the structural differences regarding education, age, and poverty were too large to treat the areas as similar. It is a decisive difference that the area in the Kisumu County is more urban or peri-urban than the remote area of rural Migori.

So we had to refer to the differences between listeners and non-listeners in one area (with rather small differences between those groups), but by doing it this way it is very challenging to find out whether the differences can be attributed to listening, because we do not know the starting level of knowledge, attitude, and practice. This is especially relevant, when the differences are small. A baseline study identifying those issues before the start of LRP and a subsequent "before-after" design would have been an alternative.

b) Another main problem in this study was that we were unable to get hold of the content of the broadcasts on LRP in September 2015. Therefore, the main reason that significant differences between listeners and non-listeners were not discovered was that we were not able to include very specific questions on the LRP. We could only create general knowledge questions (that are influenced by other factors than radio only) and not concrete issues, which could only be known through listening to that LRP.

Not knowing the content had to do with "difficult" cooperation with Radio Nam Lolwe despite a very good start. Possibly the radio managers did not have enough ownership of the research project. They might not have had enough awareness of the importance of the content of their program.

Recommendations for media development practitioners

– Our study points to the fact that good audience research starts with content. In case the content is not appropriate, audience research hardly makes sense. And more often than not content is less developed in terms of quality, quantity, and regularity than radio managers and development cooperation agents think or are convinced of. It seems essential that development agents working on capacity building for journalists and media managers monitor the achievements of trainings and other interventions stricter and more regularly. Otherwise larger effects of these efforts can hardly be expected.

– As a first step this requires that project managers check regularly what the media output is by just listening to some of the emissions or reading some rough transcripts. This is challenging, especially in an environment where radio broadcasting is done in vernacular languages that are usually not understood by foreign experts. As a second step, project managers could commission some very basic content analysis providing quantitative information on essential elements of that very content and its quality.

That might lead to radical changes to the approach on how capacity building is delivered.

– The cooperation between external audience researchers and development cooperation project managers needs to be closer. Without extra efforts by the project team these kinds of research efforts can hardly be successful. These extra efforts were not factored in this project, but need to be in the future. Clear expectations and requirements should guide the process of defining mutual obligations and achieving an agreement.

Lessons for audience research
– Future studies need to make sure that the radio programs have been aired, recorded, and handed over to the researchers. Its content has to be clear, consistent, and comprehensible before researchers go on with the audience surveys investigating media effects.
– Achieving impact requires a sound stimulus being repeated regularly and addressing virulent topics from different angles. The facts should be checked by experts ahead of broadcasting and tests should be done with listeners, before a format is launched. [16]

In our view all three of those elements (duration and consistency of stimulus, test) were missing in our study. The stimulus was not sufficiently long (at least according to our limited information on the number and duration of LRP broadcasts over time). We also suspect that the content was not consistent as such, but we cannot be sure. We only assume, based on the former broadcasts (between May and July 2015) which were rather confusing.

– Audience researchers need to work very closely with all involved stakeholders: radio editors and managers, development project managers, donors, as they touch on sensitive issues and are looking very closely at the performance of those actors.
– Cooperation between audience researchers and practitioners entails two things: (a) it is first of all making research understood by practitioners, and if possible making it useful to them, and (b) building trust between researchers and practitioners. Practitioners have to deliver a lot of services to the research that comes in addition to their daily work load, like recording programs, retrieving programs from archives, and elaborating time schedules of programs – without immediate benefit to them.
– Regarding the selection of treatment and control group, we have learned that it is rather difficult to select a true control group that is perfectly similar in all aspects to the treatment group. Approaches measuring traits in a baseline study, and then realizing a before-after approach, and/or a difference-in-differences approach, could be an alternative. Panel designs seem to be most promising.

Although this research project has not yielded the results we were aiming for, it has greatly inspired us to try again. Radio programming can have tremendous impacts on radio listeners and the entire society. We should use the opportunity of strengthening radio stations by conducting audience research that supports them in making their programs more useful to their audiences and for the betterment of their societies.

Regarding the practicability of the research, quasi-experimental designs are quite demanding. The project profited from previous capacity building activities in Africa, establishing a network of African researchers capable of conducting advanced research in the field. Samples using clustering, random route, and Kish grid methods cannot be taken for granted, so capacity building has to take place ahead of time to ensure that the research can take place with project partners instead of the usual market research companies. With respect to the radio training, expert trainers have to be on hand to assist journalists at the stations in arranging their programs to maximize effectiveness in conveying good content.

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[16] *Compare, for example Farm Radio for an impact approach or "theory-based evaluation" (see Spurk, 2015). Facing non-availability of baseline studies this approach uses proven ways of achieving impact (from other research) and compares the requirements for impact with the project under investigation and draws conclusion based on this "plausibility of achieving impact". Information about effectiveness of Farming Programs on Radio: see African Farm Radio Research Initiative, 2011.*

4. Case Study 3: Improving the social media use of Colombian community radios: a method triangulation

Laura Schneider, Esther Dorn-Fellermann, Roland Schürhoff

Case study fact sheet

Goals of the Case Study: To test a combination of social science and digital analytics tools to measure social media engagement and to help Colombian community radio stations to improve their reach and community building capacities on social media.

Research questions:
– Is the method mix of triangulation of two social science methods and digital analytics methods viable?
– How can the two community radios reach more people on social media and how can the engagement of their social media users be increased?

Methods: Focus Groups, Quantitative Survey, Digital Analytics Measurement

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Sample: 87 (potential) listeners of two community radio stations Contacto 10 and Granada Stéreo

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Innovative aspects/approaches: Using insights from digital analytics for media development purposes; mixed methods design

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Challenges: Bringing data from digital analytics and social scientific methods of data collection together; remote management of audience research

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Main results:
– While Granada Stéreo generated a great deal of interaction with listeners on social media, Contacto 10 used social media primarily to distribute information.
– Readiness by (potential) listeners to engage on social media was found to be highest for topics with a local reference, but there was also considerable interest in topics dealing with the peace process and the recent history associated with it.
– Social media content was found by the participants to be most engaging if it focused on a variety of topics, both informative and entertaining. Photos and videos were especially popular.

4.1 Introduction

Decades of violence between the state and different guerilla groups have made Colombia one of Latin America's most crisis-prone and conflict-affected countries. Massive restrictions of freedom of expression and limited access to independent information are the results. While the peace talks between the government and FARC rebels have given cause for hope, mainstream media and with it public debate are characterized by polarization and distrust.

Especially in contested environments like this, community radios can be important alternative sources of information, providing rural areas and small communities with local content, and giving a voice to those who are often ignored or otherwise discriminated against. In Colombia, there are around 620 community radios broadcasting predominantly in municipalities smaller than 50,000 inhabitants (Kopp and Ziemsen, 2015). They constitute a significant counterpart to the country's two big radio companies RCN and Caracol, the 660 commercial stations, the two national state radio broadcasters as well as the more than 200 radio stations of "public interest" run by the police, military, local governments, and universities (ibid.).

According to Colombian law, community radios have the mission to create participatory spaces for communication, information, expression, and education of the community (MINTIC, 2010). Listeners can be enabled to participate and interact with each other and community radio stations with the help of new digital channels. Almost 60 percent of all Colombians have access to the Internet (Internet World Stats, 2015). Social media can play a particularly important role as they allow for a constant exchange with community members about program topics and the audience's interests and needs. Facebook and Twitter are the social networks that are used most by Colombians, especially by younger people (MINTIC, 2015).

Based on these facts, it is crucial for community radios to make the most of social media. Community radio stations often have not developed a systematic social media strategy, owing to lack of resources and expertise. Media development organizations, on the other hand, seldom focus on social media reach and engagement, but tend to restrict their assistance to classic media or journalism production/reception.

The aim of this project is to help Colombian citizens by developing a method for finding out what information and social media interaction needs they have. This entails measuring social media reach and engagement with limited resources, enabling local partner organizations to conduct the research themselves and consulting the radio stations, whose activities are the subject of the research, on what to do to obtain better results.

This leads us to the first research question:

RQ1: Is the method mix out of social science methods (focus groups, survey) and digital analytics methods a viable option for analyzing the social media activities and attitudes of media outlets' audiences?
This project thus applies a triangulation of three different research methods (focus groups, survey, digital analytics) to evalu-

ate the social media use of two Colombian community radio stations, and how it can be improved. The specific question is:

RQ2: How can the two community radios reach more people on social media and how can the engagement of their social media users be increased?

Two community radios with different characteristics were chosen for this project: Contacto 10 and Granada Stéreo.

Contacto 10 is an Internet community radio based in District 10 (Comuna 10) in Medellín, Colombia's second biggest city. The radio is run by Sumapax, a collective aiming to promote the development of individuals and the community through local communication projects. The foundation provides young people with training on topics such as politics, democracy, recording and editing of radio and video, and website design. The station was founded in 2010, not least as a platform for the young community members. Apart from music, the station's programming addresses a variety of issues related to state projects and employment, as well as announcements relevant to the community.

Granada Stéreo was founded in 1998 by the Association for the Cultural Development of Granada (Asociación para el Desarrollo Cultural de Granada). Granada is a small, conflict-affected municipality in Colombia's northwest Antioquia province. The goal was to establish a radio station which promotes Granada's identity and culture and provides information on local events and issues. Granada Stéreo broadcasts music as well as six programs dealing with current affairs, culture, identity, higher education, sports, and entertainment issues.

Both stations make active use of social media, especially Facebook and Twitter. However, as both the basic characteristics of the two radios and their social media activities vary significantly, no direct comparison is intended. In fact, in order to include different conditions and scenarios, it was deliberately opted for an Internet radio based in a big city (Medellín) and a traditional radio in the rural area of Granada.

4.2 Research methodology

A triangulation of three empirical research methods was used: focus groups, a questionnaire-based survey (with focus group members), and digital analytics of the social media communication of the two stations. While the survey and the focus groups were conducted by the University of Antioquia in Medellín, the digital analytics as well as the data analysis of the survey results were managed by DW Akademie in Germany. A multi-method approach was chosen to get not only a descriptive overview of the social media activities and the listeners' behavior, but also more detailed insights, to enable the community radios to cater more efficiently for their interests and needs. The different methods serve different purposes and thus complement each other.

Figure 1: Method Triangulation

The **questionnaire**, focusing on topics of interest, media use and socio-demographic variables, garnered basic information about the composition of the focus groups.

The aim of the **focus groups** was to discuss these thematic interests in detail, and to assess the participants' willingness to interact and respond to different topics on social media. They helped to ascertain which kinds of issues were generally relevant to the participants by showing them a broad range of potential topics (in the form of articles and social media postings) and getting them to select those which most sparked their interest. Participants were presented with four news items at a time, and then debated which topics they were most interested in, and in what way they would be willing to interact (in the form of likes, comments, shares, retweets etc.) with such posts.

The **digital analytics**, in turn, provided a precise overview of the social media communication of the two radio stations (amount and type of posts/tweets) on the one hand, and the users' interactions (likes, shares, retweets etc.) with the radios on the other. For this analysis, data from the radio stations' Facebook and Twitter sites were collected, these two being the most popular social media channels in Colombia.

For Facebook, audience growth was measured by the number and increase of fans during the period of examination, engagement was measured using data for the number of interactions (shares, likes, comments) per post as well as post type, and a list of the most popular posts was drawn up. For Twitter, audience growth was measured by the number and increase of followers, engagement involved the number of retweets of the station's own tweets, as well as the number of favorites and replies to the station's tweets, and here too, a list of the most popular tweets was assembled.

Overall, in August and September 2015 nine focus groups were conducted at the community radios' premises with listeners and potential listeners of the radio stations: five related to Contacto 10, and four related to Granada Stéreo. Convenience and snowball samples were drawn with the help of the radio stations, grouping the participants together in age homogeneous groups. While the focus groups of Contacto 10 had a total of 43 participants, 73 people took part in the discussions regarding Granada Stéreo. So, the Granada Stéreo focus groups were rather large, which generally makes it more difficult to generate an in-depth discussion among all participants. Sample details are featured in table 1.

While the survey and the focus group discussions had a total sample of 116 (potential) listeners and users, the digital analytics data is based on all users that frequented the social media sites of the community radios during the period of the study.

4.3 Findings

The findings of the three parts of the examination are presented according to the respective method.

Survey results

Overall, the participants of the focus groups who completed the questionnaire used the Internet frequently. 86 percent used it on a weekly basis. Facebook was the most popular social media channel used. 75 percent of respondents from Contacto 10 had used Facebook the previous day and 81 percent had used the social network during the course of the last seven days, compared to 42 percent of Granada Stéreo participants using Facebook on a daily, and 67 percent doing so at least on a weekly basis. Twitter was used far less. 22 percent of Contacto 10 listeners had used it the previous day and 29 percent had used it over the last seven days, while only 3 percent of Granada Stéreo participants used Twitter on a daily, and 6 percent used it at least on a weekly basis. Younger users had a strong preference for Facebook, while the older ones also used the predominantly text-based Twitter. This different composition of target groups on Twitter and Facebook should be taken into account when developing social media communication strategies.

The questionnaire also revealed the groups of participants were interested in different topics (*see table 2*). The rankings must be seen under the point of view that the respondents from Granada Stéreo consisted mostly of young people up to the age of 18 years compared to Contacto 10 with older listeners on average.

Table 1: Samples from Granada Stéreo and Contacto 10

	Age				Gender	
	≤ 18	19 – 34	35 – 59	60+	female	male
Granada Stéreo (n = 69)	94%	0%	3%	3%	65%	35%
Contacto 10 (n = 18)	22%	0%	56%	22%	44%	56%

Note: Not all focus group participants filled in a questionnaire due to logistical problems.

Table 2: Topics of interest related to the community radio stations

Ranking	Contacto 10 (N = 16)	Granada Stéreo (N = 67)
1.	Social topics (63%)	(Local) sports (49%)
2.	Municipal issues (50%)	Church issues (36%)
3.	(Local) sports (31%)	Municipal issues (28%)
4.	Music (31%)	Radio broadcasts themselves (28%)
5.	Art and culture issues (25%)	School, university issues (25%)

The respondents from Granada Stéreo were very interested in local topics concerning the community such as local sports, church, and municipal issues. The participants from Contacto 10 mentioned social topics most often, followed by local topics concerning the municipality and sports. Thus, topics with a clear local focus would seem to be the way to go for the radio stations on social media. In a separate item, the respondents from Granada Stéreo demanded more sports, music topics, and jokes in the program, whereas Contacto 10 respondents felt social and municipal issues should be dealt with more often.

Focus groups

Overall, the analysis of the **focus group discussions** revealed that people are interested in the social media channels of the two community radio stations. Although not all focus group members were active listeners of the radio stations or engaged with their Facebook and Twitter accounts regularly, there was a consensus that social media are important tools for spreading information and interacting with the community.

Granada Stéreo

Focus group participants of all age groups said they are most interested in local topics that are linked to their immediate surroundings and everyday life. "The closer the content is to our direct living environment the better," said a participant. While they consider different issues relevant – especially culture, sports, and education – the geographical closeness is crucial. That means that national topics should also be adapted to the local context. While younger focus group participants had a special interest in music, the older discussants emphasized the significance of social and religious issues as well as educational programs.

Moreover, the results show that the process of dealing with the conflict-ridden past and violence as well as the rehabilitation of democratic rights play a significant role independent of the discussants' age groups. Due to the history of Granada, which suffered severely from violence, this issue affects almost all community members.

Especially adolescents claimed that they use Facebook mainly for communicating with their friends as well as entertainment through music and videos. Accordingly, they suggest that information should be conveyed on social media in a more entertaining form.

The discussants said that they are more likely to engage with photos – and even more so with photos in which they can recognize places from their home town. Furthermore, they stated that they would interact more with videos than with pure text. Overall, they suggested that Granada Stéreo's posts should generally have less text, and that posted texts should be shorter.

Contacto 10

Contacto 10 focus group participants also stated that they are most interested in topics that have a strong connection to their community and living environment. As one participant commented, "I want to know what is happening and what has happened in my neighborhood, the good things as well as the bad things." For younger people, these topics were related to schools, local transport, and sports, for older participants the focus was on health and society related issues.

Furthermore, the results show that one topic is of particular importance to (potential) listeners, irrespective of their age: the ongoing peace process in Colombia. Although this is a national topic, participants identified the question of peace as relevant to everyone.

Some participants expressed a wish for more variety of topics: "It is fine to broadcast information about the activities and main subjects of the radio station, but it is important to talk about other issues as well. As a media outlet, the radio shouldn't repeatedly address the same topics only, as this becomes boring."

Regarding the (potential) listeners' engagement on social media platforms, the focus groups revealed that, independent of their age, photos and videos as well as flashy titles attract their attention and they are more likely to 'like' (Facebook) and 'favorite' (Twitter) or share and retweet them. Moreover, people commented that the texts of the radio station's Facebook posts should be shorter and more precise.

Especially the younger discussants said that they are most likely to engage on social media when their peer groups are included in the posts, such as adolescents from the community or district or their friends. The older participants without social media experience said they would be interested in training courses to enable them to use Facebook or Twitter.

Furthermore, the members of the Contacto 10 focus groups suggested that the use of Twitter hashtags should be improved by making them unambiguous, more precise, and by using already existing hashtags. This would enable users to find specific topics of interest and start a dialogue about them.

Digital analytics

Digital analytics were utilized to look at audience size and interaction for each radio station.

Granada Stéreo

Granada Stéreo had 7,531 **Facebook** fans on November 30, 2015. There was a two percent rise in Facebook fans during the period from August to November 2015. Also there was a relatively high number of interactions of 35 per post. The radio station sent out 504 posts. The most used post type was photo, followed by videos, links, and status messages. Table 3 shows the post type distribution.

Table 3: Post type distribution – Granada Stéreo

Total amount of Posts	Photos	Videos	Links	Status
504	187	129	112	76

Figure 2a: Most interactions: Laura Noreña from Granada at singing contest The Voice Kids

Figure 2b: Most comments: 15 year commemoration of Granada killings

Granada Stéreo
9 October 2015

Los papás de Laura Noreña son Granadinos, pasó la audición a ciegas del concurso de Caracol #LaVozKids tiene una gran voz y talento #YoApoyoALauraNoreña . Talento con raíces granadinas.

#YoApoyoALauraNoreña
#LaVozKids

512 Likes 18 Comments 157 Shares

Granada Stéreo
3 November 2015

Hoy hace 15 años que vivimos uno de los momentos más duros de nuestra historia, integrantes del Bloque Metro de las Autodefensas -AUC- ingresaron al casco urbano y asesinaron a 19 personas. Paz en la tumba de los granadinos que murieron injustamente.

265 Likes 43 Comments 352 Shares

The post type with the highest interaction rate (likes + comments + shares) was also photo material, followed by links, videos, and status messages. The response rate of Granada Steréo is 100 percent, which means that the radio station answers all user posts. The station responds to Facebook user posts within an average of 8 hours.

The digital analytics data underscored the validity of the survey and focus group findings in that local stories about people from the community, commemoration and public holidays proved to be most popular. The ten most popular posts were again photos.

Granada Stéreo's most popular Facebook post, i.e., the post with the highest number of likes, shares and comments (687 in sum), focused on the success of a local singer and her success at a casting show (see Fig. 2a), while the post that generated the most comments (43) had to do with the region's history of violence and bloodshed (see Figure 2b).

Granada Stéreo had 1,157 Twitter followers at the end of November 2015, up 5.8 percent from the beginning of August. The number of retweets also rose from 32 in August to 56 in

Table 4: Tweet type distribution – Granada Stéreo

Station's tweets	Station retweeting others' tweets	Others retweeting station's tweets	Station's responses to user questions
478	176	245	12

Table 5: Post type distribution – Contacto 10

Total amount of Posts	Photos	Videos	Links	Status
2,632	2,087	283	144	117

Figure 3: Most popular tweet: "Granada switches on the Christmas lights."

Figure 4: Example of a typical Contacto 10 Facebook post with a lot of text

November. During the period of examination, the staff at the station tweeted 4 tweets a day on average (666 in total). Interactions of all types were also on the rise (*see table 4*). The response rate was lower than on Facebook but still quite high at 40 percent.
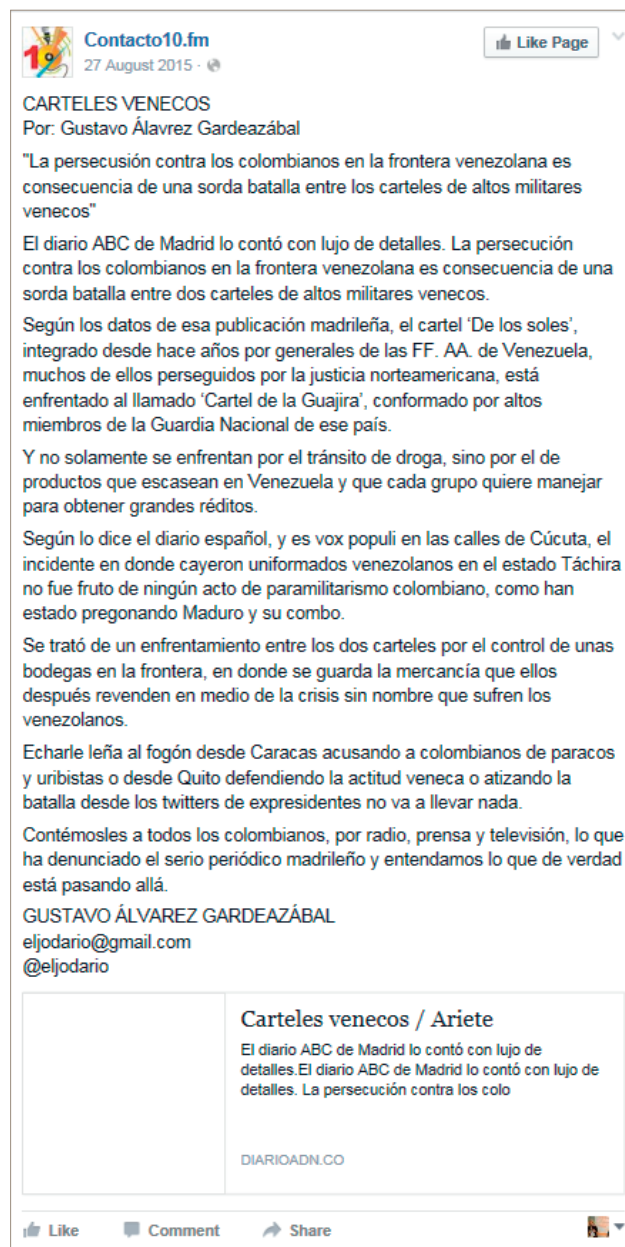
As with the Facebook page, community related topics were particularly interesting for the followers of Granada Stéreo's Twitter profile.

The screenshot in Figure 3 shows Granada Stéreo's tweet with the highest number of retweets and favorites (20 in sum). The switching on of the Christmas lights is of special importance to the local cultural identity of the inhabitants of Granada.

Contacto 10

Contacto 10 had fewer **Facebook** fans (832) at the end of November than Granada Steréo but the fan base had increased by 9.7 percent as compared to the beginning of August 2015. At the same time, the station was very active, posting 2,632 messages during the period under investigation. The most used post type on this page is photo material, followed by video, links, and status messages. Table 5 shows the post type distribution.

Facebook identifies each post containing a photo as post type "photo", even if the picture is embedded in a long text. The latter is often the case at Contacto 10's Facebook page and this might be an explanation why the participants in the focus groups indicated that they would prefer less text on the page.

Status messages received the highest interaction (1.15 interactions per message), followed by photos, videos, and links. On average, less than one interaction was sparked by a post (0.93). One of the reasons might be that the response rate of Contacto 10 was zero, i.e., user reactions were never acknowledged by the station.

The posts from Contacto 10 which generated the most likes, comments and/or shares were event announcements and reports on events, but also reports about people who were somehow connected with the community. Contacto 10's most popular Facebook post obtained 229 likes, shares, and comments *(see Figure 5b)*. The station's most commented post received four user inputs, indicating that interaction levels were low.

Contacto 10 was being followed by 110 **Twitter** users on November 30, 2015, a rise of 10 percent compared to the beginning of August of that year. The output was high, though. Contacto 10 was tweeting 22 own messages per day, a total of 2,683 tweets during the time period. Most of these tweets were links to the own Facebook pages. No tweets from other profiles were retweeted, and only 29 own tweets were retweeted by other users. The response rate was 0 percent, indicating that there were no efforts to engage with other users.

The tweet which generated the most retweets on the Twitter profile of Contacto 10 was a report on the criminal prosecution of a national politician, followed by event announcements and historical issues *(see Figure 6/page 38)*. This implies that the followers were not only interested in community specific topics.

4.4 Conclusions

The digital analytics showed both radio stations used Facebook and Twitter, but in different ways.

Listeners and fans of Granada Stéreo could get in touch with the radio station via their Facebook page, leading to a high number of fans and interactions. The same applied to Twitter. Focus group participants emphasized their interest in news with reference to local events and the conlict-ridden past. Younger focus group participants were more likely to interact via social media, demanding social media contents should also entertain and contain photos and videos, the latter seeming to spark more readiness to interact.

Less possibilities for interaction were offered by Contacto 10 on Facebook. The page was more as a showcase, posting mainly event announcements that did not generate much interaction. In addition, the radio station did not answer the fans' requests. The same applied to Twitter. Most of the tweets were links to their Facebook page only. Listeners and potential listeners in the focus groups were also interested in local topics and the peace process. Photos and videos prompted more willingness to engage regardless of age. Older audiences were interested in engaging with radio stations via social media but lacked the know-how to do so.

Figure 5a: Most interactions: Graffiti: "Peace is not silencing the guns, it is overcoming social inequality"

Figure 5b: Most comments: Contacto 10 wins peace journalism prize

Table 6: Tweet type distribution – Contacto 10

Own tweets	Retweeted tweets	Retweets of own tweets	Responses to user question
2683	0	29	0

Recommendations for community radio stations
– Local, local, local! The (potential) listeners are most interested in events in their immediate surroundings. Content must be adapted to the local context and broken down, so that its immediate relevance for local residents becomes apparent.
– The peace process and dealing with the past are of crucial significance for all community members independent of their age. This is part of a common heritage and community and engagement building should take it as a starting point.
– At the same time, a variety of topics as well as both informative and entertaining issues should be covered on social media. Topics should not be too repetitive.
– Users are interested in more photos and videos with a direct link to the local context, less in long text.
– A dialogue about topics of interest should be started and maintained with the social media community, especially through direct questions, invitations to comment, and replies to user comments, etc. The topics of interest should be regularly identified through digital analytics as well as communication with the users.
– Users and listeners are also active on Instagram and particularly WhatsApp, enabling community radios further possibilities to interact with them.
– Older community members unfamiliar with new technologies could be trained, if they are interested. This way they could become part of the social media communities.

Recommendations for researchers
– The time budget of the present study was quite tight. Especially the recruitment of participants takes time and researchers should plan at least a month for finding suitable focus group participants, preferably using random sampling or a quota plan rather than snowball sampling.
– Clear agreements with local partners should be made and the partners should take ownership and be part of the methodology development from the beginning. During the field

Figure 6: Most popular tweet: "Political persecution by the attorney general of Congressman Iván Cepeda Castro" – Contacto 10

phase, close collaboration and constant information exchange is necessary.
– Focus groups should ideally consist of between 6 and 8 participants.
– It is better to have fewer but balanced and well-composed focus groups than many groups with participants who may not be able to respond to the questions.
– In the run-up to the focus groups, the moderators should be trained accordingly.

General recommendations for an improved use of social media "by community radio stations".
– It is important to adapt social media contents to the specific features of the respective platforms: Facebook should be used to build a community and directly communicate and interact with this community through posting comments and questions and answering users' interventions. The interaction with listeners on Facebook also helps to identify their interests and needs, which in turn should be used to improve the radio programming.
– Twitter should be used for establishing a broader, less personal and more professional network. Through the use of hashtags it is possible to take part in specific discussions and thereby ensure a more prominent representation of the own radio station. Twitter is normally used to publish more news-related content and link back to the own website. However, also on Twitter interaction with other users should take place, e.g., through retweets, commenting other tweets, and answering questions.
– Quantity is not everything. It is better to publish posts and tweets that are of direct interest for the community, that generate response and interaction with users and listeners, and motivate them to actively participate – rather than posting something for the pure sake of it. Less is sometimes more!
– Facebook pages and Twitter profiles should be advertised in the main radio program and their special features should be highlighted and vice versa. That means that Facebook and Twitter pages should also refer to the radio program. The radio program could be complemented by the social media platforms, and not by simply publishing the radio content 1:1 on Facebook or Twitter.
– Watch what you are doing. One's own social media activity as well as users' interaction and response should be monitored constantly. This can be done through Facebook Insights and Twitter Analytics. These tools are provided to each profile owner for free, directly within the Facebook and Twitter accounts.

– Researchers should decide whether to use costly software that enables them to gather and analyze data efficiently, or whether the data from media house's own accounts is sufficient for the purposes of research.

The last recommendation points to the fact that DW Akademie used the comparatively expensive services of Quintly.com to collect and analyze the digital analytics data. For community radios, it will almost always be more cost-effective to use the free data provided by Facebook Insights and Twitter Analytics. Competitors can be added under "Insights" and "Pages to watch." In this way it is possible to compare the performance of the own page and posts with other similar Facebook pages by observing the development of the fans, the number of posts and total engagement of the current week.

For community radios, short surveys in combination with focus groups are a comparatively cheap and easy way to obtain information from target audiences. Especially the focus groups give listeners and users the opportunity to give direct and effective feedback on whether the stations are living up to their mission of providing participatory spaces for communication, information, expression, and education of the community. On the other hand, focus groups can be time consuming in analysis and it can be a challenge to get a real discussion going. Guided interviews can be an alternative, though less people can participate because conducting interviews is more time consuming.

As stated above, free digital analytics data is readily available if community radios use their own accounts, and the validity of this data is higher than self-reported behavior in questionnaires. But digital analytics cannot replace information gathered with the other methods since it only measures behavior but tells us nothing about people's attitudes and the reasons for their behavior. If measuring the impact of community building efforts is the goal, it is equally important to see how people are acting as it is to find out whether they identify themselves with a community radio station and whether the radio station is indeed successful in providing its community with participatory spaces. This complementary role of different methods is the advantage of method triangulations of the sort presented here.

5. Lessons learned and way forward

Dennis Reineck

The case studies presented here were ambitious in that they chose innovative approaches to address gaps in previous media development related audience research. Their results are primarily important from a methodological perspective. They were aimed at gathering experience in audience research and at the same time at testing new and innovative ways of going about it. So even though not every method yielded the results expected and things went wrong from time to time, these experiences should be viewed as a ladder, to be climbed in order for future DW Akademie research to gain in quality and scope, increasingly enabling us to measure media development impact and learn to improve our efforts for the benefit of the beneficiaries under examination.

Reviewing the results of the study, the most valuable lessons we've learned, leading rung by rung up the ladder of insights, are as follows:

Cooperation with partners

A first important insight from our studies is that close cooperation with project partners in possession of national, regional, and/or local know-how is essential. Not only media development activities require ownership. When it comes to developing instruments such as questionnaires or focus group guides, partners can provide important knowledge of the local media landscape, as well as impressions of usage patterns and information needs. Audience research directed at measuring the outcome and impact of such activities should be entrusted to partners as far as possible, in order for partners to build up capacities in the field. Partners' ideas and agendas should shape the research from the outset, though it is important to create a synthesis between what the media development organization wants and what partners need.

Ownership and involvement of partners can be maximized in intervention-based settings, i.e., where audience research provides the basis for media development action (such as in the Colombian case study, see chapter 4). Caution is advised in evaluation contexts, where the work of partners is taken under scrutiny (such as in the Palestinian case study, see chapter 2). While project partners can play an important part in conceptualizing and organizing the research in the latter case, presenting and interpreting results should in this case be left to others to guarantee the impartiality of the findings. In both settings, research should openly be directed towards identifying the role media development projects can play for the betterment of the beneficiaries of the interventions, i.e., towards achieving and measuring outcomes and impact that relate to them.

Involving partners in such a way requires a common understanding of the standards of audience research. Clear and concise research questions have to be developed, questionnaires and other methods of data collection should adhere to certain standards, and staff has to be trained so as to ensure that all respondents give their input under comparable conditions. It is important to develop a common denominator on these fundamentals before going into the field, since deviations can jeopardize the validity and reliability of the findings. A pretest is a good method for making sure that all partners have a clear understanding of these common principles.

Sampling is another aspect of research that can be challenging. While working segments of the population were underrepresented in the Colombian sample, the control group of the Palestinian sample was recruited from two instead of four schools. Project partners sometimes recruit participants at their own convenience. In large samples where statistically representative data exist, this can be compensated by weighting the data. When drawing smaller samples or when no representative data exist, quota plans based on estimates of gender and age distributions could help prevent stark imbalances as compared, for instance, to snowball sampling techniques. However, randomized samples should be drawn whenever possible, since they enable drawing general conclusions from data. In any case, do-it-yourself research without fixed standards of recruitment all too often leads to corrupted or biased data samples that do not provide a suitable basis for informed decisions.

Monitoring of implementation and analysis

Quite closely related to the previous point is the question of how best to monitor how research instruments are implemented and how data are analyzed. Monitoring implementation and analysis too closely results in high workload especially for the development organization, having to check research details in short intervals. However, leaving too much time between monitoring activities bears the risk of discovering misdirected data collection and analysis too late. Reporting should thus take place at every key interval of data collection: Before the pretest, after the main test, after the first day of the main test, after completion of the main test. The same applies to data analysis: Before analysis, after the first day of analysis, after completion of analysis. While most of this reporting can be of an informal nature, e.g., a telephone call exchanging info on the latest developments, after the pretest is a good point in time for a more detailed exchange on the shape and quality of the research. This not only holds true for cooperation with project partners, but also for work with media and market researchers. Of course, no one likes presenting results before the overall process is finished. But even a short exchange can shed light on how methods are being applied and data are being analyzed.

Monitoring audience research helps prevent data from spiraling away from the original research questions, project partners imposing their own agendas on the research process (unless this was agreed upon earlier) and choosing methodological approaches or sampling techniques that do not comply with standards of empirical research. For this purpose, project partners have to provide ample documentation of implementation and analysis to allow for quality checks. The Kenyan study showed that an assessment of the content of radio broadcasts is important to be able to judge the quality of reporting on women and land rights, before the genuine audience research started (*see chapter 3*).

Preparing and adjusting the instruments for the target group
Project partners often have quite a good impression of the target group of audience research. Knowing the beneficiaries of media development projects helps adjust instruments for data collection, be they questionnaires, interview or focus group guides, to suit their levels of language proficiency and comprehension. The challenge in the Kenyan project was to break down the legal jargon of land rights legislation into a language ordinary Kenyans could understand. The Palestinian questionnaire was adapted to children's language and included comic figures to be more motivating to the participants. Knowing the participants also helps choosing media alternatives that are realistic. For example, the media examples in the Palestinian MIL test were taken from actual Arab media or social media messages were simulated to come as close to the communication they encounter in their everyday lives as possible.

Pretests are a good way of finding out whether a research instrument is suited to the people taking part in the research. Both the Kenyan and the Palestinian studies used extensive pretesting to adapt the methods to their participants. The Colombian study did without a pretest, since it made use mainly of the qualitative focus group method. In retrospect it might have been sensible to conduct a pretest to make sure there was a common understanding of the research questions and the exact methodology.

Mixed methods approaches
Mixed methods approaches are often proposed for audience research in media development but seldom put into practice (*see chapter 1.3*). One reason is because mixed methods approaches require more effort on the part of the researchers who have to be qualified in each method employed. This makes it more likely for stand-alone classic methods like large-scale surveys or focus groups to be used, than combinations of classic with more innovative methods of data collection and/or data analysis. Another reason is that data collected with different methods often stems from different sources, raising the question of how the data can best be combined to gain an accurate picture of audience behavior and attitudes. The Colombian example delivers one possible solution to this problem by using a qualitative (focus group)

and quantitative (survey) method based on the identical sample. In this case, data linkage is unproblematic since the data stem from the same source.

Combining the aforementioned data with digital analytics data, on the other hand, does raise a few questions. If digital analytics data reflect user behavior as a whole, in what sense can the same be said of the focus group and survey results. In fact, the latter methods only deliver a selective picture of reported behavior and attitudes. So this data should be combined with caution, as was the case in the chapter on the Colombian study. Different sets of data do not always tell the same story. Due to time constraints, it was not possible to use the digital analytics data to identify user groups that were interesting to the researchers and which would have allowed to link their de facto behavior in social media to their statements during the focus groups and their answers in the survey. This would have been a good alternative for triangulation but time constraints did not allow for sequential phases of data collection and analysis. Another option would have been to spread an online questionnaire via Facebook and Twitter to find out more about the users and their preferences. This, too, would have made data linkage easier, though at the cost of surrendering the in-depth motivational insights gained from the focus groups.

Mixed methods designs are misunderstood, if methods are simply combined with each other additively. Triangulation entails merging the data to create a whole that is greater than the sum of its parts. Each method should be designed to shed light on the data provided by the other methods, to allow for insights that go beyond what any single method can produce. It makes sense to always pose the question, what additional insights another method could deliver and whether these insights are worth the extra effort. For instance, the Kenyan case study could have used a combination of content analysis of radio broadcasts and audience survey, in order for the content to better inform the questionnaire development.

Designing audience research
The other two studies conducted also yielded important insights into how best to design audience research. Results from the Palestinian study indicate that straightforward surveys for measuring Media and Information Literacy (MIL) will not do when trying to measure the MIL levels of children and adolescents. Rather, hands on testing with participants judging realistic examples of mass and social media proved to be superior to abstract surveys. Comparing methods for validity is something that media organizations rarely have time to do. This could be a productive field for universities and institutes of applied research interested in audience research in the media development context.

In the Kenyan case it was found that the strength and clearness of the stimulus was not great enough to have measurable effects. Influencing attitudes and behavior apparently requires considerably more communicative effort. Journalistic reporting is not as clear cut as targeted communication like advertising or public relations messages. The huge challenge is how to demonstrate media effects for news journalism in the same convincing way as for communication campaigns, without changing the independent and much less "message-oriented" character of journalism. This having been said, one could imagine individual radio stations devoting a whole week of programming (or several weeks of continuous regular programs, aired once or twice per week) to a certain topic or getting several media partners to coordinate activities devoted to informing on specific topics. The results, however, could also be interpreted as a warning to not expect too much from media message diffusion, if this is not flanked by interpersonal communication activities and by instruction at the local level. Nonetheless, impact research remains worthwhile and has the potential to help establish new standards in media production and reporting, if effects can be proven to be robust.

Criteria for audience research in media development

Audience research in media development presents researchers with specific challenges. The researcher should at least reflect on the following points when conducting a study:

– Cooperation with partners: How can project partner organizations be involved in the planning, implementation and analysis of the research? Is it viable and sensible to involve market research or academic institutions?
– Monitoring of implementation and analysis: Have organizations involved understood the goals and methods of the research correctly? At what intervals should this be monitored?
– Preparing and adjusting the instruments for the target group: What specific features of the target group have be taken into account when developing research instruments and sampling strategies? When and how should a pretest be conducted to test the research instruments?
– Mixed methods approaches: Can different methods be applied to gain insights in an efficient way that would not have been possible with a stand-alone method? Can the data from the methods be combined in such a way, that findings are coherent?
– Designing audience research: Have methods been tested under similar conditions? Are they valid and viable?
– Effects of audience research: What (negative or positive) effects might the audience research have on the media development environment in which it is to take place?

Effects of audience research

A final lesson from our study has to do with the intentional and unintentional effects of audience research. Audience research should not be misconstrued as an act of measurement comparable to the measurement of temperature or time. Under normal circumstances, physical measurement has scarcely measurable repercussions for the object of measurement. The day does not become markedly warmer or colder because it is being measured by a thermometer, just as it does not become noticably longer or shorter because its duration is being measured by a clock. Because audience research most often is concerned with living people, reactivity plays a role. Research has the potential to change people participating in it and it has the potential to change project partners and media associated with the research. Effects research, most often used for purposes of evaluation, is precisely intended to eventually effect changes in its objects of measurement, i.e., the beneficiaries and/or project partners. This can be institutionalized for example in the form of change workshops. For instance, the Colombian study was used by the radio stations involved to improve their social media strategies.

But research can also have unintentional effects. It was certainly not a purpose of the Kenyan study to make the participants aware of gender differences in how land rights were being practiced. Nevertheless, the 301 participants will have gone out of the interviews more conscious of the topic than before. The same is true for the participants in the Colombian focus groups, who will have become more conscious of what the community radio programs in their home towns have on offer. And the 80 Palestinian pupils, having judged ten media examples, will have been more aware of the mechanisms of media reporting after the test. This highlights the fact that audience research can contribute to a greater awareness of topics and lead participants to reflect their own behavior. In some cases it might even be sensible to have a short discussion with the participants after data collection. And in some cases such a research effort can become a small intervention in itself.

On the other hand, it is conceivable that research can have unintended negative effects. This might be the case if insensitive questioning lets people's willingness to participate in research in the future dwindle or if participants are made to feel uncomfortable with the situation of data collection in any other way.

Next steps

What should be the next steps on the audience research agenda? Depending on available resources, media development organizations should be encouraged to test and develop a standard repertoire of methods for audience research. Building expertise in the field not only enables organizations to do their own research, which is often necessary because large representative surveys do not address relevant questions or do not lend themselves to disaggregated data analysis, but also enables organizations to judge the quality of third party

research such as the work of media and market research institutes, affiliated universities, or project partners. This will make it possible for organizations to profit from the expertise of partners.

Audience research in a media development context will always require a certain degree of creativity. This applies to how standard methods are adapted to the context, but it also applies to using innovative methods. Once an organization has a standard repertoire, it should not take this as the end point of its endeavors. Rather, the dynamic development of existing media and information ecologies will always challenge organizations to optimize existing tools and develop new ones more suited to what it is they want to find out.

The methods tested in this volume should be pursued and adapted to other contexts themselves to find out whether they indeed are replicable and generalizable. Digital analytics presents a host of methods and metrics that can be harnessed for the good of media development. The Colombian study can be seen as a starting point. Quasi-experimental or experimental designs should increasingly become standard practice in audience research aimed at measuring impact. The Kenyan study is not the first to do so, but it presents an innovative design, deserving imitation and adaptation. Tests using media examples seem to be a good way of testing Media and Information Literacy of children and teens, as the Palestinian study has shown. This could also be tested with adults or with other media related skills and attitudes.

But audience research is not about the methods themselves. These methods are only a means to an end, that end being measurement of the outcome and impact of media development activities for its beneficiaries, documenting medium- and long-term effects of activities, collecting proof that positive changes have happened, and identifying weakpoints of the activities. So the case studies uncovered several points of departure for improving DW Akademie's activities. In Colombia, the findings revealed that community radio stations need more support in social media based community building and encouraging listeners and users to engage with the stations. The Kenyan study showed that journalism training has to be long-term and system-oriented and thus sustainable. Results need to be monitored. One-off training sessions do not seem to be enough to ensure good quality reporting that can have an impact on listeners. And the Palestinian case study found that media production is not enough to foster critical Media and Information Literacy. Analysis and comparison of professional and social media is essential for enabling pupils to effectively decode media messages.

Future work and research could take a closer look at the relationship between media use and content. Combining content analysis with audience research would be one way of finding out more about what content has what effects. On the other hand, content analyses of social media communication might be a valid method of doing audience research without having to engage with the audience at all, though one should be careful of using this as an excuse, not to have to go to the effort of engaging with the audience itself. The digital world is full of traces of audience behavior, waiting to be analyzed. This, however, raises some ethical questions. Is it okay for media development organizations to fight for data protection and at the same time profit from the data collection activities of multinationals such as Facebook, Twitter, and Google? How openly can one talk about what is going on in social media, if the government of the country in question actively combats freedom of expression? What data security measures have to be adhered to, to protect people whose behavior shows up in digital data? Audience research in the digital age holds several ethical questions that cannot sufficiently be dealt with here. They should, however, in future be thoroughly reflected in order for audience research to do no harm in the context of media development as a whole.

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