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Participants in World Service Trust Training in Yemen

Using content analysis to measure the influence of media development interventions: Elections training for journalists in Yemen

BBC World Service Trust elections training for journalists in Yemen in partnership with state and commercial media organisations, funded by the Foreign and Commonwealth Office

This report examines the use of content analysis to measure the influence of training for journalists on media organisations' output.

Overview

"Charitable foundations, media organisations, governmental organisations and various non-governmental organisations have invested extensively in the last 10 years in training programmes aimed at emerging democracies in an effort to create a journalistic workforce that is independent, well-educated and well-trained[1]."

Despite their prominence, little is known about the impact of these interventions on those who participate in them, their organisations and in shaping society. However, in the last year much has been written about the need to develop and implement appropriate methodologies to evaluate the effectiveness of media development programmes[2].

To date, efforts to capture the impact of journalist training programmes have focused on self-reported improvements in skills. Typically this involves qualitative follow-up interviews with journalists to explore, for example, views on training content, the professional and personal impact of training, and examples of where training impacted on working practices[3]. Although valuable, this approach is limited to capturing the self-reported impact of the intervention on the journalist and their organisation. More convincing evidence of the impact of training and its application to working practices can only be achieved by examination of the output[4].

In the context of the BBC World Service Trust's four-level approach[5] to media development, the Research and Learning Group has piloted a number of research techniques over the last four years. This media measurement 'toolkit'[6] of methods captures the impact of media development interventions at system, organisation, practitioner and public levels (see Figure1). The 'toolkit', from which methods can be selected based on the requirements of the project or programme, include pre- and post-training questionnaires, scenario exercises, in-depth interviews, trainee logs and content analysis.

1   Becker, L. B., & Lowrey, W. (2000). Independent Journalism Training Initiatives: Their impact on Journalists and Journalism Education. Presented to the Professional Education Section, International Association for Media and Communication Research, Singapore.
2   Lambino, A, II., Tebay, A., & Buzby, S. (2007). A Monitoring and Evaluation Toolkit for Media Development: What do available indicators and integrative approaches have to offer? In Media Matters – Perspectives on Advancing Governance & Development, Global Forum for Media Development.
3   Becker, L. B., & Lowrey, W. (2000).
4   Becker, L. B., & Lowrey, W. (2000).
5   The BBC World Service Trust believes that change and development can and does occur on four different levels: system, organisation, practitioner and the public. The impact of interventions depends upon the level(s) where they are implemented and the different audiences upon which they focus. See Islam, M., & Frost Yocum, L. (2007) Participation, Accountability and Transparency: Making media work for governance in Bangladesh, BBC World Service Trust Dissemination Series, 04/01.
6   Power, G. (2005). Presentation at the 1st Global Forum for Media Development, Amman, Jordan.

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BBC World Service Trust Evaluation Methods Toolkit

Level of Engagement	Outcomes	Research Tools
System Government/Ministry	**Influence at a policy level** e.g. Access to information and freedom of expression e.g. Transformation of state broadcaster to public service broadcaster	In-depth interviews Content analysis Social Network Analysis
Organisation TV Channel/ Newspaper/ Radio station/ Website	**Improved journalism and operational practices** e.g. Daily/weekly editorial meetings introduced e.g. Editorial guidelines/style guides	In-depth interviews Skillset questionnaire Content analysis
Practitioner Editors/ Managers/Journalists	**Improved skills/improved attitudes to journalism practices** e.g. Increased recognition of value of role of journalist e.g. Improved, context sensitive editorial values	In-depth interviews Skillset questionnaire Content analysis Scenario exercises Attitude questionnaire
Public Audience	**Improved media outputs** e.g. More audience-centric approach e.g. Increased audience engagement with issues	Content analysis Focus groups/audience interviews Surveys

Figure 1: BBC World Service Trust Evaluation Methods Toolkit

Skillset and attitudes questionnaires completed by trainees pre- and post-training capture shifts in attitudes as well as perceived improvements in skills and knowledge[7]. Scenario exercises, developed with experienced journalist trainers, test whether trainees are able to put new skills and knowledge into practice in a classroom environment[8&9]. In-depth follow-up interviews and trainee logs allow further understanding of the trainees' views of the training, the challenges faced working as a journalist and the trainees' experience of applying the skills and knowledge obtained through training in their day-to-day jobs[10].

This paper presents content analysis as a tool to guide the implementation of media development interventions and to monitor and evaluate their efficacy[11].

Content analysis is a research tool that has been used since the 1950s for studying the content of communication[12]. Content analysis allows researchers to analyse media output systematically, objectively and reliably by measuring the content and format of text or broadcast material. The method enables quantitative measurement of differences between media outputs by systematically identifying and recording their properties; from formal criteria (length of articles, number of photos, use of soundbites) to frequencies of words or actors and presence and character of topics[13].

Content analysis has also been used to inform media development interventions. Spurk and Keel's (2006) study of Armenian Print and TV is particularly pertinent. The study provided an assessment of print and television output and identified quality indicators for describing journalistic reporting including number and transparency of sources, news topics and their share of coverage, preference for specific actors, depth of reporting, assessment of perspectives and number of different viewpoints[14]. All editions of six print media publications as well as all main evening newscasts of a state and private station were assessed over a one week period. The BBC World Service Trust content analysis in Yemen builds on this approach by providing an assessment of Yemen media before and after the media development intervention to assess its improvements in media output.

Project design

The BBC World Service Trust ran an extensive training programme for journalists in Yemen to improve the standard of reporting for the local and presidential elections which took place in September 2006. Over 300 journalists, editors and managers from a range of media organisations participated in refresher courses and workshops

7   See the BBC World Service Trust's Media Dialogue Programme in Middle East and North Africa 2006 http://www.bbcdialogue.co.uk/
8   The trainees are given an article before and after training containing deliberate matched errors (sourcing, bias, accuracy, editorialising and defamation) that they must identify. The scores are then compared to measure any improvements in ability.
9   See BBC World Service Trust Budget Monitoring Project in Nigeria 2007 http://www.bbc.co.uk/worldservice/trust/
10   See BBC World Service Trust Training for the Elections 2007 – Sierra Leone http://www.bbc.co.uk/worldservice/trust/researchlearning/story/2007/07/070625_sierra_leone_elections.shtml

11   For full report see Whitehead, S. (2006). Content Analysis: Evaluating News Reporting in the Yemeni Media Pre and Post BBC World Service Trust Training - TV, Radio, Newspapers and On-line.
12   See Krippendorf, K: Content Analysis: An Introduction to Its Methodology. 2nd edition, Thousand Oaks, CA: Sage 2004
13   Spurk, C., Keel, G and Winterthur, J. (2006). Research Project Media Quality Tool: Methodology and Operationalization.
14   See Spurk, C and Keel, G. (2006). Quality of Armenian Print and TV Media.

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run by both international and local trainers for print, broadcast and online journalists. The training consisted of both week long face-to-face journalism courses[15] and on-the-job training where a trainer worked with the reporters/presenters in the newsroom. The training programme was extensive and included a range of activities tailored to the working practices and training needs of each media organisation. The intensity of training delivered differed between participating organisations (see Table 1).

Methodology

The media development intervention in Yemen aimed to influence at a practitioner level by improving the skills of individual journalists[16] but ultimately at an organisation level by improving the output produced across the participating media organisations.

Content analysis was employed in order to provide a systematic assessment of media output. The study included samples of participating organisations' output prior to and after training[17]. Analysis of the output pre-intervention provided valuable insights to the project team both in terms of the Yemeni media landscape and the organisations' training needs. By comparing output before as well as after the intervention content analysis demonstrates quantifiable changes to published/broadcast output.

Samples of output (see Table 1) from a selection of participating media organisations were collected for every day of January 2006 (pre-training) and for a 31 day period during July/August 2006 (post-training). The organisations from which output was collected were selected to enable the measurement of impact by the differing levels of intensity of the intervention. The definitions of intensity of training (high, medium and low) were developed to reflect a combination of percentage of staff trained, time spent working with media organisation and range of training activities delivered. Organisations producing daily output with high, medium and low intensity of training were chosen (see Table 1)[18]. The website and the two weekly newspapers were chosen as further examples of organisations where the BBC World Service Trust had a high level of involvement, delivering both formal training and on-the-job mentoring.

Table 1 provides details of the participating media organisations, the type and intensity of the training delivered, the % of staff trained at each organisation and the type of output analysed.

Media Organisation	Type of Training	% of All Employees Trained	Level of Intensity of BBC WST Training	Samples of Output Analysed
Daily Output				
Television (one of two main state controlled stations)	Face-to-face training On-the-job training	50%	High	Daily news bulletins
Radio (one of two main state controlled stations)	Face-to-face training On-the-job training	30%	Medium	Daily news bulletins
Newspaper (leading government daily)	Face-to-face training	Less than 5%	Low [19]	Front page daily and all stories on elections/political issues
Weekly Output				
Newspaper (leading independent with pro opposition writers)	Face-to-face training On-the-job training	70%	High	Front page weekly and all stories on elections/political issues
Newspaper (the leading opposition party's paper)	Face-to-face training On-the-job training	70%	High	Front page weekly and all stories on elections/political issues
News Website (state controlled)	On-the-job training	70%	High	All stories on elections/political issues [20]

Table 1: Scope and scale of training and output analysed

[15] Face-to-face refers to classroom based training.
[16] See Robinson, L (2006). Somali Journalism Training Project Phase 2. BBC World Service Trust. This is an example of content analysis at the level of the practitioner. Articles were assessed pre- and post-training only from journalists participating in the training programme.
[17] All output was collected during the specified collection period from selected media organisations which received training rather than from specific journalists who attended the training sessions. This approach does not allow output to be attributed to individual journalists. Organisational affiliation is used here for proxy purposes and to measure the influence of training across the organisation.

[18] Practical considerations such as the ease with which samples of output could be collected also influenced selection.
[19] This was used as a 'control' against which to compare results from media organisations where the intensity of BBC World Service Trust training activities was medium and/or high.
[20] Only stories covering elections and political issues published on the website during January and July/August were selected for the analysis.

The samples of ouput were analysed by means of carefully designed code frames[21]. The code frame was completed by two coders fluent in Arabic and familiar with the media landscape in the Middle East. The data were reduced into classified categories to cover the three components of journalistic quality targeted by the training[22]:

>> content of output

>> presentation of output

>> production elements

Key Findings

For the purposes of this paper, a selection of key findings from TV, radio, print and on-line media is presented to demonstrate the value of this method as both a tool to guide the implementation of media development interventions and to monitor and evaluate their efficacy. To provide context for the findings, background on the specific training objectives and the quality criteria used to measure change are outlined.

Content of output

The World Service Trust training with broadcast media organisations had three key objectives, to:

>> reduce coverage announcing 'diplomatic meetings/events'

>> promote more balanced distribution of themes and actors covered

>> produce balanced coverage of the President (when featured)

Content analysis recorded the following to measure whether the training achieved its objectives:

>> thematic coverage

>> frequency of Presidential coverage

>> treatment of the President

The post-training data collection period coincided with the Lebanon-Israel conflict. It was hypothesised that this would dominate news given the significance of these events to the region. As well as measuring the influence of training, content analysis provided information on how coverage of the conflict differed by media[23].

Coverage of news in the Yemeni broadcast media largely focused on listing 'diplomatic meetings/events' (see Figure 2 & 3) with reports on the President dominating the first story (See Figure 4) regardless of other news. In the majority of reports the President is usually treated explicitly positively (see Figure 5).

Print media in Yemen covered a broad range of themes (pre-training) thus significant changes in output post-training were not anticipated. Data from print (daily only) has been presented to demonstrate differences in output by intensity of intervention as well as to compare impact of the Lebanon/Israel conflict on coverage.

Thematic coverage

The themes covered by broadcast media and print differ (see Figure 2 & 3)[24]:

>> Television (high intensity): coverage of 'diplomatic meetings/ events' decreased and 'political reporting' and 'election stories' increased substantially after training[25].

>> Radio (medium intensity): coverage of 'diplomatic meetings/ events' decreased and 'elections stories' and 'war/crime/ corruption' increased substantially after training.

>> Print (low intensity)[26]: pre-training, a more balanced distribution of coverage across the themes than for broadcast media was evident. After training, the proportion of stories on 'war/crime/ corruption' increased.

Comparison of output pre- and post-training demonstrates that where the intensity of the intervention was high/medium (television and radio), the training delivered against its objectives: 'political stories' and 'election coverage' increased at the expense of items announcing 'diplomatic meetings/events'. Although the Lebanese-Israeli conflict undoubtedly impacted on news content, broader thematic coverage was evident in television post-training output. For print, where a more balanced distribution of thematic coverage was evident pre-training and the intensity of the intervention was low, coverage of the conflict dominated output post-training.

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21 Essential to the development of the code frame was collaboration with the project team comprising media professionals, trainers, social scientists and other stakeholders with relevant expertise and involvement in the training programme. This is an iterative process where values must be defined, tested, evaluated and redefined in several rounds of explorative coding. This process ensured that the specific criteria included in the code frame directly matched the changes in output anticipated as a result of the training. This process involved Arabic and English speakers.

22 A central problem of content analysis lies in the data-reduction process by which text is classified into content categories. Reliability problems can stem from the ambiguity of meanings and category definitions. To minimise this problem, the coding frame was trialled by the coders against samples from Yemeni media and was subject to several rounds of revisions in consultation with the project team.

23 Articles on the Lebanon/Israeli conflict were coded in 'war/crime/corruption' category.

24 Analysis of web articles is not included as only political/election-related articles were included in the sample.

25 TV coverage of the conflict wasn't as high as anticipated as the BBC World Service Trust worked with a satellite station broadcasting across Yemen and to Yemeni Diaspora. Its focus is to broadcast Yemeni news rather than international news which its viewers can easily receive from other channels.

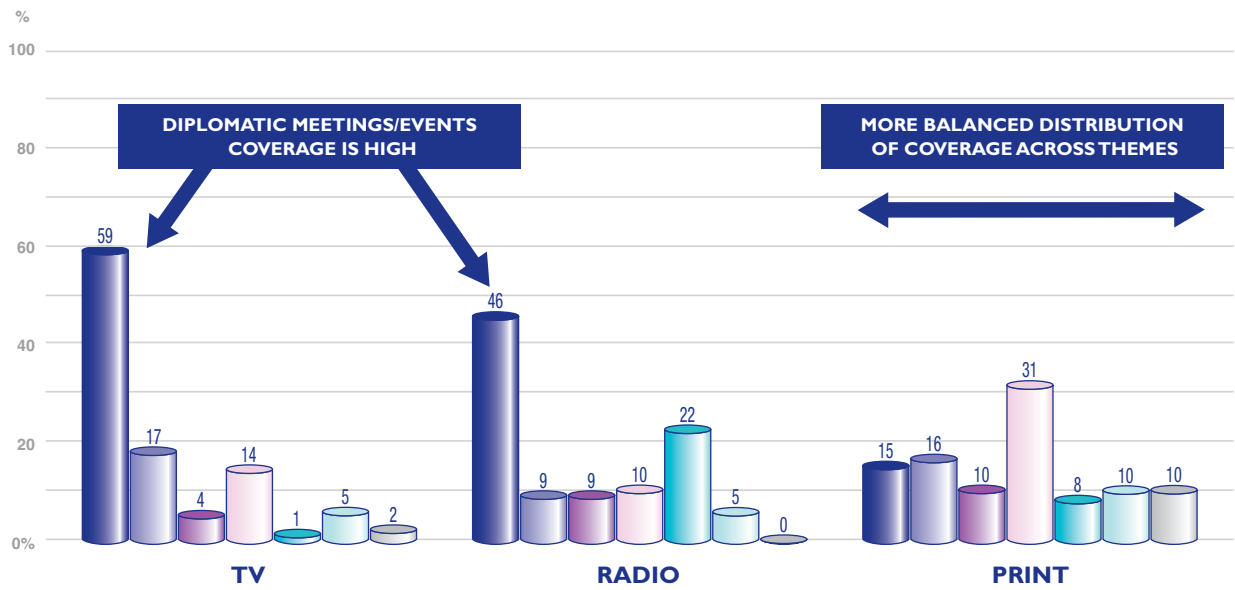26 This analysis included daily newspapers only.

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DIPLOMATIC MEETINGS/EVENTS COVERAGE IS HIGH

MORE BALANCED DISTRIBUTION OF COVERAGE ACROSS THEMES

TV: 59, 17, 4, 14, 1, 5, 2
RADIO: 46, 9, 9, 10, 22, 5, 0
PRINT: 15, 16, 10, 31, 8, 10, 10

Figure 2: Pre-training - thematic coverage

NB: SOME ARTICLES/ITEMS
COVERED MULTIPLE THEMES

INCREASE IN ELECTIONS AND POLITICAL STORIES

WAR COVERAGE MUCH HIGHER THAN TV

TV: 11, 36, 9, 10, 18, 7, 9
RADIO: 17, 24, 6, 6, 38, 5, 6
PRINT: 14, 3, 9, 25, 45, 2, 6

Diplomatic meetings/ events — Political stories — Election stories — Health, education, religion

War, crime and corruption — Economics — Other events

NB: SOME ARTICLES/ITEMS
COVERED MULTIPLE THEMES
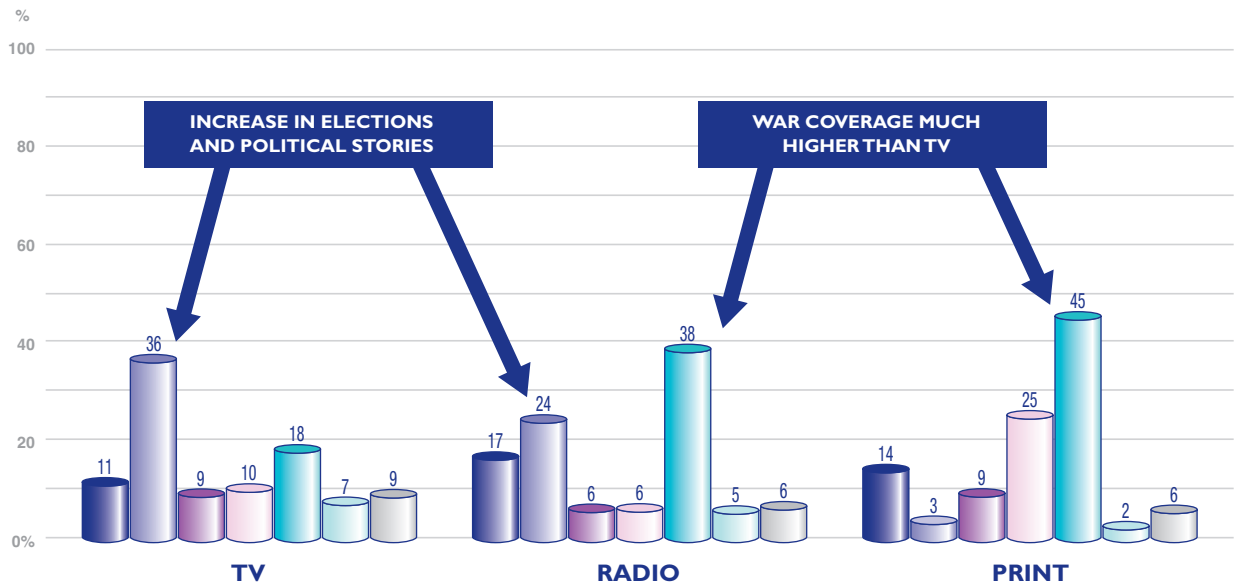
Figure 3: Post-training - thematic coverage

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Frequency of Presidential coverage [27]

Without a training intervention, an increase in coverage of the President was anticipated as the elections were imminent. Frequency of coverage of the President in the first story/news item post-training differed depending on intensity of intervention (see Figure 4):

» Television (high intensity): news items featuring the President decreased substantially from 83% pre-training to 55% post-training.

» Radio (medium intensity): news items featuring the President decreased from 87% to 67% post-training.

» Print (low intensity): stories featuring the President increased slightly from 65% to 69%.

Instead of the first news item / story being dominated by coverage of the President, TV and Radio reports post-training covered other Ministers, the High Commission for Elections and the Supreme Court.
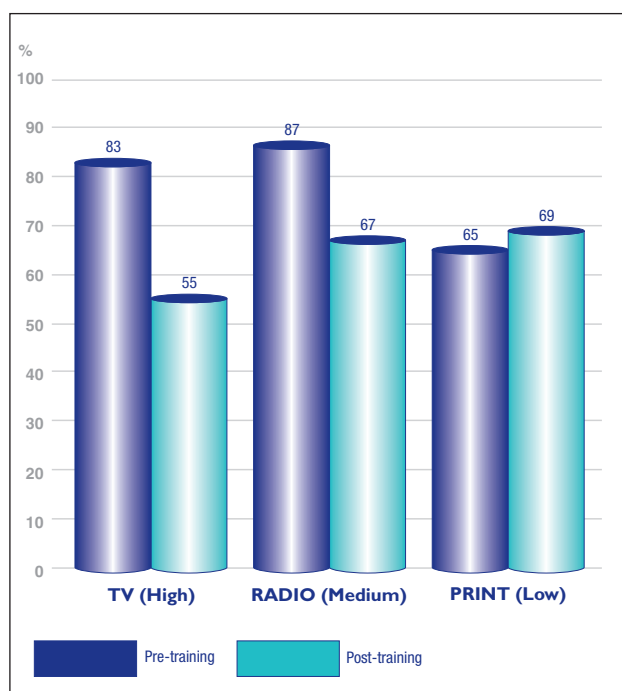

Figure 4: Pre- and post-training: % of first stories/news items featuring the President

Treatment of the President

With the elections pending it was anticipated that favourable coverage of the President would increase. This was confirmed by the print results (see Figure 5) where the intensity of the intervention was low: positive mentions of the President were low pre-training (15%) and increased post-training (25%)[28].

Prior to the training the media varied in the extent to which output showed positive bias towards the president therefore training was not always required to focus on this issue. For example, for television, explicitly positive treatment of the President was already low pre-training (21%), with only a small decrease (18%) post-training.

In contrast, media which were most favourable towards the President pre-training witnessed the greatest changes in treatment post-training:

» Radio (medium intensity): explicitly positive treatment of the President was high pre-training (94%) – post-training this decreased (55%).

» On-line (high intensity): explicitly positive treatment of the President was high pre-training (53%) – post-training this decreased (25%)[29].
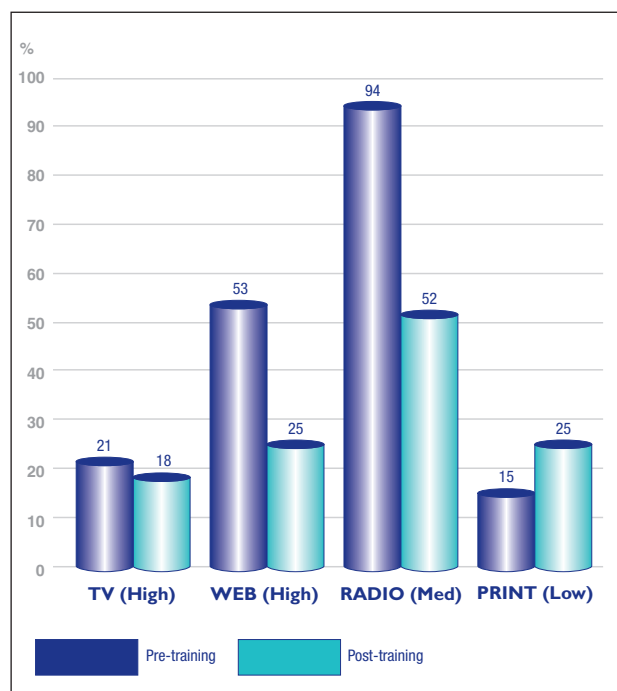

Figure 5: Pre and post-training: % of explicitly positive mentions of the President by media

Presentation of output [30]

Before training, headlines in the Yemeni broadcast media, especially radio, were often lengthy (See Table 2) and did not effectively capture the essence of the story (Figure 6). In January, the average length of headlines for radio was 15 words but it was not unusual for them to be longer, for example, a radio news bulletin on the 3rd of January opened with the headline:

The Yemen government ministers have sent a memo of congratulations to the President "The brother President" Ali Abdullah Saleh the President of Yemen. The brother Abdul Qadir Bajami [Yemen Prime Minister] has confirmed that the government is equipped to face the new kidnapping situation.

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[27] For this analysis the longest story was selected for print and the first news item for TV and radio.

[28] In all other stories the President was treated neutrally – there were no negative mentions in any stories in the sample for print, broadcast or online ouput.

[29] Online news stories were included in the analysis as coverage of the President in 'elections/ political issues' stories was recorded.

[30] Broadcast media only.

Only in the final words does the essence of the story emerge. Training with broadcast media organisations aimed to encourage journalists to:

>> produce concise, 'punchy' headlines which clearly capture the main themes of the news story

To measure whether the training achieved its objectives content analysis recorded:

>> the headline length of each news story (number of words) and;

>> whether the headline captures the essence of the story

The results showed:

>> Radio (medium intensity): headline length decreased and the training achieved its objective of 'punchy' headlines which clearly capture the essence of the story (See Table 2 & Figure 6).

>> TV (high intensity): although the length of headlines decreased post-training, they were recorded as being less successful in capturing the essence of the story.

These findings demonstrate the balance that is required to ensure that headlines are short and 'punchy' but still retain the essence of the story.

	PRE	POST
TV headline length	9.1	5.6
Radio headline length	15	9

Table 2: Average number of words per headline pre- and post-training
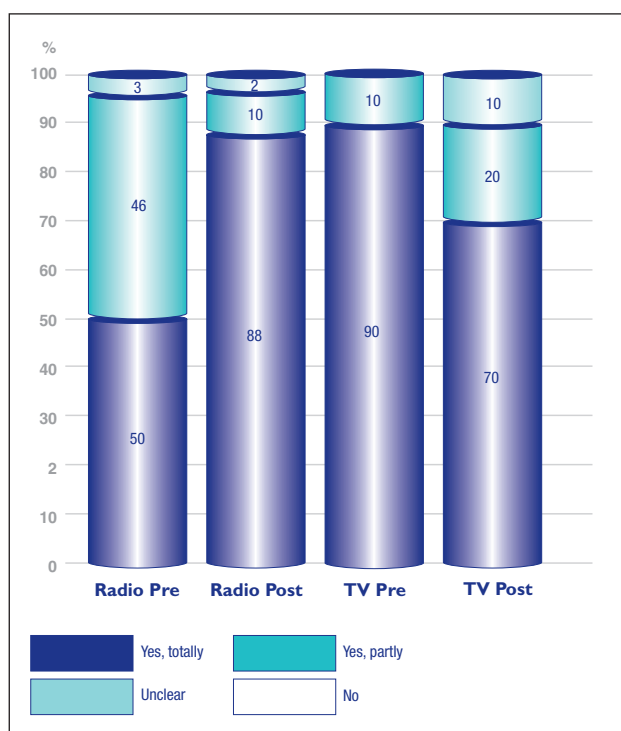

Figure 6: Does the headline capture the essence of the article it represents?

Production elements [31]

Prior to training, the TV news bulletins included sound bites but lacked on location interviews (live or recorded) and studio or phone interviews. Videos of reporters live on location were also rarely used. Instead, stills or pre-recorded video with live voice overs were common (See Tables 3 & 4).

Technical face-to-face training as well as on-the-job training and support with the television station aimed to encourage journalists to:

>> reduce use of stills or recorded video with live voice overs

>> increase the use of interviews – particularly on location interviews

>> increase items recorded live on location

To measure whether the training achieved its objectives content analysis recorded:

>> the mean number of specific sound and video devices present in each news bulletin (see Table 3)

>> type of video sourcing in bulletins (see Table 4)

The mean number of specific sound and video devices present in each news bulletin

>> 'Live voice-overs' reduced (6.7 to 1.3) post-training and the use of 'on-location interviews' (0.3 to 3.7) and 'live on-location' footage (0.1 to 0.7) increased. Phone and studio interviews are still not used in news bulletins post-training (see Table 3).

Changes in output post-training indicate that the training achieved its objectives in relation to technical quality. The number of 'live voice-overs' decreased and reporters 'live on-location' and 'on location interviews 'increased.

Sound/interview types	PRE	POST
Live voice-over	6.7	1.3
Sound bite	3.3	2.9
Pre recorded on location	2.2	1.7
Live on location	0.1	0.7
On location interview	0.3	3.7
Phone interview	0.1	0.0
Studio interview	0.0	0.0

Decreased significantly after training   Increased significantly after training

Table 3: Mean number of sound/interview types present in TV news bulletin

Video sourcing in TV Bulletins

Before training there was little use of reporter-led packages with primary shot video tape (i.e. footage of the journalist reporting a story) and more use of pictures purchased through the TV feed from wire agencies. After training there was an increase in news gathering and reporters appeared in their packages (1.5% pre-training and 26% post-training). Images from the wire service decreased from 29.3% to 7% after training.

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[31]   For the purpose of this paper production elements refer to findings for TV bulletins only.

Video sourcing in TV bulletins	PRE	POST
Staff reporter/photographer	67.7	63.2
Wire service	29.3	7.0
Other media	1.5	3.5
Reporter	1.5	26.3

Decreased significantly after training

Increased significantly after training

Table 4: Video sourcing in TV Bulletins

Research learnings

The findings from this research reveal the complexity of delivering journalism training and the challenges involved in capturing evidence of impact. Content analysis is a useful tool for measuring change in media output. It can both inform training delivery and provide evidence of improvements to output after training has taken place. The detailed and systematic collection and analysis of data can detect subtle changes in content, presentation of output and production elements that might not be captured by other research techniques.

Although content analysis provides evidence that the output has changed it may not necessarily be a direct result of the intervention. Content analysis records media output - it does not measure the situation under which the news is produced. For example, during the training period managers might have introduced editorial guidelines or style guides to the organisation independently of the training intervention. Changes in output might be attributable to the actions of management rather than the training experience.

Content analysis is also limited to measuring changes to output only – not to the skills acquired by particular trainees. For example, a trainer worked with the news room team to produce a radio package - at the last minute the management refused to broadcast the piece due to editorial policy. Although the improved content was not broadcast, and therefore not included in the content analysis, journalists acquired skills in the production process. This would not be captured through content analysis. Additional research tools such as in-depth interviews, questionnaires and trainee logs should be used to provide a more complete understanding of the changes that have taken place and the role of the training intervention in this process.

The results from the research undertaken on media output in Yemen show that:

Content analysis can be an effective tool for capturing evidence of changes to media output

Practitioners – post-training journalists have a better understanding of how to produce news bulletins:

>> headlines became shorter and more concise (Radio)

>> live on-location interviews increased (TV)

>> explicitly positive mentions of the President decreased (Web)

>> news bulletins contained more live on-location footage (TV)

Organisations – are producing improved output: changes in content, presentation of output and production elements were recorded. This indicates that:

>> Change occurred at an organisational level – staff from across the organisation in different roles had applied new skills and practices resulting in improved organisational output. For example, post-training, producers and field reporters worked together to produce more on-location live video footage instead of using stills and voice-overs in the studio.

>> Management supported change – Editors-in-Chief agreed to publish/broadcast improved output post-training. For example, in Yemen state radio, the reduction of first news items featuring the President's daily engagements is evidence of a change in the organisation's editorial approach.

Content Analysis can provide insights on best practice for journalism training

By comparing results by different intensities of intervention across organisations content analysis reveals training is most effective when:

>> management of media organisations fully support the training programme and have an understanding of the principles being taught to trainees

>> the intervention includes a 'package' of training activities. The greatest changes in output occurred when on-the-job training complemented face-to-face training

>> the majority of the news production team participates in the training.

About the BBC World Service Trust

The BBC World Service Trust uses the creative power of media and communications to help reduce poverty and promote human rights. The Trust believes that independent and vibrant media are critical to the development of free and just societies. We share the BBC's ambition to provide accurate, impartial and reliable information to enable people to make informed decisions. To achieve this we partner with civil society, the media and governments to build long-term development solutions.

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