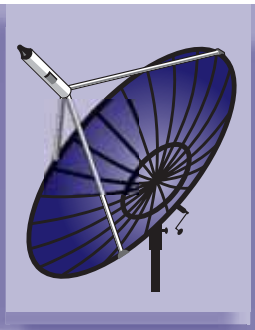

chapter twelve

MEASURING MEDIA AUDIENCES

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LEARNING OUTCOMES

At the end of this chapter, you should be able to:

- understand important concepts in audience measurement;
- understand and interpret audience measurement statistics and data;
- critically reflect on various audience measurement practices;
- plan and conduct limited audience measurement studies.

THIS CHAPTER

This chapter is about some of the practices of audience research and, in particular, the methodologies and techniques employed in measuring the audiences of different broadcasting, print and outdoor media, the cinema as well as new media such as the internet. It also gives attention to audience measurement in South Africa and gives a glimpse of some of the problems associated with, and criticism on, audience measurement. The relevance of audience measurement for academic researchers is illustrated by means of a case study.

The most important topics dealt with in this chapter are:

- reasons for audience measurement;
- key concepts in audience measurement;
- research questions in audience measurement;
- methodologies and techniques in measuring audiences for broadcasting media (radio and television), print and outdoor media, the cinema as well as new media such as the internet;
- audience measurement in South Africa;
- problems associated with, and criticism on, audience measurement.

12.1 INTRODUCTION

Imagine yourself that a newspaper, radio station or television channel has no audience. Does it deliver its message? Does it matter at all whether there is an audience or not? Of course it matters! All activities of the media – both content-related and market-related – are focused on the audience (Webster, Phalen & Lichty 2006). Without the audience, all media-related activities become completely senseless.

The problem with media audiences, however, is that they are very hard to find. Audiences are mostly elusive, geographically dispersed and hidden away in homes, businesses and/or motor vehicles. They remain largely unseen for those involved in the business of the media. It is only through research that the audience becomes visible (Webster et al. 2006). A former director-general of the BBC, Michael Checkland (in Van Vuuren 1994:120), comments: 'In the absence of research we know nothing about our customers. Maybe this is something unique to broadcasting. All we do is send invisible signals out into the ether. How do we know whether anyone receives them? The answer is audience research.'

However, audience research – and audience measurement in particular – has become much more than merely satisfying the curiosity of broadcasters about their unseen audiences (Webster et al. 2006). As early as the 1920s, AT&T in the United States (US) started to charge clients a toll to make announcements over their station and found it to be an effective way to fund their medium. 'Toll broadcasting' as this practice was initially called, led to the spread of commercial television, not only in the US, but all over the world (Fourie 2003; Gane 1994). Public service broadcasting systems primarily regulated and funded by governments have been widely replaced by the dual system of the US, which entails a combination of both public service and commercial broadcasting. Deregulation and the dominance of the market-orientated paradigm has resulted in increasing pressure on both commercial and public service-oriented broadcasting media, as well as the print and other forms of mass media, to cover costs and/or to increase income by means of advertising revenue. Currently, most media rely to a larger or smaller extent on sponsorship and/or advertising as a source of revenue. The media and marketing worlds have consequently become inextricably intertwined.

The need for audience measurement is currently largely a function of this changing media environment (Fourie 2003; Gane 1994). In the marketing industry, increased competition due to factors such as product deluge and saturated markets has created the need for more precise identification of market segments in order to target advertising to designated segments more efficiently (Buzzard 2002). The same efficiency is nowadays also sought in the media industry. Blanket targeting of undifferentiated mass audiences with the hope that somehow, somewhere, some media products will be acceptable for some or most people, is no longer possible. Precise targeting of products – also media products – has become essential for success. Media networks are consequently shifting away from the traditional idea of the mass audience – known as the lowest common denominator for programming – towards smaller targeted audiences. This process of targeting precisely defined audiences is known as narrowcasting.

Audience research – empirical research aimed at uncovering the mysteries of the audience and its behaviour and distilling it into hard data – has thus become of crucial interest to all of those involved in the media (Abelman & Atkin 2002). Audience measurement has

furthermore become a complex and highly specialised industry in which huge sums of money are spent on an annual basis all over the world. Technological innovation is furthermore constantly transforming the possibilities for and practices of audience measurement.

Whatever your personal career goals in the media, you will need to achieve a theoretical as well as practical knowledge and understanding of audience research (Webster et al. 2006). In this chapter, we explore the practices of audience measurement (sometimes also called ratings research).

12.2 WHO NEEDS INFORMATION ON AUDIENCES?

Various groups of people and/or institutions require detailed information about audience size and structure, as well as audience use of and/or attitudes towards the media (Kent 1994):

- Programme and film producers, broadcast schedulers and newspaper and magazine editors all need to address a potential audience or 'market' for their products with a suitable marketing mix. This means that product design, contents and specification (e.g. programme planning and development), pricing (e.g. charge for advertising slots), promotional activities as well as coverage (e.g. the area of broadcasting or physical distribution) need to be matched not only with the opportunities that exist in the market, but also with the organisation's capabilities and limitations. The same principle as for all kinds of human communication applies here (Mytton 1999). We speak differently, for example, to toddlers than to secondary school learners. Similarly, all aspects of media programming have to be matched to the target audience. This process of matching cannot take place without basic information on the size and structure of the audience as a whole, as well as for individual channels, stations, programmes, newspapers or magazines. Programme schedulers furthermore need information on certain aspects of consumer behaviour (e.g. channel switching behaviour) and preferences for and attitudes towards particular programmes and/or contents.
- Media owners – Media owners typically operate in two different markets: the market of audiences for their particular media products, on the one hand, and the market of advertisers on the other, to whom they hope to sell advertising opportunities for communicating with potential customers. In dealing with advertisers, they need

to convince them that a particular medium will reach a particular audience in terms of both size and composition. In order to do that, detailed information on the audience is needed.

- Similarly, advertisers and sponsors, that is the buyers of opportunities in the media to market their products, need information in order to select media or a combination of media in which to advertise; the specific channel(s), station(s), newspaper(s) and/or magazine(s) to use; what type of messages or content to convey; and the best time, frequency and/or methodology to convey their messages.
- Advertising agencies, media consultants and/or market research agencies usually act on behalf of advertisers or sponsors. In order to provide specialist advice to their clients, they also need detailed information on audiences for all the media.
- Last, but hopefully not the least, are academic researchers and analysts. In the end, research on media audiences is necessary in order to test and develop theories on audience behaviour and media consumption.

12.3 WHICH QUESTIONS ARE ADDRESSED IN AUDIENCE RESEARCH?

From the preceding section the conclusion can be drawn that audience research today needs to address a variety of complex information needs of a wide range of interested parties with different motivations, interests and levels of sophistication. The following key research questions form the basis of most audience measurement endeavours (Webster et al. 2006:31–9):

12.3.1 How many people are there in the audience?

This single factor – the size of the audience – mostly determines the value of a programme, station, channel and/or website to the media as well as advertisers. The measures of *coverage*, *audience share* and/or *audience ratings* are mainly used when referring to audience size (see section 12.4).

12.3.2 How often do people show up in the audience?

This factor relates to audience behaviour, which underlies the size of the audience. It is necessary to obtain information on how individuals use the media over time. Firstly, it is, for example, necessary to establish

whether two television soap operas with similar ratings are viewed by the same group of people or completely different groups of people (audience duplication). Advertisers also want to know how many different people are exposed to their message. *Coverage* (see section 12.4) is the measure most often employed in this regard. Another key factor is the frequency of exposure, namely the number of times that members of an audience see or hear a particular programme, read a particular newspaper or magazine or visit the cinema or a particular website. The frequency of exposure will determine, in the end, the number of times individuals are exposed to a particular message. The measure of *frequency* is used in this regard (see section 12.4).

12.3.3 Who are the members of the audience?

We emphasise in the introduction that the audience can no longer be regarded as a faceless mass (Ivala 2007). Nowadays most messages and programmes are targeting a specific kind of audience – a strategy called market segmentation or narrowcasting. The need for information on the composition of the audience consequently does not lag far behind information on audience size. Audiences are usually segmented according to particular traits and characteristics. Researchers usually refer to these traits as *variables*. The SAARF Living Standard Measure (LSM) is for, example, widely used in South Africa for market segmentation (see section 12.9). According to Webster et al. (2006), audience attributes can be grouped into the following categories:

- *Demographic variables* – Demographics most commonly reported in audience data are race, ethnicity, age, gender, income, education, marital status and/or occupation. Of these, age and gender are perhaps the most important. Broadcasters and advertisers, for example, often sell or buy programmes directed at pre-school children, teenagers, women or the whole family.
- *Geographic variables* – Just as people differ with regard to demographic attributes, they also differ in terms of where they live. Geographic variables often used in audience research are country of residence, province, residential area as well as rural versus urban areas. Newspapers, radio stations, television channels and other media are often directed at specific geographical areas. Living in particular residential areas can furthermore reflect a person's income, lifestyle and/or station in life. One can assume, for example, that people living in Waterkloof in Pretoria will have a relatively high

income, fill important posts in government or the private sector and consequently pursue a particular lifestyle.

- *Behavioural variables* – Behavioural variables distinguish between people on the basis of particular behavioural patterns. It is, for example, important to know whether people listen to or watch particular channels, stations and/or programmes, read particular newspapers and/or magazines or visit particular websites, and how often they do so. Other behavioural variables important to advertisers, in particular, are product-purchase variables. As most advertisers want to reach the audience members that are most likely to buy their products, audiences are often also segmented into buyer-graphics.
- *Psychographics* – Psychographics draw distinctions between people on the basis of particular psychological characteristics such as values, attitudes, motivations and/or preferences. According to Webster et al. (2006), psychographic variables that have caught attention recently are audience loyalty, involvement and/or engagement. It has become important for media professionals as well as advertisers to know who are the people that are particularly loyal and/or committed to particular media products. It has, for example, been found that the fans of a particular programme will also be more attentive to the advertisements contained within it.

It can be concluded that the media – and all those involved – are complex institutions that use information in a variety of ways and for a multitude of purposes. With regard to academic research into the media, audience measurement can yield important insights into media consumption as well as the power and potential effects of the media.

12.4 KEY CONCEPTS IN AUDIENCE MEASUREMENT

The following concepts are fundamental to all aspects of audience measurement:

12.4.1 The concepts of 'watching', 'listening', 'reading' and/or 'visiting'

watching, listening, reading and/or visiting

At a glance it does not seem that there is much to ponder about these concepts (Kent 1994). However, there are two questions that both researchers as well as practitioners should consider:

- Precisely what kind of behaviour is involved in the activities 'watching', 'listening', 'reading' and/or 'visiting' (an internet website)?

- How long is it necessary to pursue with these activities in order to be considered, for example, to have 'watched', to have 'listened', to have 'read' a newspaper, book or magazine and/or to have 'visited' an internet website?

With regard to television audiences, 'watching' may simply mean being in a room where a television set is switched on. Alternatively, it may entail claiming in a questionnaire or diary that watching has taken place. Where electronic devices such as peoplemeters are used (see section 12.7.3), the definition may change from mere presence in the room where a television set is switched on or to facing a television set. Similarly, the concept of 'listening' can refer to claims to have listened to a particular programme for a particular period (sometimes a period is not even indicated). The possibilities of defining the 'reading' of a newspaper or 'visiting' an internet website are even more difficult.

Currently, most methods and techniques of audience measurement rely on respondents' own subjective definitions and whether they themselves believe that watching, listening, reading and/or visiting has taken place (Kent 1994; Van Vuuren 1994). However, variations in the definitions of these concepts make comparisons of audience sizes across methods, techniques and instruments extremely difficult, if not impossible. In the end, all audience measures are dependent on the underlying definitions of these activities and audience measurements will vary accordingly.

12.4.2 Coverage or reach

coverage

As mentioned in section 12.3, coverage is an important indicator of audience size. Kent (1994) defines *coverage* – known in the US as *reach* – as the proportion of the total number of unduplicated individuals or households reached by a particular medium or item of communication (e.g. a television or radio programme, newspaper report or advertisement). According to Du Plooy (2001), coverage is usually calculated as a percentage of the population. For example, if 600 households within a given target population of 1000 are exposed to a particular radio programme, the reach is 60%.

Firstly, coverage is dependent on the definitions of the activities of 'watching', 'listening', 'reading' and/or 'visiting'. Secondly, coverage is determined by who is included in the definition of the total potential audience of interest – the so-called universe or population. Webster et al.

(2006) point out that measurements of coverage are commonly based on the entire potential audience (or universe) for a particular medium. For one of the television channels of the SABC, the total population would be the numbers of households in South Africa with one or more television sets – it does not matter whether those sets are switched on or not. For M-Net, the population would be the total number of subscribers. In the case of regional channels, the population would be those households in a particular region that have television sets.

It has furthermore to be borne in mind that populations can be composed of different building blocks or units of analysis. Whereas households equipped with television sets are commonly used as units of analysis in estimating television audiences, individual readers, radio listeners or individuals visiting an internet website are taken into account when newspaper, radio or internet audiences are estimated. However, television channels might also use individuals as units of analysis when different groups of people are considered. Television ratings might, for example, draw a difference between men and women or different age groups. Depending on the definition of the population, it may or may not, for example, include children. Children, on the other hand, may be defined differently according to specific age ranges (e.g. 0–5 years or 10–16 years of age).

Coverage furthermore takes on various forms for various media. The coverage of a television programme is, for example, determined by the size of its audience expressed as a percentage of the relevant population. For the print media, coverage is normally expressed as the average issue readership. In advertising, coverage is often measured in terms of the proportion of the population seeing at least one spot of an advertising campaign. With regard to the electronic media, coverage can also be attached to a particular time frame. The coverage of a television channel can, for example, be defined in terms of the percentage of the population watching the channel in a particular minute.

12.4.3 Audience share

audience share

The term 'audience share' usually refers to radio and, in particular, to television programmes. A programme's share refers to the percentage of total *viewing* or *listening* households within the universe whose sets are tuned to that programme. Audience share consequently refers to a particular programme as well as to the programmes broadcast

during a particular time slot, such as prime time. For the calculation of share, the population (or universe) is therefore not the total number of households in a particular country, but the total number of households who actually watch television or listen to the radio during a particular time slot (the time slot when a programme of interest is broadcast). It is therefore necessary to have information on the total number of viewing or listening households in a particular population during particular time slots. Statistics on audience share are normally not used to sell advertising time, but play an important role in decisions on scheduling (Blumenthal & Goodenough 2006).

12.4.4 Audience ratings

audience ratings

The term 'ratings' is closely related to coverage or reach (Webster et al. 2006). Audience ratings have become so common and popular that the term 'ratings research' is often used as an umbrella term or shorthand title for audience measurement in general. However, it is important to keep in mind that the rating of programmes is only one of a series of statistical summaries that can be derived from the data obtained through the data-gathering instruments and procedures that we discuss in this chapter.

Similar to 'share', the term 'ratings' represents a description of audience size (Webster et al. 2006). Blumenthal and Goodenough (2006) define the ratings of a television programme as the percentage of total number of households in an area that have television sets that were tuned to the particular programme. Whereas audience share compares the appeal of all programmes broadcast within a particular time slot, audience ratings are used to compare all programmes broadcast in a more or less equal way. It is assumed that programmes that are likely to draw a large audience will be broadcast during more popular time slots.

According to Beville (1988), audience ratings are a powerful force within the media industry that determines the price of a particular programme and the payment that performers will receive. They are furthermore an important factor determining the price that advertisers will be willing to pay for advertising time in and around the time that the programme is broadcast. Ratings also determine the rank order of stations or channels in a particular market as well as their monetary value if and when they are put up for sale. The compensation of key executives and their job security, as well as their chances of being promoted or demoted, can also

be affected by the ratings. In the end, the simple push of a button – as members of the audience switch on their sets or tune from one station or channel to another – provides the single most important piece of information regarding audience behaviour.

Especially in the US, audience ratings are the most visible component of audience research, and hold a unique place in industry practice as well as in the public consciousness (Webster et al. 2006). Audience ratings have virtually become part and parcel of popular culture. The Nielsen ratings in the US are famous – or infamous – for serving as the 'bullets' that killed programmes like *Star Trek* and *Twin Peaks*. However, the

Table 12.1 South African programme ratings: average from 1 January 2008 to 22 May 2008 (SAARF TAMS®)

Position	Programme	Channel	AMR%
1	Generations	SABC1	22.0
2	Zone 14	SABC1	19.7
3	SAMA Awards 2008	SABC1	18.6
4	A drink in the passage	SABC1	16.9
5	Shakespeare: Entabeni	SABC1	16.8
6	Shakespeare: Izingane Zobaba	SABC1	16.6
7	Hopeville Mansions	SABC1	16.5
8	MTN African Cup of Nations Ghana – South Africa vs Senegal	SABC1	16.1
9	Unsindiso	SABC1	10.6
10	The Vice Chancellor, the Chicken & the Mayor	SABC1	10.5
11	Stars of Mzansi Awards	SABC1	14.9
12	Zulu news	SABC1	14.9
13	The Fast and the Furious	e.TV	14.9
14	Twins of the Rain Forest	SABC1	14.1
10	Xhosa news	SABC1	13.7
16	The Basikol	SABC1	13.7
17	Zola 7	SABC1	13.7
18	The Rundown	e.TV	13.6
19	Jika ma jika	SABC1	13.6
20	MTN African Cup of Nations Ghana – Cote d'Ivoire vs Nigeria	SABC1	13.5

Source: Milne (2008)

influence of ratings on the culture, content and business of television stretches much further than the mere power to stop the broadcasting of shows.

Notwithstanding the dominating role of ratings in the television industry, it has always to be borne in mind that audience research entails much more than mere ratings analysis. Some of the rich detail of audience research should emerge from the contents of this chapter, but also from the other chapters on audience research.

12.4.5 Frequency

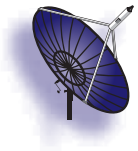
frequency

As already discussed in section 12.3, it is not only important what proportion of the population have been reached by a particular medium or communication item. In most cases, it is also important to know how often people 'watch', 'listen', 'read' and/or 'visit'. The concept *frequency* also has different meanings. *Frequency* may indicate the number of times an individual has watched a particular programme within a particular period (e.g. a two-week period) or the number of times an individual has seen a particular advertisement. Frequency multiplied by coverage gives the total number of possibilities and/or opportunities for a particular programme to have been watched or an advertisement to be seen. In combination, coverage and frequency form the yardsticks with which the media industry evaluates its successes and failures. It furthermore represents the 'currency' on which negotiations for the buying and selling of advertising opportunities are waged. Measurements of coverage and frequency are consequently one of the main aims of audience measurement endeavours.

12.5 ESTIMATING THE AUDIENCE

population versus sample

When researchers conduct research into media audiences, they are usually interested in an entire population or universe (Kent 1994; Webster et al. 2006). The nature of the population can differ from study to study. Most audience research endeavours in South Africa are interested in the entire South African population. However, as discussed in section 12.4, definitions of the population can vary from study to study and measure to measure. In most cases, however, it is logistically impossible to interview or to obtain data from every single member of the population. Researchers therefore need to *estimate* the audience from a subset that is called a *sample*. Sampling is widely used in scientific



research in the social sciences. Audience measurement endeavours are often criticised, however, due to the fact that the audience estimates that they produce are based on samples and not the whole population. However, without sampling, audience measurement becomes virtually impossible. The founder of one of the world's largest audience-research organisations, Arthur Nielsen, was fond to respond to criticism on the practise of sampling by saying: 'If you don't believe in sampling, the next time you have a blood test, ask them to take it all out' (Webster et al. 2006:113).

In the end, it is the quality of a sample that has a tremendous influence on the accuracy of the audience measures obtained (Kent 1994; Mytton 1999; Webster et al. 2006). Issues of sampling are discussed in more detail in Chapter 10. Here it is sufficient to point to the two big classes into which all samples are divided, namely probability (also called random samples) and non-probability samples. The difference between these two classes lies in the way researchers identify and select members of the population to participate in the research. Probability samples make use of methods and techniques in which every member of the population has an equal or known chance of being selected. In contrast, non-probability samples depend on happenstance or convenience in selecting participants (or respondents). In comparison to non-probability samples, probability samples are usually extraordinarily expensive and time-consuming to construct and execute. However, researchers have much more confidence in data obtained from probability samples. Furthermore, probability samples allow for generalisation or expanding the results to the population as a whole, while that is not the case with non-probability samples.

Generally, audience measures will only be trusted and accepted if they are based on a probability sample – or a good approximation thereof. All trustworthy research organisations involved in audience measurement therefore strive towards employing probability sampling in their research endeavours. Their research and technical reports are also laced with the vocabulary related to probability sampling. In order to make sense of these reports, you will need to become familiar with the principles and terminology of probability sampling as discussed in Chapter 10.

12.6 SOURCES OF ERROR IN AUDIENCE MEASUREMENT

A great concern for both the producers and users of audience research is the potential of error in the data. According to Webster et al. (2006), the concept 'error' as used in research should be understood differently from the normal understanding of mistakes being made. It rather refers to the extent to which the audience measures estimated on the basis of samples fail to reflect what is really happening in the population. Error therefore refers to the difference between what audience estimates hold audience measures to be, and what the measures really are. Sophisticated users of audience data need to understand the potential sources of error and how audience-research organisations deal, or do not deal, with these.

The following sources of error are of particular relevance to audience measurement (Kent 1994; Webster et al. 2006):

12.6.1 Sampling error

sampling error

Sampling error is perhaps the most abstract of all the sources of error. Basically, it recognises the fact that as long as we try to estimate what is true for a population from something that is less than the population, namely a sample, the chance exists that we may miss the mark. Even when we use large probability samples that are perfectly executed, these might fail to accurately represent the population from which they were drawn. This potential is inherent in the process of sampling. Sampling error is discussed in more depth in Chapter 10.

12.6.2 Non-response error

non-response error

There are furthermore sources of error associated with the process of executing sampling designs. One of the most important is non-response error. Non-response error occurs because not everybody selected to participate in a study will respond or cooperate. The possibility exists that a sample can become biased if those who do respond or participate differ from those who do not want to, or fail to, participate. Some research designs are more prone to non-response error than others. Non-response error is also discussed in greater detail in Chapter 10. When studying audience measurement reports, non-response error can be detected by comparing the original sampling design with the final realised sample. Research organisations involved in audience measurement should also report on the reasons for non-response

and indicate the procedures that they followed to prevent or correct non-response error.

12.6.3 Response errors

response errors

Other sources of error are related to the research process itself. When asking people about their watching, listening, reading or visiting behaviour, their responses are based on their memory recall of their own behaviour. Memory is, however, subject to failure, which can give rise to incorrect or incomplete responses. Problems related to memory recall, and the steps that research organisations take to prevent it, will be addressed in the discussion of the methods and techniques employed in audience measurement. Response error can also occur when respondents and/or participants misunderstand instructions or questions (see the section on questionnaire design in Chapter 10). When push-button metering systems are used, panellists can forget to push their buttons to register their own viewing or push the wrong buttons. Participants can furthermore be plainly dishonest or cheat intentionally.

12.6.4 Interviewer error

interviewer error

Interviewers can make mistakes when recording the responses of respondents and/or participants. The way in which interviewers understand or approach questions can also influence respondents/participants to respond in a certain way and result in biased responses. The training of interviewers is also discussed in Chapter 10.

12.6.5 Sources of error external to the research process

external sources of error

Measures can be biased by unusual promotional and publicity efforts on the parts of the media in order to raise their audience levels during measurement periods. For example, newspapers can run competitions offering exciting prizes that require readers to buy the newspapers every day during the period that audience surveys are conducted. There is little that researchers can do to address biased measures due to such efforts. However, measurements that are done on a continuous basis, such as in the case of peoplemeters, are less prone to such sources of error (see section 12.7).

Although professionals in the media and advertising industries are often aware of the potential sources of error and bias in measurement data,

these limitations are seldom considered in practice (Kent 1994). The daily pressures of running media and advertising businesses usually require some kind of yardstick in the form of audience data on which important decisions can be made. It is often assumed that, provided errors are relatively constant, that the figures provide a relatively balanced reflection of the situation as it really is. The fact that all audience measures, in the end, are mere estimates of the 'truth' is often conveniently overlooked.

12.7 INSTRUMENTS FOR CAPTURING DATA ON AUDIENCES

In the early years of the development of the mass media no systematic audience research was done (Mytton 1999). The likes and dislikes of editors, media owners, channel managers and/or sponsors most often determined the contents of the media. However, it soon became clear that information was needed that was independent of their own views or opinions. Some of the early forms of audience measurement entailed the counting of letters elicited by particular reports, articles or programmes. Other forms of 'measurement' were no more reliable. In an attempt to determine audience size, broadcasters would draw a circle on a map with a radius reflecting what they thought the reach of the station to be and determined the number of people living in the area. However, these measures were meaningless as it was not a given fact that all these people were indeed members of the audience. A number of things, such as transmitter power, local geography, station programming, wavelengths and other factors are known to influence the size of the audience.

As the limitations of these ad hoc methods of audience measurement have been realised, audience research has developed as a formal and systematic enterprise. The applications of audience data are endless (Mytton 1999): it is used to assist in the creative process of writing and/or programme-making; it provides a scientific basis for programming, policy and marketing decisions; it can be used to maximise the efficient and cost-effective use of scarce resources; and it can be employed to determine the effectiveness of public advocacy campaigns. In the end, large amounts of money are spent on the basis of decisions informed by audience research and millions of lives are affected by these decisions (Webster et al. 2006).

The high stakes in audience research imply that it not only needs to fulfil a wide variety of complex information needs, but also has to

provide highly accurate and precise information. Although the practice of audience research is constantly changing, a number of instruments for capturing audience data have stood the test of time. Each of these instruments has unique applications within the media world, and each has certain advantages and limitations, which should become clear in the following sections.

12.7.1 Social surveys

surveys

Questionnaires are probably one of the oldest and best-known ways of investigating social phenomena, such as media behaviour (Ivala 2007; Kent 1994; Mytton 1999; Webster et al. 2006). Questionnaire surveys as a research methodology in media research are discussed in detail in Chapter 10. Here it is sufficient to explain briefly how surveys are employed in audience measurement and research.

A questionnaire is a self-reporting method, and information can be gathered on any aspect on which questions can be asked to a respondent. Data can thus be gathered on demographic characteristics, print and electronic media usage patterns, lifestyle, values, attitudes and opinions, as well as the products and services that people buy and use. These responses can provide a treasure trove of information to media researchers, practitioners and advertisers, as particular demographics, media usage patterns, values, attitudes and opinions can be linked to particular patterns of product purchase and usage of particular services. The idea of a questionnaire is, in the end, that the questions put to each respondent are standardised so that exactly the same questions are put in a similar way to each respondent. These responses can then be counted up and/or compared.

Whether questionnaires are self-administered or completed by means of interviewers (see Chapter 10), the conventional paper-and-pen method is most widely used in the media industry for completing questionnaires. Technological advances have, however, stimulated the development of new forms of surveying (Greenberg et al. 2005). In conducting the All Media Products Survey (AMPS – see section 12.9.2), the South African Advertising Research Foundation (SAARF) replaced the traditional pen-and-paper methodology with computer-assisted personal interviewing (CAPI) where fieldworkers capture responses by means of laptop computers that they carry with them (SAARF sa). Webster et al. (2006) furthermore mention the advent of personal

digital assistants (PDAs), which are pre-loaded with questionnaires and distributed to respondents. Respondents are required to carry the PDAs with them. At various times throughout the day the devices ring, asking people to complete a short questionnaire. People can be asked to report their mood, where they are and to report on the media and/or promotions within the particular location (e.g. at work, in the car, in a store, and so forth). After a couple of days the researchers reclaim the devices and the data can be read, captured and analysed. Online data gathering by means of web-based surveys is another new innovation available to media researchers.

Telephone interviews have also been widely employed in media research, but have particular limitations especially in developing countries such as South Africa with low telephone densities (see Chapter 10). However, two techniques associated with telephone surveys are of particular relevance to audience measurement (Webster et al. 2006):

telephone recalls

- *Telephone recall* – Respondents are contacted by telephone and requested to report on what they have seen or heard over a particular period of time. However, the quality of recalled information will be influenced by how far back a person is required to remember. The further certain events are removed from the present, the more the recalled information is subject to memory error. The salience of the behaviour in question, that is, the relative importance or unimportance, also has an influence on the quality of responses. Important or regularly occurring patterns are more clearly recalled than trivial or sporadic events.

telephone coincidentals

- *Telephone coincidentals* can overcome some of the problems of memory associated with telephone recalls. In these surveys, people are asked questions about what they are seeing or listening to at the moment of the telephone call. As respondents can be expected to verify who is using what media at the particular time, problems of memory can be overcome and be reduced to a minimum. Thus telephone coincidentals have often been used as the yardstick against which other methods of audience measurement are evaluated. However, although telephone coincidentals are still being used in quality evaluations of other measures (see section 12.8), they are no longer routinely employed in audience research. The problem is that this type of survey only provides a momentary glimpse of media usage. Thus, although it offers high-quality information, it does not

provide quantity of information on audience behavioural patterns over time. There are also practical limitations on where and when calls can be made. Much radio listening, for example, is done in cars where people cannot be reached by regular landline telephones. Also, while much television viewing is done late at night, it is regarded as inappropriate to call people at late hours.

Whatever the method being employed, social surveys offer the media researcher opportunities to investigate a wide range of issues – probably a larger variety of issues than any of the other methodologies or techniques employed in audience measurement. However, some of the disadvantages of social surveys have already been highlighted in the discussion of the methods of telephone recall and telephone coincidentals. The most important disadvantage is the relatively low accuracy in the reporting of actual behavioural patterns, such as listening, viewing, reading or visiting websites (Wind & Lerner 1979). This lack of accuracy can be ascribed to a variety of sources of error related to respondents (e.g. poor memory, forgetting, deliberate falsification of information, low awareness of the importance of particular information, reporting errors, etc.), the nature of the questionnaire (e.g. ambiguous question formats) as well as other aspects of the procedure (e.g. fieldworker/interviewer bias).

Due to the problems associated with memory error, in particular, social surveys on their own are no longer regarded as sufficient to provide high-quality and precise information on audience behaviour for broadcast media. However, due to the versatility of social surveys, they are still widely used in combination with other measuring instruments and/or techniques.

12.7.2 Diaries

diaries

The diary is another self-reporting method widely employed in measuring audiences in an attempt to overcome the lack of accuracy associated with social surveys. Diaries are distinguished by the fact that they capture data on audience behaviour on an individual basis over a period of time (Kent 1994). In most cases, respondents are instructed to record a particular form of behaviour (e.g. listening to the radio and/or watching television) every time that it occurs within a given period – often a week, two weeks or longer. Thus diaries record behaviour that is normally repeated at frequent intervals and which is difficult to recall correctly in a

questionnaire survey. The focus of diaries is predominantly on behaviour – and the frequency of behaviour – and not on attitudes and/or other variables of interest. One of the reasons why attitudes are not measured in a diary is the fear that the mere act of recording one's attitudes could influence behaviour. If a respondent, for example, records a negative attitude towards a particular programme, he or she can stop watching the programme and/or switch channels or stations.

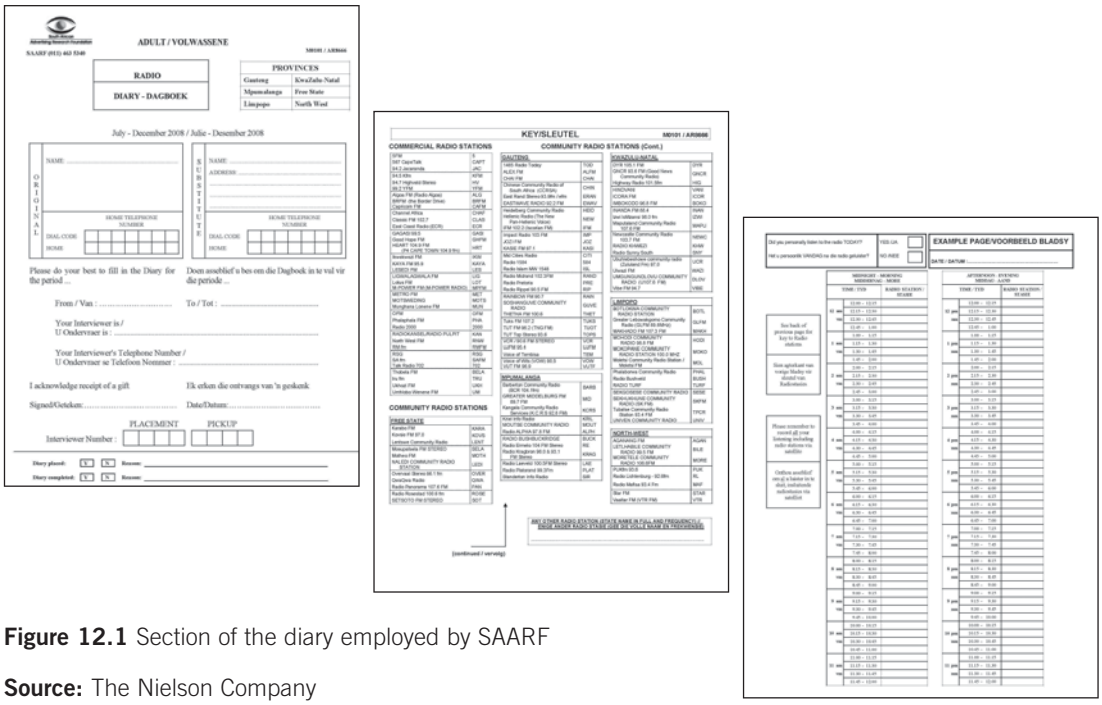


Figure 12.1 Section of the diary employed by SAARF

Source: The Nielson Company

Diaries may be sent to the respondent by post or delivered personally by an interviewer. At the end of the designated period, they can be collected personally or sent back to the organisers of the research by post. As already mentioned, diaries are usually completed by individuals who record their own behaviour. However, it is also possible that a particular person (e.g. the housewife) is made responsible for recording the behaviour of the members of a household as a whole. This is particularly the case when researchers are interested in the media behaviour of young children who are not able to complete a diary by themselves.

Diaries can differ to the extent to which they are fully structured or pre-coded, semi-structured or unstructured. Structured diaries usually include lists of all the channels, stations and/or even programmes

that can be received within a particular area. This implies, however, that a number of versions of the diary will have to be devised to make provision for regional differences within a country. Also, if programmes are pre-listed, last-minute schedule changes may be overlooked. In the case of unstructured diaries, respondents have to write in the names of channels, stations and/or programmes. In such a case, one version of a diary can be used for the whole country, but more effort is required from the respondent in completing the diary. It furthermore implies the post-coding of diary entries that could add considerably to the time and effort of researchers.

Diaries used to record listening or watching behaviour usually arrange entries by time segment on a daily basis, often in 10-minute or 30-minute periods. The time segments are usually indicated down the left side of the page, while channels, stations or programmes will be listed or entered across the width of the page. The respondent is requested to indicate all segments in which listening or watching takes place. Diaries for the print media resemble more of a product diary, where a list of newspapers and/or magazines is provided and respondents mark off those that they have read. Alternatively, respondents could write in the names of newspapers or magazines that they had read on a particular day. Diaries can also include additional aspects, such as questions on household composition, region, stations and/or channels that can be received, and so forth.

According to Kent (1994) diaries act as a type of 'reminder' to respondents that enhances the completeness and accurateness of reporting. The following potential sources of error have, however, to be kept in mind when employing diaries in audience research (Kent 1994; Webster et al. 2006):

- The completion of diaries requires a certain level of literacy from respondents.
- Respondents can forget to record viewing, listening or reading behaviour – this could be a result of failing to complete diaries as they go along and trying to recall behaviour after a couple of days or even at the end of the period just before they need to submit the completed diaries. To the extent that diary entries are delayed, memory errors are more likely.
- The respondent can record behaviour, but make a mistake on the details due to faulty memory or erroneous recording.

- There is evidence that diary-keepers are more diligent at the beginning of the recording period than towards the end. This so-called diary fatigue might depress viewing or listening levels at the end of the period. Viewing/listening late at night, of short duration and/or of less well-known programmes as well as viewing/listening of secondary sets (e.g. in the bedroom) also tends to be underreported.
- False information can deliberately be provided, either by omission of some media use or making imaginary entries. However, Webster et al. (2006) report that most people have a sense of the importance of audience research and the way it can affect programming decisions and will therefore refrain from deliberately providing false information. On the other hand, some people might regard the completion of a diary as an opportunity to 'vote' for particular programmes whether they are actually a member of the audience or not.
- When a housewife (or other household member) has to complete the diary on behalf of other household members, the person can be unaware of some media usage patterns of other members of the household (e.g. children can watch television without their parents being aware that they watch). It is consequently a known tendency that audiences of children's programmes are usually underestimated in diary measures (Friedman & Ayer 1989).
- The increasing complexity of the media environment, as well as audience fragmentation, has made diary-based measurement problematic in recent years (Webster et al. 2006; Friedman & Ayer 1989). For example, a person watching a movie recorded by means of a video recorder (VCR) might find it difficult to remember on which channel the movie was originally broadcast. Also, if a person 'jumped' about 40 channels before finally watching a programme, it would also be difficult to remember in the end which channel he or she finally really 'watched'. It is also easy to confuse channels, such as the various international news channels. It is for these reasons believed that diaries usually under-report the audience for satellite and cable television or independent radio stations/television channels.
- Lastly, Friedman and Ayer (1989) hold that the more entrenched a particular station or channel or other medium is in the minds of diary-keepers, the more likely it is that it will be remembered when the diary keepers fill out their diaries.

These sources of error can be influenced by a number of factors: the

type of programme, newspaper or magazine; the frequency of media use; the position of a page in the diary; the position and prominence of the entry on a particular page; the complexity of the layout; the overall length of the diary; the workload involved in completing the diary, and the method of, and nature of, contact between the respondent and the researchers.

Despite the abovementioned limitations, diaries hold several advantages (Webster et al. 2006):

- One of the most important advantages is that they are a relatively cheap method of data collection. Taking into account the wealth of information that can be obtained by properly completed diaries, no other method is as cost-effective.
- Diaries hold the potential for the collection of very detailed information, including demographics.
- Diaries are a non-intrusive method of data collection. They can be completed at respondents' convenience.

Similar to social surveys, diaries are nowadays often used in combination with other methods of audience research, such as the more expensive metering techniques.

12.7.3 Metering devices

In recent decades, the drive towards obtaining precise audience data of a high quality has resulted in audience measurement being dominated by technological advances and, in particular, by the development of electronic metering devices (Buzzard 2002; Gill 2000; Webster et al. 2006).

Set or household meters

set meters

Household meters have become one of the alternatives to diary-based audience measurement. The well-known Nielsen Audimeter was one of the first electronic devices that were installed in homes to monitor radio listening. The next generation of meters – known as household or set meters – were developed for television. These are essentially small computers, attached to one or all of the television sets in a home, that record automatically whether a set is on or off and to which channel it is tuned. The information is stored in a special unit and can be retrieved via a telephone line and downloaded to a central computer. For years,

set meters represented the full scope of electronic metering activity. As such, they had particular advantages over diary measurement of media usage patterns. Meters eliminated human memory error, as viewing was recorded as it occurred. Even brief exposures could be detected. Respondents did not need to be literate and 'respondent fatigue' did not play a role. In fact, respondents did not need to do anything at all. As information was captured electronically, it could also be captured and processed much faster than pen-and-paper questionnaires and diaries.

However, there were certain disadvantages to set meters. Firstly, they were expensive. It cost a lot to manufacture, install and maintain the electronic hardware to make the system work. According to Webster et al. (2006), this limitation holds true for all types of electronic metering. Due to the costs involved, electronic media metering is only viable for relatively large media markets (such as a country) and not for local and/or regional markets. The most important disadvantage is, however, that set meters provide no information on the composition of the audience, that is, the people watching, save from the known household characteristics. The lack of precise information on the nature of the audience that has become so vitally important to media people and advertisers caused set meters to be largely abandoned in favour of so-called peoplemeters, as we know them today. However, Webster et al. point to the fact that set meters are not completely a thing of the past. Nowadays, digital video recorders (DVRs) have the ability to record exactly the activity on television sets on a moment-to-moment basis. The equipment used to receive pay television in homes can also track tuning. The implication is that in the near future a set meter can be placed in virtually every home with a television set. This could provide a broad database of television activity. However, information on the exact nature of the audience would still be lacking.

Peoplemeters

peoplemeters

Peoplemeters are currently the only electronic device that measures exactly who in a household is viewing a particular set. In the early 1980s, the London-based research group AGB Research, nowadays known as Taylor Nelson Sofres (TNS), developed the first meters to gather information on who was viewing (Gill 2000). Thus the modern peoplemeter was born. The peoplemeter replaces the diary-keeping activity of recording television viewing behaviour with the simple push

Figure 12.2 Handset and display unit of a peoplemeter used in South Africa

Source: AGB Nielsen Media Research

of a button on a special handset whenever a person enters or leaves a room where a television set is switched on.

Basically, the device consists of a handset that consists of a number of push buttons. Every member of a household is assigned a number that corresponds with one of the push buttons on the handset. When a particular member of the household starts viewing, he or she is supposed to press the pre-assigned button on the handset and to press the button again when he or she leaves the room. The hand-held sets are more or less the size of other remote control devices. As in the case of household meters, data are retrieved via a telephone line. Most peoplemeters also include a display unit that shows which household members are registered to be watching. The display unit can also be used to prompt household members to check whether buttons have been pushed correctly.

Peoplemeters hold the following advantages over other methods of audience measurement:

- The most important reason for the widespread acceptance of the peoplemeter is that it is widely accepted that peoplemeters provide highly accurate information on audiences and their television usage patterns that are not subject to the deficiencies of diary-keeping and questionnaires (Gill 2000). Trust in the quality of information provided by peoplemeters is based on coincidental surveys that

have become the standardised method of assessing the accuracy of peoplemeter data in most countries. This technique involves telephoning a sample of panel homes and enquiring who is watching television at the time of the call. The information obtained by means of the telephone coincidentals are then compared with the household viewing status as recorded by the peoplemeter at the time of the call. The results obtained by telephone recalls tend to be remarkably consistent indicating a push-button accuracy of around 90%. That means that around 90% of people who were said to be viewing at the time of the call indeed registered their viewing on the peoplemeter. Also, approximately 90% of the people who indicated they were not viewing at the time of the call were also not registered on the peoplemeter.

- No literacy is required to participate in peoplemeter panels. Illiterate people as well as small children can therefore record their own viewing.
- Continuous measurement of viewing activity means that even short periods of viewing can be registered.
- The demographic data of household members are available and can be used in the analysis of the data.

However, high levels of accuracy in peoplemeter data are not a given fact. To achieve these levels of accuracy usually involves a considerable amount of effort from the organisation that conducts the peoplemeter research. Gill (2000) cites the following factors that can influence the quality of peoplemeter data:

- *Motivation of panel members* – It is firstly necessary to motivate the household to become members of a panel. As peoplemeters are usually installed in a household for several years, it is imperative to continuously motivate household members to keep pushing their buttons meticulously whenever they watch television. Incentives that can take a variety of forms, such as cash payments and shopping vouchers, can play an important role. However, incentives are seldom sufficient to keep panel members motivated. Ongoing contact between the organisers and panel members is essential, and a communication strategy for interaction between the research organisation and panel members should be in place. Becoming a member of a panel is usually presented as becoming a member of a club. Newsletters, personalised mail, phone calls and visits from technicians and representatives of