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DEVELOPMENT OF TOOLS AND SAMPLE GROUPS FOR SURVEYS: A CASE STUDY OF PUBLIC MEDIA IN THAILAND IN EVALUATING ACCESS AND THE ROLE OF PUBLIC MEDIA

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Abstract

This survey research outlines the development of tools, the determination of sample groups for data collection in surveys, the monitoring of media access, and the public's opinion regarding the role of public media. The tools used in the survey include the following: (1) A survey form for evaluating media access and the role of public media; and (2) Interview guidelines for specific groups. All tools were quality-checked, tested, and refined over three rounds to ensure they were suitable for tracking surveys and monitoring. The sample group for the survey in this research consists of a total of 8,695 people age 15 or over, residing in five regions of Thailand: Bangkok and vicinity, Central Region, Northern Region, Northeastern Region, and Southern Region. The sample includes members of the general population who consume public media, as well as specific groups such as the Voiceless group, Civic Citizen group, and Opinion Leader group. The process of developing the tools and defining sample groups underwent rigorous academic procedures, including three rounds of pre-tests and real-world testing over the course of one year. Results from these tests were reviewed, compared, and adjusted to create a reliable tool for evaluating media access and the role of public media in the third round. After developing the tools and defining the sample groups for the survey, and after real-world testing, a summary and proposal for a tracking survey framework for Thai public media are also presented.

Keywords:

Development of Monitoring and Evaluation Tools, Specific Sample Groups, Public Media, Tracking Survey, Continuous Survey

1. Introduction

Public media refers to media that is owned by and for the people, with its revenue coming from the public. It is free from control by the state and private entities, serving the public by providing information, education, and entertainment. In fulfilling its role of public service, public media must produce and broadcast content that meets the expectations of the people, according to UNESCO's Media Development Indicators. The fundamental characteristic of public media is to prioritize the public interest and benefit the people by operating justly to create public value. Public media is managed by an organization independent of the government. The content presented should be beneficial to all groups of people. If public media is independent and strengthens society, then all citizens can access and participate in it, viewing it as media that considers them as owners, not just consumers (UNESCO, 2001). Based on this definition and characteristics, Thailand has only one public media outlet (Thailand Development Research Institute, 2021).

Public media must be large-scale, operate as a national network, and remain independent from political and commercial influences. It should serve as a '*Center of excellence*,' producing and broadcasting its own content, setting standards for the market, and being able to stimulate the entire broadcasting system. While a country can have more than one public media station, there should be one large organization capable of achieving vertical integration, encompassing activities from training, production, and scheduling to broadcasting (Graham & Davies, 1997).

The most important role of the public media is to present and disseminate relevant information to the public. The events reported must be real and must offer something new to the public, involving a selection process to determine what should be reported as news (Jiarananon, 2018). The fundamental difference between public and commercial media (Atkinson & Raboy, 1997) lies in their core philosophy: Public media aims to reach the entire population, focusing on creating and promoting various cultural aspects, functioning as a "public space" for all citizens.

The public media organization conducted surveys and monitoring to evaluate media access and public opinion on public media. The researcher team designed this study to be implemented in three phases over a period of more than one year, starting in 2022. The plan included defining the study areas and determining both quantitative and qualitative sample groups,

with the objectives of surveying and monitoring the following issues: 1) Public media consumption habits; 2) Opinions on the role and value of public media; and 3) Proposals for developing public media in line with public expectations.

The research framework followed academic principles, starting with selecting a sample group that represents the public who consume public media across Thailand. This group was further divided into specific categories based on characteristics related to social rights, expression, and participation in society. The sample universe was stratified by gender, age, occupation, education, and residence according to administrative divisions. Over the course of more than a year, the survey was conducted in phases, with tools being analyzed, revised, and improved through three rounds of testing. The final tool, refined by the third round, is believed to effectively represent the target audience, which is the focus of this article. However, this article does not present the findings on public media access and its role.

The development of the tools and the determination of the sample groups were carried out under rigorous principles of both quantitative and qualitative research, as well as statistical methods, which will be summarized alongside each topic in the content that follows.

2. Objective 1: Development of tools for surveying Thai public media in evaluating media access and the role of public media

2.1 Tools for quantitative research: The ideal quantitative survey

A good survey should be accurate, reliable, and aligned with the research objectives. It should be based on a review of relevant theories and concepts. The questionnaire should be concise, short, and simple, using language that is easily understood by respondents of all genders and ages. Respondents should not need to interpret complex questions. The questions should be specific, direct, and not overly complicated, avoiding technical language that is difficult to understand. The questions should be unbiased and should not lead respondents toward particular answers.

The tools used in quantitative research are crucial for data collection, grounded in the philosophy of positivist research, which holds that "*knowledge*" and "*truth*" exist and can be measured with appropriate tools (analogous to using a ruler to measure length - if the ruler is straight and standardized, the measurements will be accurate and standardized). However, in the

social sciences, developing quantitative tools is not as straightforward as creating a ruler. Designing measurement tools requires careful consideration and extraction of knowledge into practical guidelines that can be used as indicators of phenomena.

Nevertheless, what is measured in a study is "different" from the hypothesis, and there is no need for the two to always align. In other words, "*the beliefs of the surveyor/researcher should not determine the correctness of the data,*" since the data collected represents "*social facts.*" Therefore, it is crucial to emphasize and ensure the "*quality of the tools,*" which must be believed to possess the following key characteristics for data collection:

- The tool should be valid in relation to the study's objectives or research questions, both in terms of content and measurement accuracy. This means that it should "*ask the right questions*" and "*be usable repeatedly with consistent results.*" The validity of the tool can be verified using statistical techniques such as Content Validity Index (CVI), Index of Item-Objective Congruence (IOC), and Cronbach's Alpha for reliability. If the tool has been tested using these techniques and the results meet the quality criteria, it can be trusted that the tool is of high quality.
- The reactions of respondents to the questions should be considered, such as whether they understand the questions or become confused by the sequence or wording. If respondents take too long to complete the survey due to open-ended questions (which may only be suitable for specific projects with particular objectives) or repetitive questions on similar topics, these issues should be observed and addressed early in the survey process to improve the process.
- If "*comparative data*" is required, certain "*characteristics of the respondents*" and "*key questions for comparison*" must remain unchanged. Changing these core elements would limit the ability to make meaningful comparisons. Therefore, it is essential to maintain the "*core elements*" that are needed for comparison.

In this study, the survey tool that was developed over the three rounds followed these guidelines and can be considered fairly accurate and reliable in measuring the issue under the research question: "*What are the public's opinions on the role of Thai public media?*"

2.2 Tools for qualitative research: The ideal qualitative survey

Qualitative research tools involve the process of gathering descriptive information through methods such as document analysis, interviews, observation, focus group discussion, and brainstorming sessions. This research is participatory, with researchers closely involved in monitoring, verifying, and collecting data to ensure accurate and in-depth information that can be effectively utilized.

In-depth interview questions for specific groups are the qualitative research tool used in this study, designed to collect detailed information from sample groups, expanding on what was obtained through the quantitative survey.

2.3 Process of tool development: Survey form

2.3.1 Construction and revision of the survey form

The survey was designed according to the research objectives of the project, which aims to evaluate media access and public opinions on the role of public media. The survey was structured based on the principles of good quantitative surveys outlined earlier and consists of five sections:

Introduction: This section provides details for researchers or data collectors, such as the date, time, and method of data collection. It includes interviews conducted by the team, interviews by sample group managers, and self-administered responses from the sample groups.

Part 1: For collecting general information about the sample groups, this section includes questions that categorize the sample into "specific groups" based on the survey's sampling criteria (details on sample group determination are included in the relevant section).

Part 2: For collecting data on media usage behavior and television viewing over the past three months, such as viewing times and chosen programs.

Part 3: For gathering opinions on the role and value of public media, including its principled and content-related roles, and its value in areas such as democracy, creative culture, contributions to learning, environment, society and community, and global/international awareness.

Part 4: For collecting opinions on public media's role in social situations, including its effectiveness in addressing anti-corruption, political situations, issues of inequality and neglect, economic concerns, as a space for learning and enjoyment, support for an aging society, and preparedness for natural disasters.

Parts 2, 3, and 4 are designed with comparative scoring against other television channels in Thailand. Respondents can indicate whether public media performs better, other channels perform better, or if both are equally effective, with space to provide reasoning.

Part 5: For collecting suggestions on improving accessibility and responsiveness, including aspects such as media access, the role and value of public media, assessment of public media needs, and satisfaction with public media. Part 5 requires written or descriptive responses.

2.4 Adjustments to the survey form

Based on the review of the surveys from pre-test rounds 1 and 2, adjustments were made to improve the survey for more effective tracking and evaluation of media access and public opinions on public media. These modifications were implemented in the second round to enhance the clarity and utility of the survey for the third round of data collection.

2.5 Quality assurance of the tool

To confirm the reliability of the survey, the research team evaluated the quality of the survey instruments with scaled measurements. This involved assessing the survey's reliability using Cronbach's alpha, a statistical measure. Data collected was analyzed using statistical software to calculate Cronbach's alpha for each section, with values above 0.7 considered acceptable. The scores used for the calculations were scaled to a full score of 10.

The results of the reliability assessment indicate that all sections of the survey had Cronbach's Alpha values greater than 0.7, confirming that the questions used in the survey have a high level of reliability and quality.

Table 1. *Value of Cronbach's Alpha by dimension*

Part	Dimension	Cronbach's Alpha (round 2)	Cronbach's Alpha (round 3)
Part 2	Potential Change	0.91	0.95
	Coverage	0.90	0.91
	Diversity	0.93	0.92
	Independence	0.92	0.92
	Credibility	0.93	0.93
	Producing programs for public benefits	0.92	0.92
	Distinctive programs	0.92	0.93
	Democracy	0.94	0.93
Part 3	Creative culture	0.93	0.92
	Contributions to learning	0.93	0.93
	Environment, society, and community	0.93	0.90
	Global/international awareness	0.93	0.92
Part 4	Support in social situations	0.96	0.95

2.6 Application to data collection

Due to the survey's multiple sections and the need for explanatory responses, coupled with a large and diverse sample size, meticulous preparation was undertaken for the actual data collection. This involved thorough training for the research team through detailed workshops at every step of the process.

For the qualitative research tools, in-depth interview and focus group discussion questions were used for three specific groups. The objective was to study the opinions on the role and value of public media among these specific groups, which include the Voiceless, Civic Citizens, and Opinion Leaders. The research aimed to understand how these groups perceive the role and value of public media, identify any obstacles they face in accessing or viewing media, and determine what type of media would best meet the needs of these groups for maximum benefit.

The interview questions were framed around four main components: 1) Issues to be addressed: The topics that need to be covered in the interview; 2) Questions to be asked: The specific questions to be used during the interview; 3) Source of Information: Some questions are based on survey results that may require additional explanation, some are derived from definitions that the research team wants to verify, and some seek deeper insights extending from survey results; and 4) Utilization of Findings: How the answers will be used in the research, such as understanding expectations, viewing behaviors, and issues related to media access.

The interview questions consist of two main parts: Part 1: General questions about media usage and television viewing behavior, divided into television viewing and online viewing, with approximately 17 questions in total; and Part 2: Questions about the role and value of public media, divided into the role of public media and the value of public media, with approximately 16 questions in total.

The use of interview questions may vary depending on the specific context of the discussion. Researchers need to adjust the questions to suit each target group, as their knowledge, understanding, and life experiences differ. For example, questions for the Voiceless group should be straightforward and free of academic jargon. Additionally, interviewers should have experience talking with people who have different characteristics, understand the nature of each respondent, and create a comfortable interview environment. This approach helps ensure that respondents feel confident in sharing honest and accurate information.

2.7 Summary of the findings in the development of the survey tools

From this study, findings helped to inform the development of tools for both quantitative and qualitative research, ensuring completeness and standardization for future use. The details are as follows:

2.8 Problems and limitations of the tools

- The quantitative research tool designed for "*Evaluating access to and the role of public media*" underwent changes in question items across the three rounds of data collection. This prevented the researchers from presenting some variables for continuous study. Therefore, researchers should review, revise, and consult the questionnaire with public media organizations to ensure that the questions align with the research objectives and the needs of the media. After developing the questionnaire, experts should review it for content and validity to incorporate their feedback and improve it. The research team should then pilot the questionnaire to assess understanding of each question.
- Pilot testing is a crucial step in quantitative research. Before actual data collection begins, testing the tool for reliability (and making adjustments accordingly) increases its credibility. This involves evaluating the precision and accuracy of the questions, especially those with fixed-choice answers, to ensure they accurately reflect behavioral measurements. Thus, high-quality and reliable research results depend on thorough checking of question quality, including validity, reliability, difficulty, discrimination, and

objectivity, to achieve a standardized and comprehensive questionnaire. Quality data will lead to the most accurate and true information.

- In this quantitative study, the sample was categorized according to multiple characteristics, which limited the researchers' ability to collect more detailed samples. Therefore, the data collection process might exceed the planned timeframe.
- With a large number of sample respondents to collect data from, there were constraints related to the duration of data collection and the number of interviewers. The research team reached out to networks in each area to assist in data collection to meet the set goals. Training on the survey tool before field networks started actual data collection was crucial to ensure understanding of the questions and to obtain accurate data.
- Each survey round was conducted with a three-month interval, which might result in limited observable changes in certain behaviors. Behavioral studies often require time to observe changes in behavior and attitudes, particularly concerning television viewing habits or access to public media. Therefore, if another survey is conducted, a longer interval should be considered.

3. Objective 2: Defining a sample group for the survey of Thai public media in evaluating access to and the role of public media

3.1 Sample population for the survey

This study had a sample size of 8,695 respondents, divided into two groups: General group of public media viewers with 7,147 samples (or 82.2%) and the specific group with 1,548 samples (or 17.8%).

The 8,695 sample respondents were distributed across Bangkok and vicinity, as well as four geographic regions of Thailand: Central, North, Northeast, and South. Specifically, the provinces included were Bangkok, Chonburi, Kanchanaburi, Chiang Mai, Chiang Rai, Nakhon Ratchasima, Ubon Ratchathani, Nakhon Si Thammarat, and Songkhla.

All of the sample respondents participated in the quantitative survey, while a subsample was also part of the qualitative data collection (in-depth interviews and focus group discussions).

3.2 Definition of the sample

The process of defining the sample group began with planning to obtain the sample using probabilistic methods. Multi-stage sampling techniques were employed, combined with area sampling, to define the characteristics of the sample group through random sampling at each stage.

Sampling started with a geographic approach. The entire Thai population was divided into five regions using stratified sampling. Since each region has different geographic characteristics, experiences, perspectives, or attitudes toward media access and public media opinions might vary. Subsequently, two provinces were selected from each region using cluster sampling, based on the belief that provinces within the same region might have similar attitudes or opinions on the issues of interest.

In the next stage, each province was divided into administrative areas both within and outside municipal boundaries. Stratified sampling was applied because people in different administrative contexts may have varying experiences, perspectives, or attitudes towards media access and public media opinions.

Following the completion of the sampling process, the next step was accessing informants, which required a Node-Networked approach to collect data in each area. The network contacts (nodes) included individuals familiar with the area, such as community leaders, activity group leaders, or independent organization leaders working in the region. These network contacts used their social relationships with familiar sample group members to request their participation in the survey, or they might engage individuals who are not known but willing to cooperate in completing the survey.

In this stage, the surveyed sample would be distributed according to the population characteristics to ensure comprehensive representation, such as including all genders and age groups. Upon examining the distribution of population characteristics after sampling and data collection, it was found to be aligned with the demographic factors in various aspects, including gender, education, occupation, income, and age distribution. The sample was categorized into five age groups: (1) age 15-24 years, (2) age 25-34 years, (3) age 35-44 years, (4) age 45-54 years, and (5) age 55 years or older.

The process of sample creation in this study included weighting, a technique used to determine the importance of variables or issues of interest. In this work, a plan was made to

weight samples that were disproportionate compared to reference figures from various agencies and to test the weighted cases. Statistical t-tests were then performed to compare whether weighting or not weighting the sample had a significant effect on differences in mean scores across various aspects. The results concluded that whether the sample was weighted or not, the mean values of the variables of interest did not differ significantly.

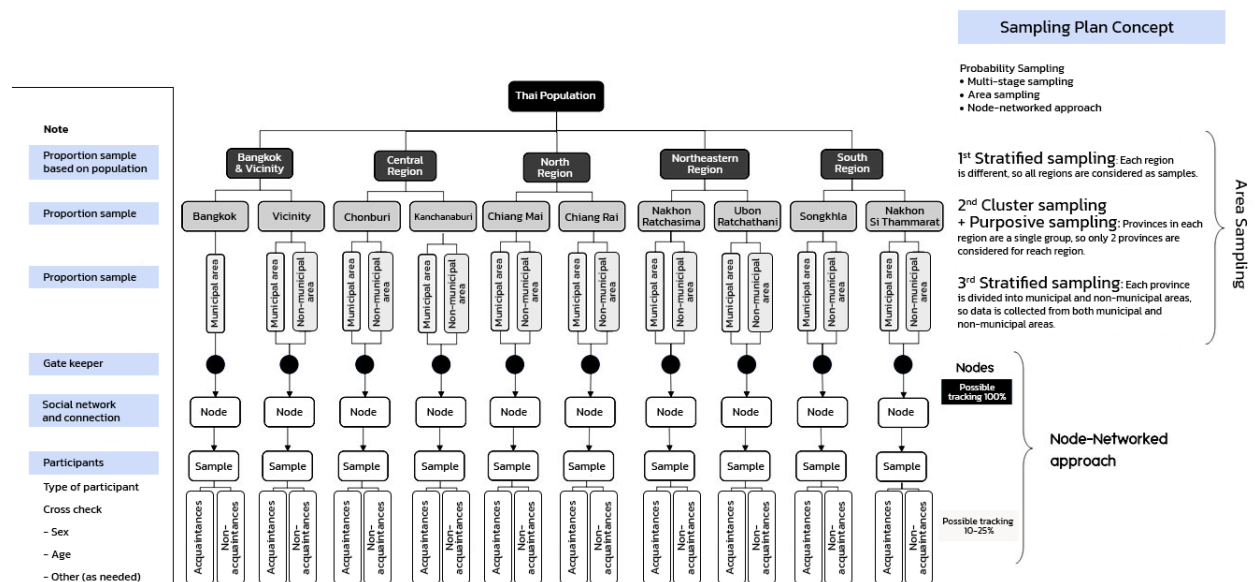


Figure 1: Sampling process

3.3 “Specific group” a special sub-set of the overall sample

In this study, the sample creation not only involved a large sample size that covered various regions and population characteristics, and employed methods to ensure it could represent the larger population, but it also included a particularly interesting aspect: Namely, the inclusion of what is termed as "specific groups" in both quantitative and qualitative surveys, in addition to the general sample.

The "specific groups" in this study were chosen to explore the role of public media as a social tool for all groups, aiming to provide a more comprehensive view of the public media's role. Defining these specific groups was linked to the development of the survey tools, in terms of designing questions to categorize these specific groups and using in-depth interview and focus group discussion questions to delve deeper into the relationship between these groups and public media.

The specific sample groups in the study are divided into three categories: Voiceless, Civic Citizen, and Opinion Leader.

"Voiceless" refers to "a group of people who are invisible in society, overlooked, neglected, unable to access resources, and burdened with taking responsibility for their own lives and fate. They face high risks, especially in terms of health, and lack the power to negotiate, leading them to submit to injustice" (Thai Health Promotion Foundation, 2019).

"Civic Citizen (Active Citizen)" refers to "a citizen who focuses on a just society. They are engaged, participatory, and question their own society. They are citizens who, after seeing the overall social picture, strive to drive structural changes to ensure that those who were previously disadvantaged can access better opportunities or improved quality of life" (Anunthavorasakul, 2017).

"Opinion Leader" refers to *"the potential of individuals to express, initiate, and emphasize their views on various issues, including economic, social, and environmental conditions. They can influence others' perspectives and actions, potentially leading to change in one direction or another"* (Altherr, 2019). Opinion leaders often have an impact on the attitudes or behaviors of others (Solomon, 2004).

The process of determining whether a sample unit is part of the specific group begins after data collection with the entire sample has been completed. Screening is done based on responses to certain questions specified in Part 1 of the survey.

The Voiceless group includes diverse subgroups such as the elderly who are self-reliant and lack access to rights, homeless individuals, those without access to education, those without access to basic healthcare services, and those lacking resources. Each subgroup

receives a weight of 1 point. If a sample selects various options specified, points are accumulated and summed to determine the level of Voicelessness.

In contrast, for Civic Citizen and Opinion Leader, questions 16-17 were used to assess the degree of Civic Citizenship and Opinion Leadership. Each group was categorized into 4 levels, ranging from 1 (the lowest) to 4 (the highest).

Voiceless			Civic Citizen		
Elderly people who do not have access to rights and are abandoned	Homeless people / people without rights	People who do not have access to education	People who do not have access to medical care rights	Disabled people who do not have access to basic rights	Disadvantaged people who live in poverty
6. Age > 60 years	14. Did not have medical care rights	9. Did not receive education	14. Did not have medical care rights	15. Being a disabled person	12. Did not have enough money / in debt
↓	↓	↓	↓	↓	↓
6.1 Did not receive elderly living allowance	14.1 cause:	9.1 causes:	14.1 causes:	15.2 Did not have a disability ID card	13. Monthly income
6.2 causes:	(3) Being a missing person / no record on civil registration (homeless)	(1) Did not have enough money to pay for tuition fees	(1) Did not have the national ID card	15.3 causes:	less than 2,805 THB
(1) Did not have information on the application process		(2) Did not have application documents	(2) Did not get registered at birth	(1) Did not know how to obtain the card	
(2) Did not have supporting documents		(3) Live in remote areas / school lacks teachers	OR	(2) Did not have the required documents	
OR			14.2 Never used medical care rights	↓	
6.1 Received elderly living allowance			14.3 causes:	15.4 Way of living	
6.3 Way of living			(1) Did not have money to pay the excess fees	(3) Being a severely disabled person who needs constant care from others	
(1) Insufficient allowance and have to support themselves			(2) Did not have travel budget		
			(3) Live far away from medical facilities / hard to travel		
SCORE					
1	1	1	1	1	1
Total score 1+1+1+1+1 = 6			Score level 1 = level 1 2 = level 2 3 = level 3 4 = level 4 5 = level 5 6 = level 6		

Question no.16
Which of the following describes you?
(Choose all that apply; if none, please skip to no.17)

1. I often participate in social activities by being a representative or a volunteer to help others.
2. I engage in activities addressing various social issues, such as the environment, equality, and justice.
3. I assist those facing injustice or having their fundamental rights violated, not standing idly by.
4. I am not afraid to stand for what is right and question structural problems in society by thoroughly examining information.

select 1 answer ----> level 1
select 2 answers ----> level 2
select 3 answers ----> level 3
select 4 answers ----> level 4

Opinion Leader

Question no.17
Which of the following describes you?
(Choose all that apply; if none, please skip to part 2)

1. I often take on leadership roles in various situations or serve as a spokesperson for others.
2. I am a source of support for people in distress and always seek solutions for them.
3. My opinions influence the thoughts of many people.
4. I aim to create positive change in society, communities, or groups.

select 1 answer ----> level 1
select 2 answers ----> level 2
select 3 answers ----> level 3
select 4 answers ----> level 4

Figure 2: Rating the level of specific group

A Civic Citizen can be categorized into 4 levels, depending on how the sample defines their involvement in various social activities. There are 4 characteristics to consider. If a sample selects one specific level, it means they define themselves according to that level, becoming a Civic Citizen Level 1. If they choose additional levels, they will accumulate to higher levels, with a maximum of 4 levels. The selection is not based on a specific order of options but on the extent to which the sample combines these characteristics.

- *I often participate in social activities by being a representative or a volunteer to help others.*
- *I engage in activities addressing various social issues, such as the environment, equality, and justice.*
- *I assist those facing injustice or having their fundamental rights violated, not standing idly by.*
- *I am not afraid to stand for what is right and question structural problems in society by thoroughly examining information.*

Opinion leaders can be categorized into 4 levels, depending on how the sample defines their own influence over others. There are 4 characteristics to consider. If a sample chooses a particular level, it means they define their characteristics according to the criteria for Opinion Leader Level 1. If they select more options, they accumulate to higher levels, with a maximum of 4 levels. The choice of levels is not dependent on the specific order of options selected but rather on how many of these characteristics are chosen overall.

- *I often take on leadership roles in various situations or serve as a spokesperson for others.*
- *I am a source of support for people in distress and always seek solutions for them.*
- *My opinions influence the thoughts of many people.*
- *I aim to create positive change in society, communities, or groups.*

3.4 Specific sub-groups in the quantitative and qualitative research

For the quantitative study, the aim is to understand who the specific groups at each level are, and what their perspectives or attitudes are toward the role of the media, the value of media, and their support in social situations. The qualitative study follows from the quantitative survey and focuses on the previously identified specific groups. These groups will be studied through in-depth interviews and focus group discussions to gather qualitative opinions and data. The specific groups—Voiceless, Civic Citizen, and Opinion Leader—will

be examined across seven areas: 1) Media consumption habits; 2) Views/opinions on public media; 3) Media ethics; 4) Satisfaction with public media; 5) Media's role in shaping opinions; 6) Ideas for improving public media content; and 7) The future of public media.

4. Objective 3: Ongoing tracking survey framework of Thai public media

4.1 Lessons learned from data tracking

In this study, which collected data over three rounds, the observations that are beneficial for designing a data tracking approach include three key considerations: 1) Clear unit of analysis: Ensure that the unit of analysis is well-defined and consistent; 2) Strong network: Develop and maintain a robust network for effective data collection and support; and 3) Focus on local operations: Emphasize operational activities at the local level to ensure relevance and accuracy.

Consideration 1- Clear unit of analysis: In this context, it is crucial to establish from the beginning of the study what changes the research team intends to track and at what level. For example, if the goal is to monitor changes in "thoughts" at a group level, such as by age group, occupation group, or residents of a specific area, setting this up will help in defining a clear framework for the study. For instance, if focusing on age groups, the operational plan will target data collection from individuals of different ages to meet the objectives. This clarity will enhance the effectiveness of the operation and help manage issues and challenges more effectively.

However, in the current project, the study aimed to explore population-level trends rather than individual-level changes. This approach aligns with continuous tracking surveys using representative sampling. The unit of analysis is not at the individual level but at the group level or inferred for the population, to assess how perspectives or attitudes towards media access and public media change over time. Therefore, tracking in this case might involve monitoring variables such as age or previous survey participation, rather than tracking individuals directly, which could raise privacy concerns.

Consideration 2- Strong network: Although the survey work involves distributing questionnaires and conducting in-depth interviews rather than participant observation (a qualitative research technique), this type of work still requires engaging gatekeepers, key persons, or nodes to establish relationships between the research team and local people quickly. This can be particularly useful when the research team is conducting fieldwork themselves.

Alternatively, requesting the cooperation of gatekeepers or key persons to collect data for the research team can be advantageous, as community members are more likely to be comfortable and cooperative with familiar networks. This approach may also help reduce biases in the data collection process. For example, if people know the research is coming from a public media organization, they might provide evaluations that favor public media more than other channels.

Therefore, if an organization aims to conduct continuous field surveys to track results, utilizing existing networks can be beneficial. In this project, contact channels with networks for accessing information in various areas have already been compiled to facilitate future fieldwork.

Consideration 3- Focus on local operations: Consideration may be given to expanding the survey area to cover a broader network and reach the desired target groups. However, the defined area should align with the unit of analysis to ensure the sample meets the requirements as closely as possible. It is also important to note that if a diverse sample is needed, it will increase the complexity of defining the area, units, and levels of analysis, which must be handled with caution.

4.2 Development of a tracking survey framework for Thai public media

From the study under the project on *Evaluating access to and the role of Thai public media*, this article presents the development of tools and sample definition. The results derived from summarizing and analyzing this process, as well as the final study outcomes (which are not presented in this article), lead to the creation of a “Tracking Survey Framework.” Since the unit of analysis for this study is at the population level, the key approach to the study is to establish a clear and comprehensive tracking plan that covers the topics of interest. The principles for designing the tracking survey framework are as follows:

- **Define objectives:** Clearly state the objectives and goals of the survey, specifying the topics of interest. For example, if tracking public opinion on climate change, you might aim to measure perceptions, attitudes, and behavioral changes over time.
- **Identify key variables:** Determine the variables or metrics crucial for tracking the topic of interest. These variables should directly align with the study's objectives and provide meaningful insights. For climate change, variables might include public awareness levels, support for environmental policies, carbon footprints, and adherence to sustainable development practices.

- **Select data sources:** Consider the sources of data that will meet your needs. These sources may include surveys, interviews, publicly available datasets, or other relevant sources. Choose the most suitable sources to capture the key variables of interest.
- **Determine data collection methods:** Decide on the methods for collecting data on each variable, which may involve surveys or extracting data from existing sources. Consider factors such as frequency, sample size, and necessary quality control measures for data collection.
- **Set a timeline:** Establish the timeframes for data collection and specify how often updates are needed to effectively track changes. This could be weekly, monthly, quarterly, or at other appropriate intervals depending on the study's objectives, topics of interest, and socio-political context.
- **Analyze data:** Define the analysis techniques and tools to be used, which may involve descriptive statistics, trend analysis, correlation analysis, or other relevant methods.
- **Present findings:** Display results through charts, graphs, and reports, ensuring that the presentation is aligned with the data measurement levels.
- **Review and refine framework:** Evaluate the effectiveness of the tracking framework, assess the relevance of the selected variables, and adjust the framework as needed to ensure alignment with the study's objectives and to provide actionable insights.

Based on the principles for designing a tracking survey framework mentioned above, the following approach can be designed for monitoring:

Table 2: Guideline for tracking survey

Steps for consideration	Contents
1. Define the study objectives	How has public access to and the role of public media changed over the past three months?
2. Identify key variables	<p>The main variables in the study are as follows:</p> <ul style="list-style-type: none"> • Views on the role of media (both principle-based and content-based) • Views on media value • Demographic factors (region, administrative district, gender, age, occupation, and income) • Type of specific groups • Media consumption habits
3. Choose data sources	Primary data sources from surveys
4. Data collection methods	Survey tools developed to study specific issues of interest
5. Set the timeline	Data collected every 3 months
6. Analyze the data	Descriptive statistics, inferential statistics, and correlation analysis
7. Present the findings	Table and charts
8. Review and refine the framework	Refinement of some tools to obtain desired data

The presented study framework will illustrate the implementation of surveys conducted across 3 rounds over a period of 1 year. Each round will follow the main research framework, which includes demographic factors (region, administrative district, gender, age, occupation, and income), the various types of specific groups, and media consumption habits. These factors influence perspectives and attitudes towards the access and role of public media, including both content and principal roles, as well as the value of media. Each data collection phase will utilize surveys to gather information from samples obtained through multi-stage probability sampling combined with area-based sampling. This will then be followed by fieldwork using networks as gateways to access informants.

This data collection method will be repeated across all 3 rounds, with each round producing key outputs: the “study results” and the “database” used to track changes from data collected in each round. Since the unit of analysis for this study is not at the individual level but at the group or population level, generalizing findings to infer conclusions about the population is necessary. Therefore, tracking will focus on the variables of interest, including demographic factors (region, administrative district, gender, age,

occupation, and income), the various types of specific groups, and media consumption habits. In other words, even if the respondents are not the same individuals each time, they can still be categorized based on the characteristics of interest for tracking and comparison, as long as they fit within the sampling plan parameters.

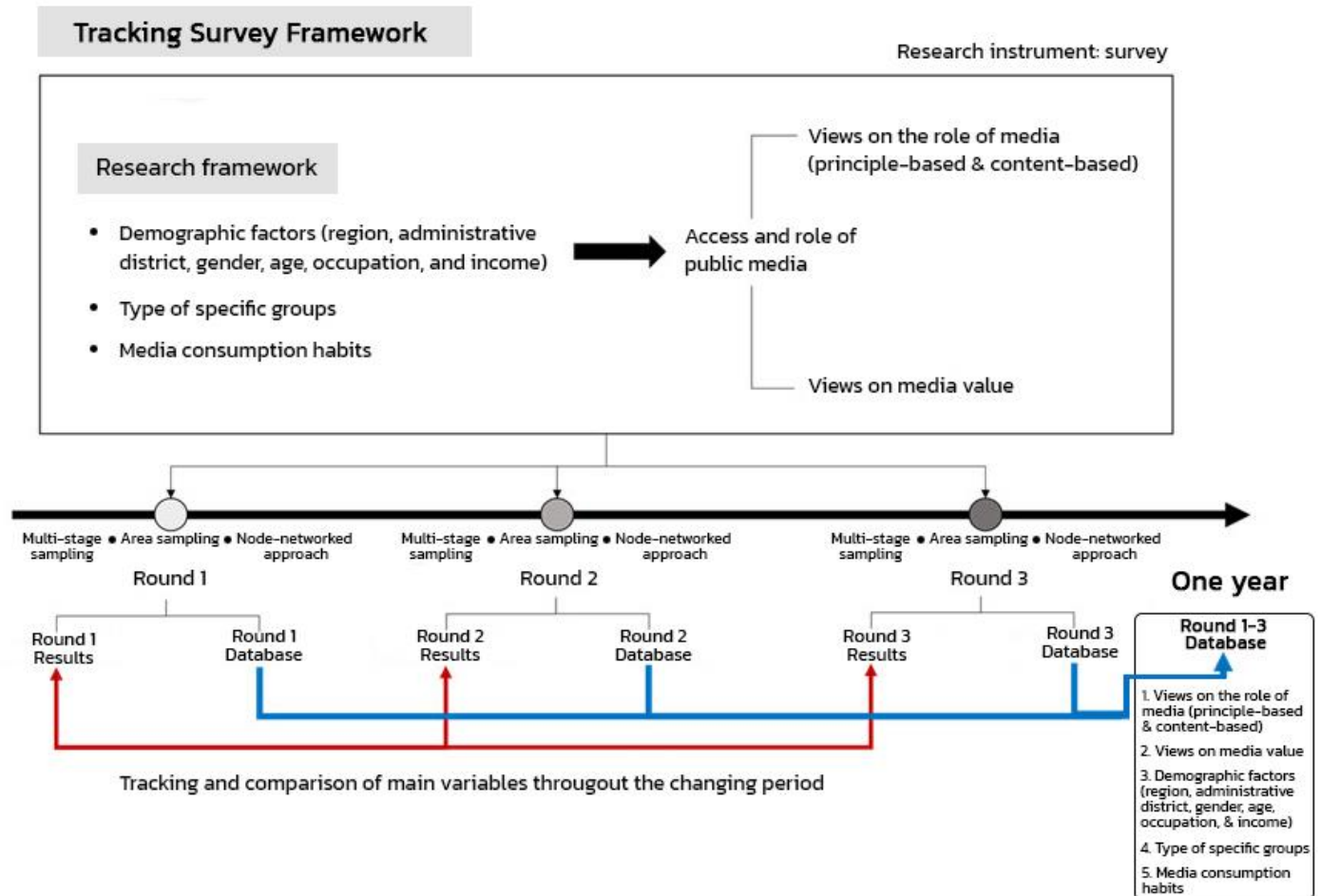


Figure 3: *Tracking survey framework on the role of public media in Thai social*

5. Summary, discussion, and recommendations

This article presents a survey tool for evaluating and tracking the access to and role of public media in Thailand, with a particular focus on defining the sample groups. The unique aspect of this survey is the inclusion of three specific groups: Voiceless, Civic Citizen, and Opinion Leader. The presentation emphasizes the “process” of developing the tool and defining the sample groups under both academic and statistical principles. The aim is to ensure that the creation of the tool and sample definition align effectively to measure what is truly needed and to accurately reflect the population. The resulting process leads to important lessons intended to benefit the ongoing use of tracking surveys. This includes the framework for the tracking survey of public media in Thailand.

An additional point of emphasis is the aspect of sample group definition, particularly the inclusion of specific sample sub-groups in this study. In the process of defining sample groups, the results not only yield the sample groups used for the survey but also offer considerations for the use of these samples. In other words, the collected samples serve as resources or raw materials valuable for analysis in various aspects. In practice, utilizing sample groups may not solely aim at creating a grand narrative or a broad explanatory framework. A specific yet in-depth dataset can also provide valuable insights, such as creating specific sample groups or conducting in-depth studies on particular issues, especially concerning public media. Therefore, this study, which involves three rounds of data collection, allows for the exploration and testing of various possibilities to obtain sample groups representative of the entire target population.

Defining specific samples in large-scale surveys, to lead to population inference, is often piloted or tested before actual use. Research has concluded that testing strategies developed by researchers in pilot surveys before applying them in the main survey can improve sampling efficiency by approximately 25% compared to standard methods (Burton, Lee, Raghunathan, & West, 2024).

The next point is the broader perspective on sample group creation, which can be considered a key recommendation of this article. In continuous tracking survey projects, it is crucial to ensure that the sample groups in the study are representative of the population. This involves demographic structure, weighting, or finding methods to enhance the representativeness of survey data. The process of obtaining data relies on statistical principles to define steps from sampling to data collection. Thus, the representativeness of the data hinges

on the "process" of sample definition rather than on the attempt to align the obtained sample with other reference points. A new approach to obtaining data for large-scale public surveys, such as a probability-based panel, might be a solution for future studies since it shows promising results in representing the overall population and is cost-effective. (Seol et al., 2023)

Several factors are important in constructing data. One of these is placing the data in a specific context or situation. In other words, data should have context to ensure meaningful referencing over time. If there are concerns about data bias, weighting tests may be conducted, and differences between weighted data using other reference points and the actual collected data should be considered. If no significant differences are found, it may indicate that the representativeness or bias is not determined by the reference points of any agency, but rather by the process of obtaining the sample through probability at every step. However, errors in measuring public opinion are expected to be found since public opinion is unstable and tends to change over time (Tsai et al., 2019).

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