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An Analytical Review of Content Analysis in Accounting Research: Methods, Uses, Limitations and Future Directions

AJIBOLA, Oluwafunmilayo Olubukola (PhD)
Accounting & Finance Department, Anchor University Lagos, Nigeria
oajibola@aul.edu.ng, 08034368526

Abstract

Content analysis has become an increasingly important research technique across various disciplines because of its flexibility in analyzing textual, visual, and audio data. In accounting research, its relevance has grown significantly with the increasing focus on sustainability reporting, corporate social responsibility (CSR), environmental disclosures, and other narrative forms of corporate communication. The study adopts a conceptual and descriptive review approach through the examination of existing literature and empirical studies related to content analysis and its application in accounting research. The study reveals that content analysis is a valuable tool that complements traditional numerical analysis by enabling researchers to systematically identify themes, patterns, frequencies, and meanings within corporate reports and financial disclosures. It is widely applied in areas such as financial reporting analysis, disclosure analysis, earnings management, corporate governance, sustainability reporting, and risk management disclosures. The study also identifies the major approaches to content analysis, including qualitative and quantitative methods, as well as the growing use of software applications such as NVivo, ATLAS.ti, and MAXQDA to improve coding, analysis, and data management. Despite its usefulness, content analysis faces challenges including time consumption, subjective interpretation, coding inconsistencies, and reliability concerns, particularly when analyzing large volumes of textual and visual data. The study further reveals that advancements in Artificial Intelligence (AI), machine learning, and natural language processing are expected to improve the efficiency and accuracy of content analysis, although human judgment and interpretation remain essential.The study concludes that content analysis remains a relevant and evolving research method in accounting and recommends greater adoption of the method alongside AI-powered tools and modern analytical software to enhance research quality and efficiency.

Keywords: Content Analysis, Accounting Research, Sustainability Reporting, Artificial Intelligence, Corporate Disclosure, Qualitative Analysis

1.0 Introduction

Content analysis has emerged as one of the most widely used qualitative and quantitative research techniques in the social sciences because of its ability to systematically evaluate textual, visual, and symbolic information (Guffey and Harp, 2017). The method enables researchers to identify patterns, themes, meanings, and relationships within documents and communication materials. According to Loughran and McDonald (2020) content analysis involves the systematic coding and interpretation of textual data to generate valid and replicable findings. It has become increasingly important in modern research due to the rapid growth in digital communication, corporate disclosures, annual reports, sustainability reports, and online financial information. Kleinheksel *et al*. (2020) noted that content analysis has become "widely used" in accounting studies because it allows researchers to examine narratives and disclosures contained in financial reports and corporate communications. The growing relevance of content

analysis is also linked to the expansion of textual data in business and financial reporting (Bengtsson, 2016; Kleinheksel *et al.* 2020).

Prior studies such as Ajibolade and Oyewo (2017); Abdurrachman *et al.* (2022); Suraj *et al.* (2024) indicates that accounting researchers increasingly rely on textual analysis and Natural Language Processing (NLP) techniques to evaluate disclosure quality, readability, sentiment, risk reporting, forward-looking statements, and corporate transparency. Leone *et al.* (2023) observed that textual analysis has grown significantly as an important method in accounting research, particularly with the emergence of machine learning and deep learning tools for analysing large volumes of corporate disclosures. Similarly, Gandía and Huguet (2021) argued that the increasing volume of financial documents and digital communication platforms has expanded the usefulness of textual and sentiment analysis in accounting studies. Furthermore, accounting research itself plays a critical role in improving financial reporting, corporate governance, accountability, auditing practices, and decision-making among stakeholders (Rajabdorri, 2022). Abbasi and Borhani (2024) opined that understand financial behaviours, disclosure practices, regulatory compliance, earnings management, sustainability reporting, and the impact of accounting standards on organisational performance.

However, accounting research faces several methodological and practical challenges (Steenkamp and Northcott, 2007; Schreier *et al.,* 2019; Bochkay *et al*., 2023). One major challenge is the overreliance on quantitative financial data while ignoring qualitative information embedded in annual reports, management commentaries, audit reports, sustainability disclosures, and corporate narratives. Traditional accounting measures often fail to capture intangible assets, intellectual capital, organisational culture, environmental disclosures, and forward-looking information that influence corporate value and stakeholder perception (Schreier *et al.,* 2019). Another challenge in accounting research is the difficulty of interpreting narrative disclosures objectively. Corporate reports often contain ambiguous language, impression management strategies, and symbolic disclosures that may not be adequately analysed using conventional statistical techniques (Schreier *et al.,* 2019; Bochkay *et al*., 2023). Abbasi and Borhani (2024) also postulated that accounting researchers also encounter problems relating to subjectivity, inconsistency in coding procedures, lack of transparency in interpretation, and difficulties in comparing findings across studies. Guffey and Harp (2017) identified key methodological challenges in content analysis within accounting research, including determining appropriate recording units, handling repetitive messages, and interpreting ambiguous disclosures. Similarly, Kleinheksel *et al.* (2020) highlighted that the absence of standardised disclosure language in intellectual capital reporting makes interpretation and comparison difficult across organisations and studies. The increasing complexity of financial reporting and the expansion of non-financial disclosures have further intensified these challenges. Modern corporations now provide extensive environmental, social, governance (ESG), sustainability, and integrated reporting information that cannot be fully understood through numerical analysis alone (Wagenhofer, 2024). Consequently, accounting researchers require methods capable of examining both the explicit and implicit meanings embedded in corporate communication. In this regard, content analysis provides a useful methodological solution because it allows researchers to systematically analyse qualitative disclosures while transforming textual information into measurable and interpretable data. Through coding and categorisation procedures, content analysis enhances the reliability and validity of accounting research findings (Abdurrachman *et al.,* 2022; Suraj *et al.,* 2024).

Content analysis also improves accounting research by enabling the investigation of hidden patterns, disclosure tone, readability, impression management, and sentiment in financial communications. More so. Advanced forms of textual analysis supported by machine learning and artificial intelligence now allow researchers to analyse massive datasets efficiently and objectively. (Bengtsson, 2016; Kleinheksel *et al.* 2020). Leone *et al.* (2023) explained that modern textual analysis techniques help accounting researchers measure disclosure sentiment, thematic content, readability, and similarities across corporate reports more effectively than traditional manual methods. In addition, automated content analysis enhances efficiency, reduces human bias, and improves consistency in coding procedures. This is particularly important in studies involving large volumes of annual reports, audit opinions, sustainability disclosures, and regulatory filings.

Despite these advantages, accounting researchers still face issues relating to subjective interpretation, coding reliability, contextual understanding, and methodological standardisation. The effectiveness of content analysis depends largely on the researcher's coding framework, analytical skills, and ability to interpret meanings within context (Steenkamp and Northcott, 2007; Schreier *et al.,* 2019; Bochkay *et al*., 2023). Furthermore, differences in coding categories and analytical approaches often reduce comparability among studies. Nonetheless, the continued advancement of computer-assisted qualitative data analysis software, artificial intelligence, and natural language processing tools presents new opportunities for improving methodological rigor in accounting research (Abdurrachman *et al.,* 2022; Suraj *et al.,* 2024).

Given the increasing importance of narrative disclosures in corporate reporting and the methodological challenges facing accounting research, there is a growing need to critically examine the application of content analysis in accounting studies. An analytical review of content analysis in accounting research is therefore necessary to understand its methods, applications, limitations, and future directions. The aim and objective of this study is to review methods, uses, limitation and future directions content analysis in accounting research. The remainder of this paper is organized as follows. section 2, reviews related literature and considering related researchers' studies. section 3, methodology, section 4, findings and section 5, conclusion and recommendations.

2.0 Literature review

The section reviews literature to show the various conceptual review, empirical review and the various method of content analysis.

2.1 Conceptual review

2.2 Content analysis

Kleinheksel *et al.* (2020) opined that content analysis was originally introduced as a strictly quantitative method, recording counts to measure the observed frequency of pre-identified targets in consumer research. However, as the naturalistic qualitative paradigm became more prevalent in social sciences research and researchers became increasingly interested in the way people behave in natural settings, the process of content analysis was adapted into a more interesting and meaningful approach.

Neuendorf and Kumar (2015) asserted that the methodical, objective, quantitative examination of message attributes is known as content analysis. Perhaps the most popular technique in the academic field of political communication is content analysis, which is increasingly being used in conjunction with other techniques including focus groups, polls, and experiments. The empirical method to the systematic analysis of "manifest content" in all modes of communication was first established by Bernard Berelson in the 1950s. Since then, it has been used to examine political content in speeches, news media, commercials, campaigns, and, more recently, social media and blogs. In addition to methods that concentrate on non-textual message content, such as pictorial pictures, graphical elements, moving images, nonverbal behaviors, music, and sounds, content analysis encompasses text analysis, which is the methodical examination of written text or transcribed voice. Content analysis generally refer to " a research technique for making replicable and valid inferences from text (or other meaningful matter) to the contexts of their use(Drisko and Maschi, 2016).

Gheyle and Jacobs (2017) opined that a study methodology called content analysis (CA) is used to interpret the (often unstructured) content of messages, whether they are text, images, symbols, or audio data. To put it briefly, the goal is to ascertain the meaning of the text.

Furthermore, Columbia University Mailman School (2026) opines that in conceptual content analysis, a concept is selected for investigation and its existence is measured and tallied. Examining the frequency of particular terms in the data is the primary objective. Terms may be explicit or implicit. It is simple to recognize explicit terms. Implicit word coding is more difficult since you have to determine the degree of implication and base conclusions on subjectivity (a problem for validity and reliability).

2.2. 1 Content analysis software used in accounting research.

Nowadays there are numerous software packages for content analysis. Among the most famous programs belong (in alphabetical order) AnSWR, AQUAD, ATLAS.ti, CAT, Dedoose, DiscoverText, HyperRESEARCH, INTERACT, MAXQDA, Nvivo, QDA Miner, Qualrus, Quirkos, Transana, V-Note, Weft and WordStat (Petera, Wagner & Pakšiová, 2016) .

NVivo: According to Singaram and Paramasivan (2025) one of the most popular programs for analyzing qualitative data is NVivo.Important characteristics: Advanced text, image, audio, video coding tools, thematic classification, memo composition, word clouds, sentiment analysis, automatic coding recommendations, importing data from social media, polls, and transcripts allows researchers to find trends and links while keeping a transparent audit trail.

Atlas.ti: Conducting a scoping review requires a grasp of the field's current state.The researcher can keep track of search phrases, keywords, databases, journals, academics, and management system programs by using ATLAS.ti. Additionally, the ability to import papers and articles from any database at any time allows the scoping review to be integrated into a project in ATLAS.ti. In order to write the review in a seamless and referenced manner, the researcher can code particular sections of the articles after developing an analysis framework with the main topic in mind. To monitor the progress of this evaluation, brief memoranda can be contributed to the project (Smit and Scherman, 2021).

MaxQDA: MAXQDA provides strong alternatives for mixed techniques and qualitative analysis. The highlights of this tool is for coding, retrieval, and thematic matrices combining statistical tools visual aids such as summaries, document pictures, and code maps An interface

that is easy to use. It allows researchers to integrate quantitative components with qualitative observations (Singaram and Paramasivan, 2025).

2.2. 2 Usefulness of content analysis in accounting research

A methodical approach to classifying and evaluating textual content is content analysis. It has historically been used in the study of archive material, where it has typically been restricted to the text's obvious features, including the quantity of words that appear or the quantity of words associated with specific topics (Steenkamp and Northcott, 2007).

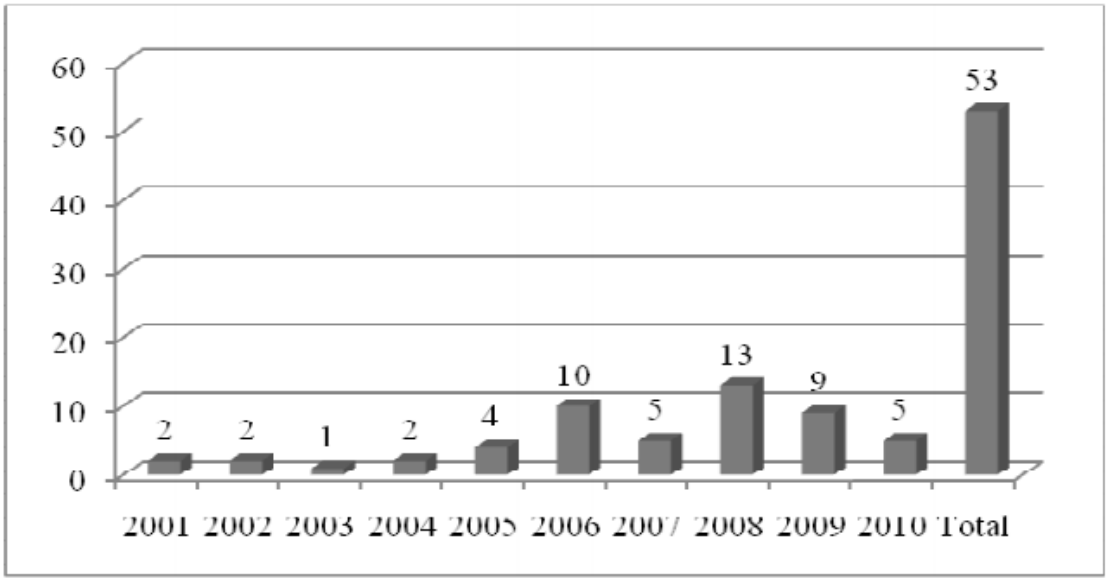
Content analysis help accounting research in wide number of ways: It helps to directly examines communication using text, it allows for both qualitative and quantitative analysis, it also provides valuable historical and cultural insights over time, it allows a closeness to data, coded form of the text can be statistically analyzed, Unobtrusive means of analyzing interactions, it provides insight into complex models of human thought and language use, when done well is considered a relatively "exact" research method. Content analysis is a readily-understood and an inexpensive research method. A more powerful tool when combined with other research methods such as interviews, observation, and use of archival records. It is very useful for analyzing historical material, especially for documenting trends over time (Columbia University Mailman School, 2026).

Suraj *et al.* (2024) asserted that in accounting and disclosure research, content analysis has been widely utilized to examine financial reports, disclosures, and other financial data. Financial Performance Analysis, which examines financial reports and disclosures to find patterns and trends in financial performance, is one area where content analysis is used in accounting and disclosure research. Analyzing financial ratios, income and spending patterns, and other important financial indicators might be part of this. In order to find patterns and trends in disclosure practices, disclosures analysis is used to examine financial and commercial disclosures.Analyzing the degree, caliber, and uniformity of disclosure among businesses can all be part of this. The purpose of earnings management analysis is to find trends and patterns in earnings management procedures. Corporate Social Responsibility Analysis: aids in the examination of CSR disclosures in order to spot trends and patterns in CSR activities. Analyzing the quantity, caliber, and uniformity of CSR disclosure among businesses are some examples of this.

More importantly the Nigeria's early adoption of IFRS S1 and S2 is a significant development in corporate reporting, turning sustainability from a minor facet of Corporate social reporting into important information that can be used to make decisions in general-purpose financial reports.The Reporting Council (FRC) of Nigeria's Sustainability Roadmap and the updated Sustainability Reporting Guideline 1 (SRG 1) in 2026 are intended to help businesses overcome implementation obstacles by offering a clear route to compliance (Beredugo, 2026) . Content analysis can be used to assess and research corporate contributions to sustainability and the environment in general. Stakeholders can develop their own opinions about these organizations while making decisions by using content analysis of business reports on these two topics, which are more contentious in the corporate reporting environment. Disclosures regarding Risk Management Analysis is another recent trend in business disclosure is risk management disclosure. Businesses can improve their reputation in the market by disclosing this information through the help of content analysis. (Suraj, Kulal and Menezes 2024).

Alves (2011) carried out a study on "Content analysis: its use in Accounting publications using 53 articles which were published in 23 journals. This study had as its central objective of the identification of applications of the content analysis in scientific articles published in journals specifically in area of Accounting. The below was the finding of the research.

Table 3 : Articles in Accounting published using content analysis



Author: Alves, (2011)

As shown in Table 3, 2008 was the year which had the largest number (24.5%) of articles that included studies applying the content analysis method. The annual average was five articles and the standard deviation was four.

Regarding the identification of the magazines (Table 4) in which the sample articles were published, despite there being 23 different journals, around 34% of the articles were published in just two magazines: Journal of Human Resource Costing & Accounting (10) and Accounting, Auditing & Accountability Journal (8).

Table 4 : Different journals used in Table 3 above

Journal of Human Resource Costing & Accounting	10
Accounting, Auditing & Accountability Journal	8
Accounting and Business Research	5
Managerial Auditing Journal	4
Journal of Intellectual Capital	4
Corporate Communications	2
International Journal of Public Sector Management	2
Issues in Accounting Education	2
Journal of Business Ethics	2
Accounting Horizons	1
Interdisciplinary Journal of Contemporary Research in Business	1
International Journal of Management	1
Journal of Education for Business	1
Journal of Management Accounting Research	1
Journal of Public Budgeting, Accounting & Financial Management	1
Performance Improvement Quarterly	1
Public Relations Quarterly	1
Review of Accounting & Finance	1
Society and Business Review	1
The Accounting Review	1
The Journal of Business strategy	1
The Journal of Global Business Issues	1
The Learning Organization	1
Total	**53**

Author: Alves, (2011).

Despite the usefulness of content analysis in accounting research, many researchers are yet to make use of this form of analysis for research in accounting. Given the recent move towards sustainability reporting, researchers in accounting field might use it more in coming years.

2.3 Empirical studies

Loughran and McDonald (2020) researched on "Textual analysis in finance" The author opined that textual analysis, implemented at scale, has become an important addition to the methodological toolbox of finance. In his review, the author first provided an updated survey of the literature while focusing on a few broad topics—social media, political bias, and detecting fraud. The author did not attempt to survey the various statistical methods but instead initially focus on the construction and use of lexicons in finance. Also the author then center the discussion on readability as an attribute frequently incorporated in contemporaneous research, arguing that its use begs the question of what we are measuring. Finally, the author discussed how the literature might build on the intent of measuring readability to measure something more appropriate and more broadly relevant—complexity.

Abbasi and Borhani (2024) studied "an overview of the content flow of articles in the Journal of "Accounting Advances".The purpose of the study was to know the content characteristics of the articles in "Accounting Advances" magazine. There was descriptive research and in it, the content analysis of 230 articles published in 26 issues of the aforementioned magazine between 2009 and 2022 was discussed. The findings of the research indicate that 593 people were involved in writing articles, 84% of them were men and 16% were women. 97% of the works are the result of group work and 3% are the result of individual work. 30% of the authors of the articles are assistant professors, 18% are associate professors, 17% are masters, 15% are Ph.D. students, and the rest of the scientific levels have obtained a lower position. In terms of subject matter, 55% of the articles were in the field of financial Accounting, 16% in

management Accounting, 14% in auditing, 6% in corporate governance, 2% in taxation, and 7% in other fields.

Kleinheksel *et al.* (2020) this article describes the qualitative data analysis method of content analysis, which can be useful to pharmacy educators because of its application in the investigation of a wide variety of data sources, including textual, visual, and audio files. Findings show that both manifest and latent content analysis approaches are described, with several examples used to illustrate the processes. This article also offers insights into the variety of relevant terms and visualizations found in the content analysis literature. Also, common threats to the reliability and validity of content analysis are discussed, along with suitable strategies to mitigate these risks during analysis. It was concluded that content analysis as a qualitative data analysis method will provide clarity and actionable instruction for both novice and experienced pharmacy education researchers.

Mahdavikhou (2018) studied exploring accounting research in "Emerald's Accounting Journals" using content analysis approach. The research aimed to analyze the content of Accounting published papers in Emerald's Accounting journals. The statistical population in this study includes 3847 published papers in 15 Accounting journals from 1986 to 2014. In this research, the content of published papers through a quantitative approach was been investigated and after categorizing selected papers under 7 areas the percentage and proportion of them were analyzed. The results revealed that the most proportion of published papers related to financial Accounting with 1710 papers and 45 percent and then auditing with 842 papers and 22 percent. The proportions of other areas included management with 431 papers and 11 percent, finance with 291 and 8 percent and management Accounting with 284 papers and 7 percent. The least propotion of published papers related to accounting education and governmental Accounting with 170 and 119 papers and 4and 3 percent of total papers, respectively.

Rajabdorri (2022) studied analysis of islamic financial articles published in scientific and research journal of Accounting and finance: content analysis and taxonomy. The purpose of this study is to analyze Islamic financial articles published in the academic and financial science and research journals with the approach of content analysis and taxonomy analysis. In the research, after analyzing the quantitative and classification of articles published in the scientific and financial journal of Accounting and finance, an analytical-descriptive-analytical approach was used by the researcher. The researcher found that at first, by identifying 124 papers (15 articles in scientific journalistic Accounting and 109 articles in financial science publications), using the content analysis technique, the research axes were published in a 14-axis format. This section of the findings showed that "Islamic finance instruments" have attracted the most attention and then "Islamic finance capital market". Also, issues such as "Islamic Finance Theory" and "Islamic Financial Institutions" are at the bottom and need more attention. The study of the development of Accounting and finance research journals by taxonomy analysis also showed that the publication of Islamic Finance Research is the most developed publication among the scientific and financial journal of Accounting and finance in Islamic finance.

Guffey and Harp (2017) studied "a content and citation analysis of the first 25 years." The article provided a descriptive content analysis and citation analysis for the Journal of Management Accounting Research (JMAR) between 1989 and 2013. The study categorized articles published in JMAR by research method, topic, and underlying discipline (theory) and presented information on changes in content over time to identify potential trends. The study also collected citations to articles in JMAR and use citation metrics to identify which research

methods, topics, underlying disciplines, and specific articles have contributed the most toward establishing JMAR as a premier accounting journal. The study interpreted content trends in conjunction with citation results to provide insights for the future of JMAR. The study found that research methods such as Survey, Literature Review, and Field Study are decreasing in prevalence in JMAR over time, yet these are the research methods that have the greatest impact based on citations collected.

Schreier, *et al.* (2019) opined that content analysis has a long history in the social sciences. Berelson was the first to define the quantitative version of the method as a research technique for the objective, systematic and quantitative description of the manifest content of communication. In the same year, however, this was met by criticism from the German expatriate Siegfried Kracauer when he published his article "The Challenge of Qualitative Content Analysis,"(QCA) in which he pointed to the limitations of a purely quantitative content analysis. Kracauer's main points of criticism were directed at quantitative content analysis being limited to the analysis of manifest content, and at the focus on coding frequencies. Instead, he argued for the importance of including latent structures of meaning into the analysis, and he pointed out that the single occurrence of a phenomenon in a given text can also be meaningful. On this basis, he proposed a distinctly qualitative content analysis, and his article can be considered the starting point of the history of the method. Since then, QCA has been turned into a highly popular method that is used widely across the social sciences.

Bochkay *et al.*(2023) opined that content analysis lays various roles in Accounting research: 52.7% of the textual analysis publications construct a variable directly from a document and use the variable as the dependent or explanatory variable for hypothesis testing, 29.9% extract targeted textual information (e.g., through keyword search or regular expressions) and construct a variable from the extracted data for subsequent analysis, 5.8% construct a text-based control variable, 2.4% produce text based variables as predictors of an outcome of interest, and 9.2% use text-based measures for other purposes. These observations suggest that textual analysis plays a primary role in research designs and that accounting researchers typically use textual analysis to construct a measure.

2.3.1 Literature research gap

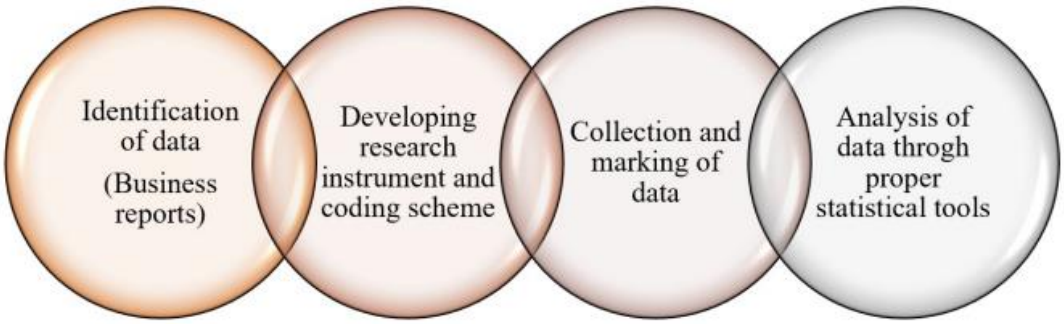
Several scholars have examined the concept and application of content analysis in research (Bengtsson, 2016; Kleinheksel *et al.,* 2020; Suraj, *et al.,* 2024). However, only a limited number of studies have specifically linked content analysis to accounting research (Abbasi and Borhani, 2024; Bochkay *et al.,* 2023). In addition, few studies have extensively discussed the usefulness, methodological application, limitations, and future prospects of content analysis within the accounting discipline.

Considering the increasing importance of sustainability reporting and the growing adoption of narrative and textual analysis in accounting research, there is a need for an updated review of content analysis in the accounting field. Specifically, there is insufficient literature providing a comprehensive discussion of the methods, applications, limitations, and future directions of content analysis in accounting research. Therefore, this study seeks to bridge this gap by providing an updated and focused review of content analysis as it relates to accounting research. The study will contribute to existing knowledge and serve as a valuable resource for academic scholars and future researchers.

3.0 Methodological aspect involved in Content Analysis.

Suraj *et al.* (2024) asserted the steps in content analysis, stating that finding the pertinent facts to be examined is the first stage in content analysis. Financial statements, auditor reports, and other financial disclosures such important accounting policies, management analysis and discussion, corporate governance disclosures, CSR reports, sustainability reports, and so forth may be included in Accounting and disclosure research.
The author opined that creating a coding system to classify the data is the next stage. The study questions and objectives should serve as the foundation for the coding scheme, which should be created methodically and impartially. The data can be coded after the research instrument (coding scheme) has been created. This entails going over the data and classifying it using either binary (0 or 1) or ordinal (1 to 5) scores in accordance with the coding system. To guarantee the validity and dependability of the results, the coding should be done methodically and consistently. Lastly, statistical techniques can be used to examine the data in order to find trends and connections. Conclusions and judgments regarding the financial performance of businesses can then be derived from the results.
Depending on the goal of the study, this procedure may be used to create disclosure indices that enhance the significance of the investigation.

Table 1: Methods of Content Analysis

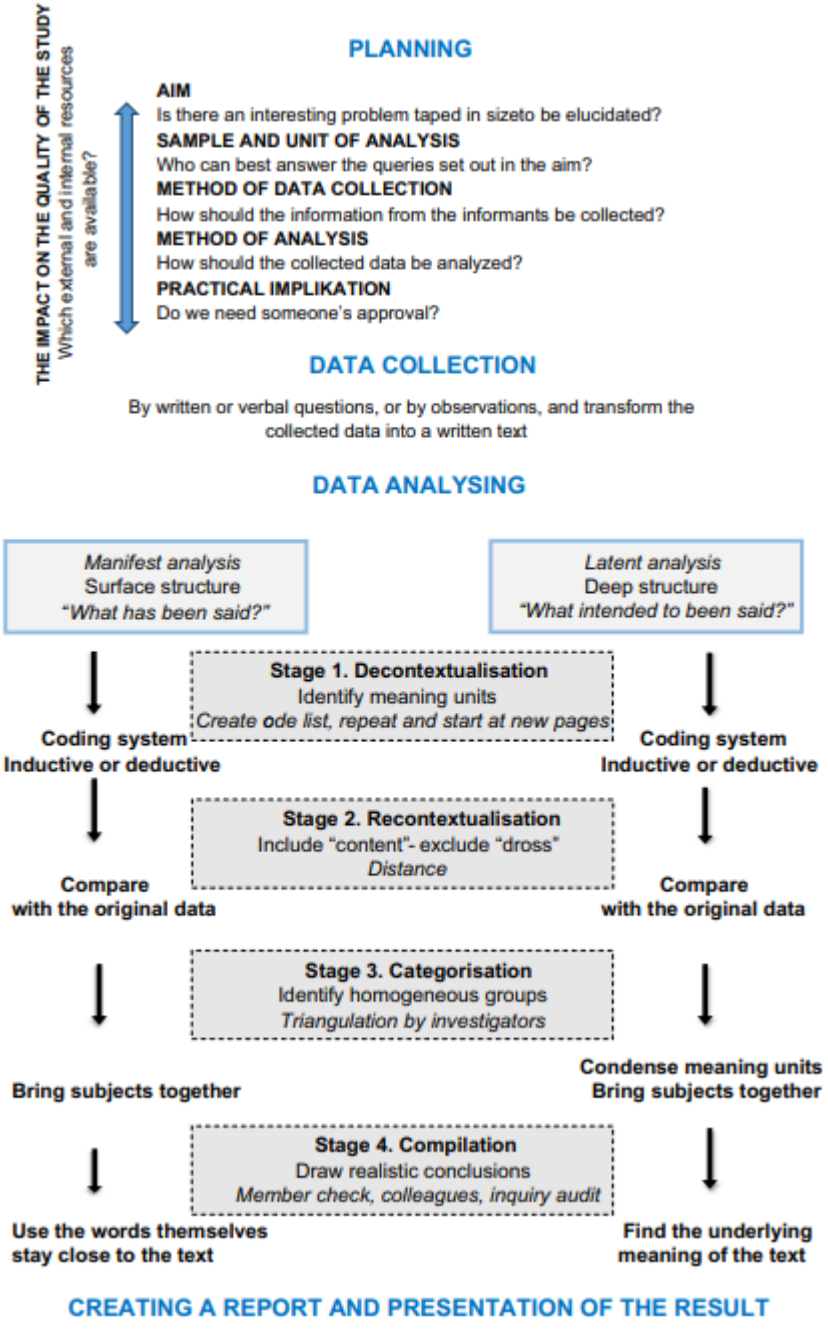


Author : Suraj, Kulal, and Menezes (2024)

3.1 Qualitative content analysis.

Giving more detailed explanation to the methods of content analysis explained above, Bengtsson (2016) opined that when the approach of qualitative content analysis is selected in a qualitative study, this table 2 below outlines the research process, from planning to presentation, with a focus on credibility throughout. As soon as the study is planned, the foundation for credibility is laid. To reduce any bias caused by personal influence, the researcher must identify both internal and external resources and take into account their own experience with the topic under study. The goal of content analysis is to arrange the gathered material, extract meaning from it, and derive practical conclusions.It is up to the researcher to decide whether to analyze a deep structure (a latent analysis) or a broad surface structure (a manifest analysis). The Table 2 below describes four basic stages: decontextualization, recontextualization, categorization, and compilation. This explanation of qualitative content analysis provides one method that demonstrates the application of the method's general concepts.

Table2: Research process in qualitative CA



Author: Bengtsson, (2016)

For academics and pharmacy educators, qualitative content analysis is both high-yield and easily accessible. The nature of qualitative content analysis addresses issues by offering a methodical methodology to find meaning in textual material, both on the surface and indicated beneath it, even though some of the techniques may appear abstract or flexible. As with other research techniques, application and deliberate, repeated practice are the most reliable ways to become proficient. Researchers are to think about using content analysis as a qualitative

research method to find significance in their data and to pose questions appropriate for qualitative research (Kleinheksel *et al.,* 2020).

3.2 Quantitative content analysis(CA)

Petera *et al.* (2016) asserted that quantitative CA helps to analyse data using quantitative analytical methods (such as word counts). This method is useful for textual disclosures like annual report or stand-alone corporate responsibility reports since it can objectively show how much attention is given to specific themes. The main concept of quantitative content analysis is data reduction, which is accomplished by classifying the text into much fewer categories. This allows for the quantitative expression of the text fraction devoted to specific topics as well as the identification of important topics of interest. These results could be used to temporal and/or spatial comparisons example is conceptual analysis.

4.0 Result.

4.1 Uses of Content Analysis (CA)

Content Analysis (CA) is widely recognized as a valuable research method because it supports both qualitative and quantitative analysis. It enables researchers to systematically examine textual and narrative information by identifying themes, patterns, frequencies, and meanings within data. In accounting research, CA is commonly used to analyze annual reports, sustainability reports, corporate governance disclosures, environmental reporting, and other forms of corporate communication.

Despite its usefulness, only a limited number of researchers have extensively applied content analysis in accounting research. According to the study conducted by Alves, only fifty-three studies employed content analysis across approximately twenty different journals, indicating that the method remains underutilized within the accounting discipline.

5.0 Conclusion and recommendations

5.1 Conclusion.

The aim of this study is to review methods, uses, limitation and future directions content analysis in accounting research. Content analysis is a powerful research tool that complements traditional numerical analysis in accounting studies. Its relevance has become even more significant with the growing emphasis on Environmental, Social, and Governance (ESG) and sustainability reporting. The mandatory adoption of IFRS S1 and S2 sustainability standards by Nigerian firms underscores a major shift from purely traditional financial reporting toward a more balanced assessment that incorporates both financial and non-financial performance. Consequently, researchers must recognize content analysis as an essential method of data collection and evaluation for Corporate Social Responsibility (CSR), environmental, and sustainability disclosures. Despite its limitations, content analysis has consistently demonstrated its capacity to enhance the quality of research and make meaningful contributions to the field of accounting.

5. 2 Recommendations

Despite the usefulness and flexibility of content analysis, only a limited number of researchers have extensively applied the method in accounting research. Therefore, it is recommended that more accounting researchers adopt content analysis in examining narrative disclosures, sustainability reporting, corporate governance reports, and other textual information in accounting studies.

Although content analysis is highly valuable, it is associated with certain limitations, particularly the time-consuming nature of analyzing large volumes of textual data. To address these challenges, researchers are encouraged to make use of relevant software and technological tools such as NVivo, ATLAS.ti, MAXQDA, and other text analysis applications to improve coding efficiency, accuracy, and data management.

For future research, Artificial Intelligence (AI) is expected to enhance research efficiency rather than replace researchers entirely. Consequently, researchers are encouraged to embrace AI-powered tools and machine learning techniques in content analysis. While AI can assist in data processing, coding, and pattern identification, it cannot replace human judgment, interpretation, and critical reasoning. Instead, AI should be viewed as a complementary tool that enhances the quality and efficiency of research.

5.3 Future directions of content analysis in accounting research

The future of content analysis in accounting research is increasingly shaped by advancements in Artificial Intelligence (AI) and machine learning technologies. AI provides a promising avenue for enhancing text-based linguistic analysis by improving the speed, accuracy, and efficiency of data processing and coding. Developments in natural language processing, automated text analysis, and sentiment analysis are enabling researchers to analyze large volumes of qualitative data more effectively. An important example from the AI field is the development of conversational “bots” designed to imitate human interaction through processes similar to the Turing Test. Systems such as Cleverbot and Evie demonstrate adaptive learning, where AI programs improve responses by analyzing and storing patterns from thousands of user interactions. These systems learn by identifying the most common responses to questions and calculating the probability of appropriate replies in future interactions (Stemler, 2015). Such adaptive learning techniques illustrate the potential of AI-driven content analysis tools to recognize linguistic patterns, classify textual data, and generate insights from complex accounting disclosures and narratives.

Despite these technological advancements, AI is not expected to replace researchers entirely. Instead, it will enhance research efficiency by automating repetitive coding and data analysis tasks, thereby allowing researchers to focus on higher-level interpretation, creativity, and critical judgment (Singaram & Paramasivan, 2025). Human expertise remains essential for understanding context, meaning, and the broader implications of research findings. Overall, the integration of AI into content analysis represents a significant future direction in accounting research. As these technologies continue to evolve, they are expected to provide deeper insights, improve analytical capabilities, and expand the possibilities for qualitative and mixed-methods accounting studies.

5.4 Limitation of content analysis in accounting research

Despite its growing importance in accounting research, content analysis (CA) has several limitations and practical challenges. Although CA provides valuable qualitative insights that complement traditional numerical analysis, researchers have noted concerns regarding its reliability, efficiency, and interpretation. One major limitation is that content analysis can be extremely time-consuming, particularly when researchers analyze large volumes of textual or visual data. The process of coding and interpreting information may also increase the likelihood of errors, especially in relational analysis where higher levels of interpretation are required. In some cases, content analysis lacks a strong theoretical foundation and may lead researchers to draw overly broad inferences about relationships and impacts implied in a study. Additionally, CA is inherently reductive because it often simplifies complex texts into categories or word counts, which may overlook deeper meanings and contextual factors. Researchers have also observed that content analysis frequently ignores the context in which texts are produced and interpreted, and that the process can be difficult to fully automate or computerize (Columbia University, 2026).

Steenkamp and Northcott (2007) further identified several practical challenges associated with content analysis in accounting research. First, researchers must make subjective judgments when interpreting and categorizing texts. Since a single text may convey multiple meanings to different individuals, coding decisions may vary across researchers. To reduce subjectivity and improve reliability, the use of multiple independent coders is recommended.

Secondly, determining the relevant data to analyze presents another challenge. Although content analysis traditionally focuses on written text, modern corporate reporting increasingly includes graphs, charts, pictures, photographs, and other visual elements. Ignoring such visual information may result in incomplete or inaccurate interpretations of corporate disclosures. However, guidance on how to incorporate visual materials into content analysis remains inconsistent within the literature. Thirdly, coding repetitive messages can also create methodological difficulties. Researchers must decide whether repetitive information should be counted multiple times across different contexts or counted only once within the same context. Regardless of the chosen approach, coding rules should be clearly defined and consistently applied to ensure reliability and validity.

Overall, while content analysis remains a valuable research method in accounting, its effectiveness depends heavily on careful interpretation, consistent coding procedures, and attention to contextual and methodological challenges.

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