Design and Instrumental Analysis of Media Literacy Education Research

SHANG ZHAO

Introduction

This study aims to highlight the effectiveness of media literacy education in fostering critical engagement with social media among 15-17 year olds (post-adolescents) across three distinct educational and cultural settings. By comparing Finland, a leader in media literacy, the United Kingdom, a developing case, and China, an emerging developmental case, the study examines the policies and implementation strategies of media literacy education in these countries. It identifies variations in the effectiveness of media literacy education across different environments and provides valuable insights for regions with less developed media literacy systems. Additionally, the study explores how adolescents can be better equipped to critically engage in diverse digital environments and develop critical thinking skills to address emerging challenges.

Chosen Method

Philosophical background of the study

Cohen et al. (2011) pointed out that the choice of studying philosophy runs through all aspects of the research design and has a profound impact on the validity and reliability of the research. Therefore, clearly defining its philosophical basis in this study plays a crucial role in ensuring the scientificity and suitability of the method selection.

Ontology explores “what we can know”. This study adopts a stance that combines realism and relativism, recognizing the objective realities behind educational phenomena, but also realizing that these realities are affected by changes in socio-cultural contexts. This perspective provides a theoretical justification for the complexity of the object of study.

Epistemology further focuses on “how we know”. This study strikes a balance between Objectivism and Subjectivism, and seeks to provide a comprehensive and in-depth understanding of the differences in media literacy education in the three countries by combining the collection of empirical data and the

interpretation of multiple voices in the educational environment. On this basis, the study adopts the core idea of **Theoretical Perspectives** on Pragmatism, synthesizing the strengths of positivism and interpretivism and emphasizing the interface between theory and practical application.

In conjunction with the aforementioned philosophical foundation, the Methodology section adopts a **Mixed-Methods approach** to offer a more holistic perspective by integrating quantitative and qualitative research. This methodology facilitates a multi-faceted analysis of the research subject at both macroscopic and microscopic levels.

Selection and Appropriateness of Mixed-Methods

Johnson et al. (2007) define a Mixed-Methods approach as a research paradigm that integrates qualitative and quantitative methodologies to achieve a more comprehensive understanding and deeper analysis while providing multi-dimensional corroborative evidence. Consequently, this study employs a mixed-methods design, incorporating qualitative research through comparative case studies and quantitative research via survey methods, to effectively address the complexity of the research

questions.

Rationality

Based on an analysis of the rationale for integrating qualitative and quantitative research, Bryman (2006) offers a more detailed enumeration of reasons for employing mixed-methods, highlighting the unique value of this approach in terms of its diversity and comprehensiveness. This section will focus on two key aspects—Credibility and Illustration—to elucidate the specific application of mixed-methods in media literacy education and its contribution to enhancing the quality of research findings.

Credibility : Mixed-methods research integrates the advantages of both quantitative and qualitative approaches to address the limitations of using a single method, thereby enhancing the comprehensiveness and reliability of the study. For example, In this investigation, I will first employ survey data from the quantitative component to uncover adolescents' media usage patterns. Subsequently, I will complement this with semi-structured interviews from the qualitative component to achieve a more nuanced understanding of how these media habits influence adolescents' critical thinking abilities.

Illustration : Qualitative research can complement and deepen the insights derived from quantitative research by providing concrete meaning to abstract data and statistical conclusions. In this study, while quantitative research can illustrate changes in young people's media literacy competence through statistical data obtained from surveys, qualitative research offers a more nuanced interpretation of these findings. By collecting students' learning experiences, it reveals the underlying mechanisms and processes driving the observed changes, thereby presenting a more comprehensive and tangible understanding.

When using a mixed research approach, researchers inevitably face a number of challenges. At the research design stage, several key issues have to be addressed, Morgan and Morse(1991) have note that the manner in which quantitative and qualitative data are to be collected (concurrently or sequentially) , as well as the resultant increase in workload and lengthening of the research cycle. However, these difficulties can be significantly mitigated through sound planning and effective utilisation of research data integration tools, resulting in a smoother and more efficient research process.

The specific application of the mixed-methods

In the analysis of existing literature, it is evident that research on media literacy predominantly adopts a single research method contingent upon the specific research topic. For instance, in comparative analyses of media literacy policies, researchers frequently employ qualitative methods such as textual analysis and interviews to conduct comparative studies by examining policy documents and gathering insights from relevant stakeholders. This preference for qualitative methods arises primarily because quantitative research typically demands substantial time and resources for data collection and processing, leading researchers to rely on pre-existing data from other periods as supplementary information. However, this approach has notable limitations, as the data used often fails to capture real-time conditions, potentially resulting in inaccurate or lagged research conclusions due to insufficient timeliness.

In light of these challenges, this study posits that in the field of media literacy, relying solely on a single methodology may not fully uncover policy dynamics and implementation effects. Specifically, while qualitative research can offer in-depth textual analyses and opinion mining, it lacks extensive quantitative evidence support.

Conversely, quantitative research, though capable of providing data-driven insights into macro-trends, falls short in capturing the nuanced complexities of contexts and policy interpretations. Therefore, this study will adopt a mixed-methods approach, combining qualitative and quantitative research methods to address the shortcomings of a single research method through comprehensive field data collection and integrated analyses.

Specifically, this study examines the differences in media literacy policy implementation among Finland, the UK, and China. It begins by conducting an in-depth analysis of each country's policy framework, objectives, and implementation strategies through policy text analysis. By integrating interview data, the study gathers insights from policymakers, education practitioners, and stakeholders to contextualize the formation of these policies and evaluate their impact on youth media literacy education. Furthermore, to validate the effectiveness of policy implementation and assess dynamic changes in adolescents' media literacy levels, this study designs a questionnaire survey to collect quantitative data. This data will reveal trends in adolescents' performance in key areas such as media literacy, critical thinking, and information recognition. Specifically, this part of the study focuses on

comparing the participation and effectiveness of youth in media literacy education across different countries, and further analyzing the correlation between policy content and implementation outcomes.

Sampling

This study aims to analyze the current state of media literacy education for adolescents aged 15 to 17 in Finland, the United Kingdom, and China, focusing on policies, implementation strategies, and curriculum design. It explores how adolescents from different cultural and policy backgrounds use social media critically and safely. Additionally, the study examines how policymakers and educators address the challenges of the digital age, aiming to identify obstacles and propose recommendations for improvement. The findings are expected to provide concrete and actionable recommendations for enhancing media literacy education and addressing shortcomings in underdeveloped systems, using the successful experiences of Finland and the UK as benchmarks.

To achieve the research objectives, this study employs a combination of random sampling and purposive sampling

methods. The sample consists of three groups: adolescents aged 15-17, stakeholders in the education field, and policymakers, with participants drawn from Finland, the United Kingdom, and China.

For the adolescent group, stratified random sampling was applied. Students aged 15 to 17 were stratified by age, and samples were randomly selected within each stratum to ensure representativeness. This approach enables a comprehensive understanding of the educational experiences of students across different age groups. For teachers and educators within the same schools, convenience sampling was utilized to capture direct observations and feedback on students' educational environments. This mixed sampling strategy not only ensures the representativeness of the student sample but also efficiently leverages research resources, supplementing critical information about the educational context. This approach deepens the understanding of the educational environment from the perspective of schoolteachers and educators.

Furthermore, purposive sampling was employed for policymakers, selecting individuals with relevant experience. This method is well-suited for studies requiring in-depth insights. In this study,

interviews with government officials, educational institutions, and policymakers provide a comprehensive analysis of media literacy education policies across different countries, enabling the identification of key factors in policy formulation and curriculum design.

Ethics

Ethics is not only central to research design in educational studies but also a vital safeguard to ensure the credibility and scientific value of research findings. This study adheres to the ethical guidelines established by the British Educational Research Association (BERA) and the UWTSD Code of Practice for Ethical Research, integrating ethical principles throughout all stages of the research process, including design, data collection, analysis, and dissemination of results.

Informed Consent: The Foundation of Research Ethics

Informed consent is a fundamental aspect of ethical research. Participants must be fully informed about the purpose of the research, methods of participation, and potential risks, allowing them to make voluntary decisions regarding their involvement. In this study, informed consent applies not only to adult participants

but also requires special attention to minors ‘assent’ and the consent of their legal guardians. For example, when designing survey questionnaires on adolescents’ social media usage and their ability to critically engage with online information, it is essential to clearly outline the purpose of the data, the measures for data protection, and participants’ right to withdraw from the study at any time.

Anonymity and Confidentiality: Protecting Participant Privacy

Anonymity and confidentiality are key to safeguarding participants’ privacy. Measures such as data anonymization—removing direct and indirect identifiers—are employed to protect personal information. Confidentiality ensures that researchers do not disclose any information that could potentially identify participants. For instance, when employing observational methods that involve audio or video recordings, researchers must obtain participants’ consent beforehand and explicitly explain how these recordings will be stored and utilized.

Participants' Rights and Ongoing Communication

Participants' rights must be upheld throughout the research process. They should be informed of their right to refuse to answer specific questions or to withdraw from the study at any time without providing a reason. Continuous communication is critical to ensuring participants fully understand and agree to all aspects of the research. This ongoing dialogue fosters transparency and trust, key components of ethical research practice.

Avoiding Harm and Mitigating Risks

The design and execution of research must prioritize avoiding harm, whether psychological, social, or physical. Researchers need to carefully evaluate potential risks before the study and implement measures to minimize them. For instance, in exploring the impact of media literacy education on adolescents' social media behaviors, data collection methods such as interviews or focus groups may be used. When addressing sensitive topics like cyberbullying or privacy breaches, researchers should establish clear participation guidelines and provide neutral discussion environments. Additionally, they should offer access to psychological support channels to address any potential distress caused by the discussion. Special attention must also be given to

minimizing social pressures within group discussions, ensuring that participants feel comfortable expressing differing views without fear of peer conflict.

By embedding these ethical considerations into every stage of the research, this study seeks to uphold the highest standards of integrity and respect for participants while generating valuable insights into media literacy education.

Research Tools

This chapter outlines the research tools and design employed to conduct a comparative study of media literacy education in Finland, the UK, and China. By integrating both qualitative and quantitative methods, this approach ensures a comprehensive understanding of media literacy education within the distinct cultural, policy, and historical contexts of these three countries.

Qualitative Research Tools

Qualitative research aims to gain an in-depth understanding of phenomena through the analysis of text and discourse, rather than relying on numerical or measurable data. This approach is particularly suited to exploring phenomena that are too complex to

be reduced to single numerical values (Jacobsen, 2018). Therefore, this study employs a case study approach as the primary qualitative method and utilizes tools such as policy document analysis and interviews to comprehensively evaluate the intricate domain of media literacy education. It seeks to understand phenomena such as the impact of media literacy policies and adolescents' media usage experiences across three distinct contexts.

Case Study

A case study is an empirical method of inquiry that explores a specific phenomenon (or "case") within its real-world context, making it particularly valuable in situations where the boundaries between the phenomenon and its context are ambiguous or not clearly defined (Yin, 2009). This methodological approach is especially suited for complex, multifaceted research topics, as it enables a deep and holistic understanding of the case in its natural setting. As noted by Yin (2014), the core purpose of a case study lies in unraveling the processes or implementation pathways of a specific program and critically assessing its outcomes.It offers a systematic framework for analyzing the mechanisms and reasons behind the attainment of specific outcomes, enabling a nuanced

assessment of both achievements and challenges.

Building on this foundation, the study undertakes a comprehensive examination of media literacy education in Finland, the United Kingdom, and China. This approach covers all key stages of the educational process, from the initial formulation of policies to their practical implementation within classrooms. By focusing on these three distinct national contexts, the case study method allows for a detailed exploration of the unique cultural, institutional, and policy-driven factors that shape media literacy education. Furthermore, it facilitates a critical assessment of the implementation outcomes and challenges encountered in each country, offering insights into best practices and areas for improvement. This rigorous analysis not only enhances our understanding of media literacy education across different settings but also provides a robust foundation for comparative analysis and cross-contextual learning.

Policy Document Analysis

Policy document analysis is a vital tool for exploring the principles, objectives, and practical applications underlying media literacy education policies. As noted by Cardno (2019), policy analysis is a

core method in educational research that helps researchers understand the context of policy formulation and its implementation effectiveness. Finland, as a global leader in media literacy education and the only country with formal legislation and policies in this area, serves as a crucial case. In-depth analysis of Finland's media literacy policies clarifies the theoretical frameworks and practical scopes of media literacy education, while identifying the gaps between policy intentions and actual implementation. This analysis not only provides valuable insights for other countries but also promotes the effective global dissemination and localization of media literacy education.

Semi-Structured Interviews

Semi-structured interviews are a flexible qualitative data collection method that allows researchers to adapt their questions to explore respondents' answers in greater depth. Group interviews, by fostering dynamic interactions among participants, can often yield richer data (Bogdan & Biklen, 1997). Semi-structured interviews enable the researcher to maintain focus while capturing unforeseen insights.

In this study, interviews with adolescents delve into their media consumption habits and experiences with media literacy education, offering a window into their authentic perspectives. These interviews are particularly valuable as they capture the lived realities of young people, uncovering nuanced details about how they engage with social media and online information. Such insights are often difficult to obtain through other research tools, as surveys and tests may lack the depth needed to fully understand personal experiences and emotional responses.

Moreover, interviews with policymakers and educators provide a crucial internal lens on media literacy education. By engaging directly with those responsible for designing and implementing policies and curricula, the study uncovers their perceptions of the objectives, successes, and challenges of media literacy initiatives. These conversations reveal not only their professional judgments but also the practical constraints and opportunities they encounter within specific cultural and institutional contexts. This dual focus on the perspectives of adolescents and professionals enriches the understanding of how media literacy education operates at multiple levels, from individual learners to systemic frameworks. Ultimately, the findings from these interviews offer actionable

insights into the effectiveness of current practices and highlight areas for potential reform and innovation, paving the way for more impactful and inclusive approaches in the future.

Quantitative Research Tools

Surveys

Surveys are a crucial tool for collecting large-scale quantitative data. This study will use surveys to collect data from adolescents aged 15–17 in Finland, the United Kingdom, and China. The surveys will address topics such as media literacy skills, the frequency and methods of social media use, and the ability to critically evaluate online information. By designing standardized questions, including Likert scales, multiple-choice questions, and open-ended questions, the study ensures the comprehensiveness and reliability of the data, enabling the identification of regional differences in media literacy education outcomes.

Testing

Testing is another essential quantitative research tool that measures specific abilities, knowledge, and skills, typically producing numerical results suitable for statistical analysis. In this study, a standardized test will be designed to objectively assess

adolescents' media literacy skills. The test will measure abilities such as identifying false information, distinguishing misinformation from disinformation, and recognizing media bias. By administering these tests across different regions, the study will generate reliable and comparable data, complementing the subjective insights obtained through qualitative research.

Ntegration of Research Tools

This study employs a diverse range of tools to ensure both depth and breadth in its findings. Qualitative methods such as case studies, policy document analysis, and interviews are used to explore the nuances and context of the research subject, while quantitative methods such as surveys and standardized tests capture overarching trends. This methodological diversity ensures a comprehensive understanding of media literacy education across different regions and target groups.

Data Analysis Methods

This study adopts a mixed-methods approach, integrating both qualitative and quantitative data analysis to provide a comprehensive exploration of the research data. This

methodological framework facilitates a deeper understanding of complex phenomena while ensuring the scientific rigor and reliability of the findings.

Quantitative Analysis

For the quantitative component, SPSS software will be used for data processing, including descriptive statistics and correlation analysis. Descriptive statistics will summarize the fundamental characteristics of the survey data, such as the frequency and patterns of media use among adolescents aged 15 to 17 in Finland, the United Kingdom, and China. This facilitates cross-country comparisons, enabling researchers to identify trends and regional variations. Correlation analysis will explore relationships between key variables, such as the presence or absence of media literacy courses and adolescents' ability to critically evaluate online information. By establishing statistical associations, this method provides evidence-based insights into the effectiveness of media literacy education and its potential impact on adolescents' media usage behaviors. The statistical analysis is expected to identify broader trends that can be further explained using qualitative data.

Qualitative Analysis

For the qualitative component, NVivo software will be employed to conduct thematic analysis of data collected from interviews and policy documents. Thematic analysis will begin with open coding to identify key concepts and patterns within the text, followed by refining and consolidating these codes into overarching themes. For instance, interview data with adolescents will reveal their personal experiences and challenges in engaging with media critically, while policy documents will shed light on the principles and goals underpinning media literacy education in different countries. By extracting and categorizing themes, this method allows the study to delve deeply into the perspectives of participants and uncover hidden patterns that might not be immediately evident in the quantitative data.

Integration of Findings

To enhance the validity and coherence of the results, the findings from the quantitative and qualitative analyses will be integrated through triangulation. This integrative analysis will juxtapose statistical trends with insights derived from thematic analysis, ensuring that conclusions are well-rounded and supported by multiple data sources. For instance, while quantitative data may

reveal a significant correlation between media literacy education and improved critical thinking skills, qualitative findings can offer contextual explanations, such as specific teaching strategies or cultural influences. This mixed-methods approach not only ensures a balance between breadth and depth but also strengthens the reliability of the research by leveraging the complementary strengths of both quantitative and qualitative methods. Through this comprehensive strategy, the study aims to provide actionable insights into the current state of media literacy education and its effectiveness across diverse national and cultural contexts.

Conclusion

In conclusion, this study begins with a strong philosophical foundation, ensuring that the research methods align with the underlying research philosophy. Centered on a mixed-methods approach, the study integrates qualitative and quantitative methodologies, utilizing a variety of tools and perspectives to comprehensively analyze media literacy education models across Finland, the United Kingdom, and China—each with distinct cultural, policy, and historical contexts. Quantitative methods provided statistical support, uncovering key trends and differences

in adolescents' media literacy skills through surveys and standardized tests. Qualitative methods, such as case studies, policy document analysis, and interviews, offered deeper insights into the logic of policy formulation, the implementation processes of educational practices, and their contextual influences.

By integrating these data, the study not only identified similarities and differences in media literacy education across diverse cultural and policy environments but also highlighted the main challenges in current educational practices. Furthermore, it provided targeted recommendations for improvement. This multi-dimensional and methodologically rigorous design ensures the comprehensiveness and scientific validity of the findings, offering valuable insights for academic research and educational policymaking. Looking ahead, this study aspires to serve as a reference for other countries in developing and implementing media literacy education policies, contributing to the global advancement of media literacy education.

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