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Systematic Literature Review: Application of Andragogy Principles in Makeup Training in Non-Formal Education

Fransisca Devyyana Putri Astari*, Imam Shofwan

Universitas Negeri Semarang, Indonesia

*Corresponding Author: fransiscaastari7@students.unnes.ac.id

Abstract

Face makeup training is an important component of non-formal education that focuses on developing vocational skills, enhancing independence, and supporting economic empowerment, particularly for adult learners. Given the characteristics of adult participants who are self-directed, experience-based, and problem-oriented the application of andragogical principles is essential in designing effective training programs. This study aims to examine the implementation of andragogical principles in face makeup training within non-formal education through a Systematic Literature Review (SLR) combined with bibliometric analysis using VOSviewer. Literature was collected from publications published between 2015 and 2025 through Google Scholar and screened using predefined inclusion, exclusion, and quality assessment criteria. The selected studies were analyzed to identify publication trends, keyword co-occurrence patterns, dominant research themes, and methodological approaches. The VOSviewer analysis reveals that research on andragogy in face makeup training clusters around experiential learning, practice-oriented instruction, skill development, and adult empowerment. The findings indicate that the consistent application of andragological principles contributes positively to learner engagement, mastery of makeup skills, self-confidence, and readiness for employment or entrepreneurship. Methodologically, most studies employ descriptive qualitative and quantitative approaches, using instruments such as observation, interviews, and questionnaires. Overall, this review highlights the importance of integrating andragogical principles into face makeup training programs as a strategic approach to improving the quality and relevance of adult learning in non-formal education.

Keywords: andragogy, face makeup training, non-formal education

INTRODUCTION

Non-formal education plays a strategic role in addressing the community's need to improve skills outside of formal education, particularly in developing practical and applicable vocational competencies. Through non-formal education, communities gain more flexible and contextual learning opportunities tailored to the needs of life and the workplace (Triandini et al., 2019). One rapidly growing form of non-formal education is skills training, designed to foster independence and enhance participants' economic opportunities.

One of the most sought-after skills in non-formal education is makeup artistry training. This training is not only aesthetically oriented but also has economic value by opening up job and entrepreneurial opportunities in the beauty services sector. Makeup artistry is positioned as a skills-based competency that requires mastery of basic knowledge, precise techniques, and the ability to tailor services to the needs of service users. Therefore, it requires learning designs relevant to the workplace (Ermavianti et al., 2023).

Makeup training in non-formal education is generally attended by adult learners from diverse social, economic, and life backgrounds. Adult learners possess unique characteristics, such as learning needs

oriented toward solving real-world problems, a tendency to learn independently, and utilizing experience as a primary learning resource (Knowles, n.d.). Therefore, conventional educator-centered pedagogical approaches are considered less appropriate for this group of adult learners.

A relevant learning approach for adult learners is andragogy. Andragogy positions students as active subjects in the learning process, while educators act as facilitators, supporting the learning process through dialogue, reflection, and practice. The principles of andragogy emphasize the relevance of the material, the utilization of student experience, task- and problem-oriented learning, and the dominance of internal motivation as the primary driver of learning (Shabnam, 2019). In the context of vocational education, this approach is considered capable of connecting the learning process with work needs and the development of professional competencies.

Various studies have shown that the application of andragogical principles in adult education and training positively contributes to the quality of the learning process. Learning that values participants' experiences, encourages active participation, and emphasizes hands-on practice has been shown to increase participant engagement and satisfaction (Livingston & Cummings-Clay, 2023). These findings demonstrate that andragogy is not only theoretical but also practically relevant in non-formal education contexts.

In the field of makeup training, the application of andragogy principles has begun to receive attention in empirical studies. Research conducted in non-formal educational institutions shows that tutors who implement two-way communication, experience-based demonstrations, and provide extensive practice opportunities are able to create a conducive learning environment and increase participant participation (Musarah et al., 2018). This indicates that the success of training is determined not only by the material and facilities, but also by the learning approach used.

Makeup training is also often associated with empowering specific community groups, particularly adult women and housewives. Training tailored to the participants' actual needs has been shown to boost self-confidence, independence, and entrepreneurial readiness in the beauty services sector (Zamilah & Yusiyaka, 2022). This context further emphasizes the importance of applying andragogical principles to makeup training.

However, research addressing the application of andragogical principles in makeup training remains scattered and fragmented. Some studies focus more on the technical aspects of training or the development of teaching materials, without explicitly incorporating andragogy as the primary theoretical framework (Hardianti, 2020). Furthermore, variations in institutional contexts and research methods mean that a comprehensive overview of the application of andragogical principles in makeup training is lacking.

Based on these conditions, a study capable of systematically synthesizing research findings is necessary. A systematic literature review (SLR) approach is considered appropriate because it allows for mapping research results based on empirical evidence, identifying dominant themes, and exploring understudied research gaps (Priharsari, 2022). Through SLR, scattered research results can be analyzed in a structured manner, resulting in a more comprehensive understanding.

Therefore, this study aims to conduct a systematic literature review on the application of andragogy principles in makeup training in non-formal education. This study focuses on mapping the distribution of publications, identifying research themes and trends, and analyzing the trends in research methods and instruments used. The results of this study are expected to provide theoretical contributions to the development of andragogy studies and practical contributions to improving the quality of makeup training in non-formal education.

METHOD

This study used a Systematic Literature Review (SLR) approach to identify, select, and synthesize research findings that discuss the application of andragogy principles in makeup training in non-formal education. The SLR stages include formulating research questions, literature searches, article screening, quality assessment, and analysis and synthesis of research results. The literature search was conducted through Google Scholar with a publication range of 2015–2025 using a combination of keywords relevant to andragogy, makeup training, and non-formal education. The obtained articles were then selected based

on inclusion and exclusion criteria that included the focus of the study, the type of scientific document, the language of the publication, and the clarity of the research methodology. Furthermore, articles that passed the selection were assessed for eligibility to ensure the relevance and quality of the analyzed data, so that only studies that met academic standards were used as primary sources in this study.

In addition to descriptive qualitative analysis of article content, this study also utilized bibliometric analysis using VOSviewer software to map thematic trends and interconceptual relationships within the reviewed research. Bibliometric data was extracted from the metadata of selected articles, then analyzed through keyword co-occurrence mapping to identify dominant topic clusters, research focuses, and the direction of research development related to andragogy and makeup training. Network and density visualization were used to strengthen the interpretation of SLR findings objectively and systematically. The combination of SLR and VOSviewer analysis enabled the study to not only present a narrative synthesis but also provide a structural overview of research patterns, thus making the study results more comprehensive and data-driven.

RESULTS AND DISCUSSION

The results of this study are presented based on a synthesis of findings from articles that passed the systematic literature review stage and bibliometric analysis using VOSviewer software. The analysis was conducted to map the structure of research themes, inter-concept relationships, and study focus tendencies related to the application of andragogy principles in makeup training in non-formal education. The presentation of the results is divided into several main sub-discussions, namely mapping dominant keywords, research cluster structure, and the implications of the findings for the practice of andragogy-based makeup training.

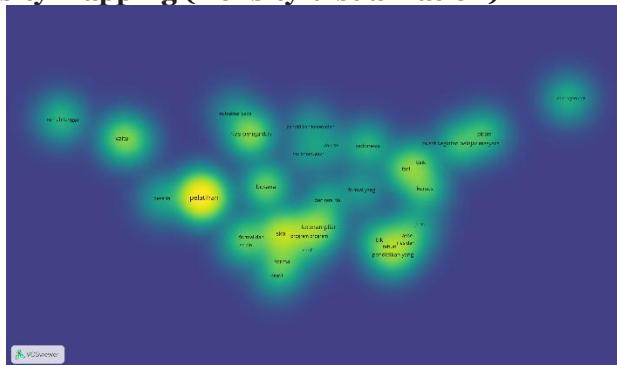### Research Theme Density Mapping (Density Visualization)

Figure 1. Density Visualization of the Application of Andragogy Principles in Makeup Training

The density visualization results show that the keyword "training" appears as the point with the highest density, marked by the brightest color on the visualization map. This indicates that the primary focus of the research reviewed is centered on the context of training as a form of non-formal education intervention. The high density of this keyword also shows that training serves as a key node connecting various other concepts, such as participants, skills, courses, and non-formal education providers.

In addition to "training," the keywords "skills," "makeup," and "bridal makeup" also showed a relatively high density. This finding confirms that most studies not only view training as a process but also emphasize the outcome of mastering practical skills. In the context of makeup training, the skills-oriented approach reflects the nature of vocational education, which emphasizes hands-on practice and job readiness. This theme density aligns with the principles of andragogy, which view adult learning as a process oriented toward solving real-world problems and direct application in everyday life.

On the other hand, keywords such as "household," "participant," and "housewife" appear at lower densities but still hold significant positions within the thematic network. This suggests a tendency for research to highlight makeup training as a means of empowering specific community groups, particularly adult women. This lower density indicates that this theme remains contextual and has not yet been a

primary focus in most studies, opening up opportunities for further, more in-depth research.

Cluster Structure and Inter-Concept Relationships (Network Visualization)
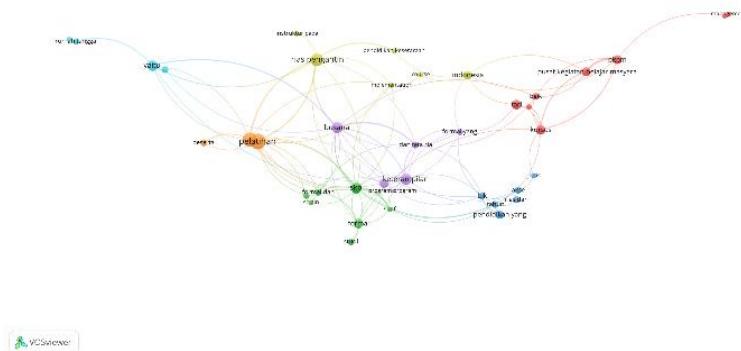

Figure 2. Network Visualization of Research Keywords

Network visualization analysis reveals the formation of several main, interconnected clusters, reflecting the conceptual structure of research related to andragogy and makeup training. The first cluster centers on the keywords "training," "participants," and "fashion," which represent the dimensions of the learning process and learning subjects. This cluster demonstrates that research focuses heavily on how participants actively engage in training and how training materials are linked to specific skill areas, including makeup and fashion.

The second cluster focuses on the keywords "skills," "program," "formal," and "non-formal," which describe the institutional context and learning objectives. The presence of these keywords indicates that makeup training is positioned as a bridge between formal and non-formal education in improving participant competency. The strong relationship between "skills" and "program" indicates that most studies view training as a structured program with clear competency achievement targets, in line with the principles of andragogy, which emphasize mutually agreed-upon learning objectives relevant to participant needs.

Another cluster displays the relationship between the keywords "course," "PKBM," "SKB," and "BLK," which represent non-formal education institutions. The existence of this cluster indicates that research is spread across various types of institutions, both community-based and job training institutions. The relationship between keywords in this cluster is relatively strong, indicating that the institutional context is a crucial factor in the implementation of andragogy principles. Each institution has different characteristics, resources, and learning approaches, which influence how andragogy principles are applied in makeup training.

Smaller but significant clusters also emerged for the keywords "bridal makeup," "dance," and "type," indicating a variety of skill specializations within makeup training. This indicates that research addresses not only makeup in general but also encompasses specific types of makeup with specific technical and aesthetic requirements. This variation reinforces the argument that makeup training requires a flexible andragogical approach that adapts to the context of the skills being taught.

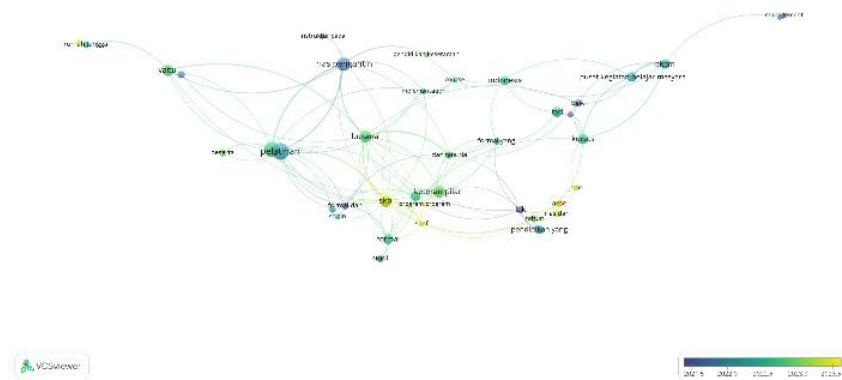**Research Timeline and Trends (Overlay Visualization)**

Figure 3. Overlay Visualization of Research Theme Development

The *overlay visualization* provides an overview of the development and research trends in the application of andragogy principles to makeup training. The colors on the map indicate the publication year range, with lighter colors representing more recent research. This visualization reveals that keywords such as "skills," "programs," and "PKBM" tend to appear in more recent publication periods. This indicates a shift in research focus toward strengthening competency-based training programs and the management of non-formal educational institutions.

In contrast, keywords such as "training" and "courses" appear consistently across time periods, indicating that this theme is fundamental and continues to be a focus for researchers. This consistency demonstrates that training as an adult learning approach remains relevant, but has undergone a more enriched perspective through the integration of andragogical principles and the strengthening of the context of community empowerment.

The overlay visualization also shows that studies linking makeup training to the context of empowerment and equality education have begun to emerge in recent years. The emergence of the keywords "equality education" and "program" in the more recent period indicates growing attention to the role of makeup training in supporting lifelong learning policies and human resource development. This trend aligns with the development of non-formal education policies that emphasize relevance, flexibility, and inclusivity.

Integrative Discussion of SLR and VOSviewer Findings

A synthesis of the results of a systematic literature review and VOSviewer analysis shows that the application of andragogical principles in makeup training significantly contributes to the effectiveness of adult learning. The dominance of training and skills themes confirms that learning in this context is oriented towards direct practice, which is one of the main characteristics of adult learning. Andragogical principles, such as utilizing participant experience, orientation towards problem-solving, and the relevance of the material to real-life needs, are implicitly reflected in the structure of the themes and research clusters formed.

The strong link between training, skills development, and non-formal educational institutions demonstrates that the successful implementation of an andragogical approach is not solely determined by the learning methods used, but is also influenced by program design and the institutional context. Institutions such as PKBM (Community Service Centers), SKB (Special Education Centers), and BLK (Vocational Training Centers) serve as learning spaces that provide flexibility, encourage active participant participation, and emphasize experiential learning. However, the differing characteristics of these institutions also present challenges in maintaining consistent application of andragogical principles, particularly with regard to instructor competence and the availability of learning practice facilities.

Furthermore, the findings indicate that although andragogical principles are widely applied in

makeup training practices, some studies have not explicitly used the andragogical framework as a theoretical foundation. This is evident in the emergence of keywords that are more prominent in the practical aspects than in the concept of andragogy itself. This situation indicates a research gap that can be filled through studies that more explicitly link andragogical theory to the design, implementation, and evaluation of makeup training.

Overall, the results of this study demonstrate that andragogy-based makeup training has significant potential to improve the quality of adult learning in non-formal education. Mapping research themes and trends using VOSviewer provides a structural overview that reinforces the SLR findings and serves as a basis for developing training models, developing evaluation instruments, and formulating a further research agenda in the field of beauty training and adult education.

CONCLUSION

Based on the results of a systematic literature review and bibliometric analysis using VOSviewer, it can be concluded that the application of andragogical principles in makeup training in non-formal education plays a significant role in improving the quality of adult learning processes and outcomes. Research theme mapping shows that training and skills are the dominant focus, interconnected with the institutional context of non-formal education, such as courses, PKBM, SKB, and BLK, and directed at strengthening participants' practical competencies and work readiness. The cluster structure and research trends show that experiential learning, hands-on practice, and the relevance of the material to participants' needs are the main characteristics of effective makeup training. Although andragogical principles have been widely applied implicitly in training practices, studies that explicitly use the theoretical framework of andragogy are still limited, thus opening up opportunities for more focused further research. Thus, the systematic integration of andragogical principles in the design, implementation, and evaluation of makeup training is expected to strengthen the role of non-formal education as a vehicle for adaptive, contextual, and sustainable adult learning.

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