

Digital Transformation in Educational Institutions: A Phenomenological Analysis of Educators Experience in the Utilization of Autocrats in Bantul, Yogyakarta

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Abstract.

Digital transformation in education administration is a strategic need in the era of technological disruption. This phenomenological study explores the experience of educators and administrative staff in implementing Autocrat for digital certificate automation in educational institutions in Bantul Yogyakarta, DIY. Through the Interpretative Phenomenological Analysis (IPA) approach, 25 participants from various levels of education who had participated in the intensive workshop were interviewed and observed. Data were collected through triangulation methods: in-depth interviews, participatory observations, and digital document analysis. The thematic analysis revealed three key findings: (1) cultural resistance to digital change that presents adaptation challenges; (2) the role of educators as a liaison between technology generations, facilitating digital knowledge transfer; and (3) the formation of a collaborative ecosystem between educators, local communities, and the government. The results of the study confirm that the success of technology adoption is not only determined by individual digital literacy, but also by the strength of local values, community narratives, and institutional support. This study recommends a human-centered approach to design and the establishment of digital task forces in educational institutions to ensure inclusive and sustainable technology adaptation.

Keywords: Digital transformation, Autocrats, Educators, digital literacy, local wisdom.

I. INTRODUCTION

Digital transformation has become a key driver of change in various sectors, including education, especially amid the challenges of the Industrial Revolution 4.0 and Society 5.0. Digitization of school administration is now a strategic need to improve the efficiency, accuracy, and quality of educational services, but its implementation in Indonesia still faces significant obstacles, especially in areas with disparities in access to technology and diverse digital literacy such as Bantul, Special Region of Yogyakarta. Most schools still rely on manual systems that are prone to errors and are less efficient in data management and document issuance, thus hampering administrative performance and quality of educational services (Leser et al., 2022).

One of the innovative solutions that has begun to be adopted is Autocrat, a Google Workspace add-on that is able to automate the creation of digital documents quickly and accurately from Google Sheets data (Rohimat et al., 2021). Automation through Autocrat can cut administrative workload and improve data accuracy, but the successful adoption of this technology is heavily influenced by non-technical factors, such as work culture, user psychological readiness, and collaborative capacity between stakeholders. Previous studies have emphasized that digital transformation in education does not only depend on the availability of technology, but also requires changes in organizational culture, individual readiness, and strong collaborative ecosystem support (UNESCO, 2020; Westerman et al., 2014).

In addition, resistance to digital change is still a major challenge, mainly due to uncertainty factors, value differences, and skill limitations (Maurer, 2010). In this context, the role of educators as boundary spanners is crucial to bridge the gap between technology generations and encourage the adoption of innovation in the school environment (Williams, 2002). The establishment of a collaborative ecosystem involving educators, local communities, governments, and the private sector has also been proven to strengthen the sustainability of educational innovation (OECD, 2017).

This study uses the Interpretative Phenomenological Analysis (IPA) approach to explore the subjective experience of educators and administrative staff in Bantul in adopting Autocrat as an instrument for digitizing education administration. This study aims to: (1) comprehensively describe the experiences and challenges of educators and administrative staff in adopting Autocrat; (2) identify key factors that support and hinder the sustainability of the digitalization of school administration; and (3) formulate strategic recommendations based on local values and human-centered design principles to optimize the implementation of inclusive and sustainable educational technology in Bantul, Yogyakarta.

Thus, this research is expected to make a theoretical contribution to the interpretive phenomenological literature on the adoption of educational technology in developing countries, as well as offer practical recommendations for policymakers and educational technology developers to design digitalization programs that are more adaptive, collaborative, and based on user experience

II. METHODS

a. Research Design

This study adopts a qualitative approach with the Interpretative Phenomenological Analysis (IPA) method (Smith, Flowers, & Larkin, 2009). IPA was chosen for its ability to:

- **Digging into Subjective Experiences:** Allows for a deep understanding of how participants conceptualize, feel, and give meaning to their experiences of using Autocrats.
- **Focus on Meaning:** Not only describe the phenomenon, but also interpret the meaning that participants give to the experience, including their emotions, perceptions, and interpretations.
- **Context-Sensitive:** Allows exploration of how individual experiences are shaped by social, cultural, and organizational contexts in the Bantul school environment.

b. Research Participants

The participants in this study amounted to 25 educators and administrative staff from 10 schools in Bantul, Special Region of Yogyakarta. The selection of participants was carried out through *purposive sampling* techniques, with the following criteria:

- Educators or active administrative personnel participate in previously organized Autocrat training workshops.
- Educators or administrative personnel who have been directly involved in the process of implementing and utilizing Autocrat for educational administration in their respective schools.
- Representation of participants from various levels of education to get diverse perspectives.
- Availability of participants to be interviewed in depth and participate in member checking sessions.

c. Data Collection Techniques

Data collection is carried out through triangulation of sources and methods to improve the validity and reliability of the findings:

- **Semi-Structured Interviews:** In-depth interviews are conducted with each participant, with a duration of between 60-90 minutes. The interview guide includes open-ended questions regarding the initial experience with Autocrat, the challenges faced, adaptation strategies, perceptions of digital change, and expectations and recommendations. The interview was recorded and transcribed verbatim.
- **Participatory Observation:** The researcher conducted direct observation during Autocrat training sessions and in the early stages of implementation in several schools. This observation focuses on participants' interaction with technology, the dynamics of collaboration between educators, and non-verbal responses to the digitalization process. Field notes are created in detail to capture relevant context and behavior.
- **Document Analysis:** The documents analyzed include: (a) qualitative evaluation results from the Autocrat training workshop (evaluation questionnaire), (b) activity logs and documentation of the Autocrat implementation process in schools (e.g., number of certificates generated, use of features), (c) examples of digital certificates generated, and (d) internal guidance materials that educators may create for peers.

d. Data Analysis Techniques

The collected qualitative data were analyzed using the following stages of Interpretative Phenomenological Analysis (IPA) (Smith, Flowers, & Larkin, 2009):

1. **Verbatim Transcription:** All interview recordings are transcribed on a word-for-word basis to ensure data accuracy.
2. **Repeat Reading and Initial Note-Making:** The researcher reads the transcript repeatedly to familiarize themselves with the data and make initial notes in the form of observations, impressions, and questions that arise.

3. **Development of Emerging Themes:** Based on the initial notes, researchers identify key phrases, important statements, or patterns that appear in each transcript. From here, emergent themes began to be developed.
4. **Connection Themes:** The emerging themes of each participant are then sought to form more abstract and general themes (super-ordinate themes) that represent the collective experience.
5. **Interpretive Narrative Development:** Key themes are presented with direct quotes from participants to support interpretation and give "voice" to their experiences. The researcher's interpretation is also included to give deeper meaning to the findings.
6. **Data Triangulation:** Findings from interviews are validated and enriched with data from participatory observation and document analysis to ensure consistency and depth of understanding.
7. **Validation Through *Member Checking* and Focus Group Discussions (FGDs):** To increase the credibility of the findings, some participants were invited to a *member checking* session where they reviewed and confirmed the researchers' interpretation of their experiences. In addition, the FGD was conducted with a selected group of educators to discuss key themes and test the validity of interpretation.

III. RESULT AND DISCUSSION

a. Results of the Initial Evaluation of the Autocrat Workshop

The training activity entitled "Digital Transformation in Educational Institutions: Phenomenological Analysis of Educators' Experience in the Utilization of Autocrats in Bantul, Yogyakarta" was successfully held from May 19 to 22, 2025 in Bantul, Special Region of Yogyakarta. This activity is part of efforts to empower educators to face the challenges of education digitalization, especially in the use of Google Workspace-based technology such as *Autocrat*, to support the automation of education administration in a more efficient and structured manner.



Photo 1.

Implementation of Autocrat Training Activities, Bantul - Yogyakarta

This training was attended by a number of educators from various levels of education, and received a very positive response. Based on the results of the qualitative evaluation, the level of satisfaction of participants with the training program was above 80%, which reflects high acceptance of the training materials and methods provided. The aspect of mastery of the material by

the facilitator recorded the highest score with an average of 86.4%, indicating that the delivery of the material had taken place effectively, clearly, and easily understood by the participants.



Photo 2.

Implementation of Autocrat Training Activities, Bantul, Yogyakarta

However, there is an important note in terms of the effectiveness of learning media, which obtained the lowest score in the evaluation, which is an average of 75.2%. This indicates that although the enthusiasm of the participants is very high, there is still room for improvement in terms of providing more interactive visual and technical facilities and supporting technology-based learning optimally. These findings reinforce the importance of a pedagogical approach that not only centers on the competence of the facilitator, but also pays attention to the quality and effectiveness of the media used in the training process. To give a clearer picture, here is a summary table of qualitative evaluation results from the training workshop:

Table 1: Evaluation Results of the "Digital Certificate Creation with Autocrats" Training No.

Statement	Actual Score	Maximum Score	Percentage (%)
1. Training materials according to the needs of the community	103	125	82.4%
2. The language used is easy to understand	101	125	80.8%
3. Facilitators master the material well	108	125	86.4%
4. The facilitator answers questions clearly and satisfactorily	99	125	79.2%
5. Training methods encourage active participant participation	95	125	76.0%
6. Media and tools support understanding	94	125	75.2%
7. Feel able to apply Autocrat after training	104	125	83.2%
8. Training is beneficial for activities in the community	104	125	83.2%
9. Satisfied with the overall implementation of the workshop	104	125	83.2%
10. Would recommend this training to others	105	125	84.0%

The 'Digital Certificate Creation with Autocrat training received an excellent response from the participants. The majority of statements received a percentage above 80%, with the highest score on the aspect of mastery of the material by the facilitator (86.4%). Areas that need to be improved are methods that encourage active participant participation and the effectiveness of the learning media used. Overall, the training is considered useful, applicable, and worth recommending.

b. Main Themes of Educator Experience

Based on the analysis of science, the three main themes that emerged from the experience of educators and administrative personnel in the use of Autocrats are: A) Cultural Resistance in the Digital Transition, B) Educators as *Boundary Spanners*, and C) The Formation of a Collaborative Ecosystem.

• Cultural Resistance in the Digital Transition

Participants' experiences showed significant emotional and cognitive dilemmas when transitioning from an established manual administration system to an Autocrat-based digital system. Initially, many participants expressed anxiety and doubt. As expressed by one of the junior high school educators: *"At first, I was afraid of making mistakes. It's comfortable to use the old way, suddenly you have to click a lot of buttons. Especially if the power goes out, what will happen later?"* (Participant G-07). This statement reflects uncertainty and fear of technological failure, exacerbated by infrastructure limitations such as frequent power outages.

Furthermore, it was found that there is a "nostalgia" for the conventional administrative process, where physical interaction in document education is considered to have its own value. A high school administration worker said: *"In the past, when I made a certificate, I was busy, sometimes while chatting with friends. Now everything is fast, but sometimes I feel less 'gregarious'. There's a sense of loss of interaction."* (Participant TA-03). This phenomenon shows that digital changes are not only changing work processes, but also affecting social and cultural aspects in the workplace. This tendency is reinforced by the initial perception that digital systems are more complex and require longer adaptation times than older systems. These findings are in line with research by Bartolo et al. (2023) who said that technological changes trigger anxiety and require time to adapt.

However, research shows that changes in perception occur after participants have gone through intensive mentoring phases and ongoing hands-on practice. Personal mentoring by more skilled facilitators and peers has proven to be very effective. *"After trying it continuously, guided one by one, it turns out that this Autocrat is very helpful. The process becomes faster and neater. Even now, if you don't use Autocrat, it feels strange."* (G-15 Participant). This transformation of perception indicates that cultural resistance can be minimized through a humanist approach, where social support and positive hands-on experience are the keys to successful technology adoption. This process is in line with the concept of *the technology acceptance model* which emphasizes the importance of *perceived usefulness* and *perceived ease of use* in technology adoption (Davis, 1989).

• Educators as *Boundary Spanners*

One of the most significant findings is the evolution of the role of educators. They not only act as passive users of technology, but also as transformative agents and digital facilitators within their school communities. Many participants proactively took on the role of mentors for colleagues who were less familiar with technology or who were still struggling. *"I often help friends who are*

struggling. Make a small tutorial video using a cellphone, or if you have free time, I will accompany you directly. It feels good to be able to transmit knowledge." (G-11 Participant). This personal initiative demonstrates the capacity of educators to be *boundary spanners*, bridging the digital knowledge and skills gap between members of the school community. They informally break down technical and psychological barriers for their peers.

Local creativity also appears in this adaptation process. Some educators develop in-house guidance in the form of easy-to-digest infographics or short tutorial videos tailored to their school's context. More interestingly, they not only automate certificates, but also integrate elements of local culture in the design of digital certificates, such as the use of Yogyakarta-style batik motifs or the inclusion of Javanese proverbs. For example, a student's award certificate may contain a Parang Rusak batik ornament or a quote from a relevant Javanese philosophy. *"We tried to include a little Javanese touch in the design of the certificate. So that it is not too rigid and there is local pride value."* (Participant G-09). This shows how technology can be adapted to enrich and preserve local wisdom, not erode it. The role of educators as *boundary spanners* is very important because they are able to translate the complexity of technology into language and context that is relevant to their peers, while integrating innovation with local cultural values. This is in line with the concept of *diffusion of innovations* where local agents of change play a crucial role in the dissemination of innovation (Rogers, 1995).

- **Formation of a Collaborative Ecosystem**

The success of the implementation of Autocrat in Bantul cannot be separated from the crucial role of the collaborative ecosystem that exists between educators, the school community, and the support of the local government, especially the Education Office. Informal but effective communication forums, such as dedicated WhatsApp groups for technical discussions and solution sharing, are vital forums for educators to help each other. *"The WA group is very helpful. If there is a problem directly in the photo, someone will answer it. So there's no need to worry about being alone."* (Participant TA-05). This community of digital practice allows for quick and collective problem resolution, minimizing individual frustration.

In addition, this study identifies the use of the "gotong royong" or "rewang" system in the distribution of administrative tasks related to Autocrats. For example, some educators are responsible for managing data in Google Sheets, while others focus on the design of certificate templates, and some are in charge of *the merge* and distribution process. *"We divide the tasks, who inputs data, who designs, who prints if there is any. So it is not heavy on one person. This is like the 'rewang' of the old days, helping each other."* (Participant G-04). This strategy not only reflects the efficiency of teamwork, but also shows the adaptation of local values into the context of digital transformation. The concept of "rewang" which means helping each other in Javanese society, applied in the context of technology, creates a sense of collective ownership of the digitalization process. Hopkins et al. (2022) emphasize the importance of cross-sector collaboration in the sustainability of educational innovation.

The support from the Bantul District Education Office, although not fully structured, provides additional legitimacy and motivation for schools to adopt this technology. *"The Education Office also occasionally monitors and gives appreciation, it motivates us to continue learning."* (G-18 Participant). This multi-stakeholder collaboration is a key factor in the sustainability of the digitalization program, showing that educational technology innovation will be more successful if it

is supported by strong social networks and responsive policies. These findings strengthen the argument about the importance of *social capital* in facilitating the adoption of innovation (Putnam, 1995).

c. Research Implications

This research underlines that digital transformation in education is not just the adoption of technological tools, but a process of profound sociocultural change. The main implication of these findings is the importance of a contextual and humanist approach in designing and implementing digitalization programs.

- **Narrative-Based Training Approach and Community of Practice:** It is not enough to focus only on the technical aspects. Training should be designed to address psychological and cultural resistance, for example by using narrative case studies from the experiences of other successful educators, or by facilitating the formation of a digital community of practice where educators can share experiences and solutions with each other. This will build *peer support* and reduce the sense of isolation that educators may feel in the adaptation process. The use of experience stories by senior educators is effective in reducing resistance (Mattar, 2018).
- **Strengthening School Social Infrastructure:** Investment in technology must be balanced with investment in social infrastructure. The establishment of a digital task force at the school level, consisting of pioneering educators and competent administrative personnel, can function as an agent of grassroots change (Saad & Sankaran, 2020). These task forces can provide ongoing mentoring, develop local guidance, and identify specific needs of schools, ensuring that technology is tailored to the local context.
- **Integration of Local Wisdom:** Successful digital transformation does not mean eliminating local identity. On the other hand, efforts to integrate cultural values and local wisdom, such as the concept of mutual cooperation and design that accommodates cultural elements, can increase acceptance and a sense of ownership of technology. This creates a "rooted digitalization", which is more sustainable and relevant to the community.
- **Responsive Policy Role:** Local governments and education agencies need to develop policies that support digital innovation, not only in terms of providing infrastructure, but also in facilitating continuous training, providing recognition to educators who are *boundary spanners*, and creating multi-stakeholder collaboration mechanisms.

IV. CONCLUSION

Digital transformation in education administration in Bantul, Yogyakarta, especially through the use of Autocrats, is a phenomenon that goes beyond technical innovation; it is a paradigm shift that involves cultural adaptation, role evolution, and strengthening social collaboration. The study found that the success of the adoption of Autocrat technology was strongly influenced by educators' ability to overcome cultural resistance, their willingness to be *boundary spanners* who facilitate adoption among peers, and the existence of a solid collaborative ecosystem based on local values such as "mutual cooperation".

This study recommends a holistic approach to sustainable digital transformation in educational institutions. This includes the establishment of a responsive digital task force in each school, the design of training that focuses not only on technical literacy but also on the narrative and emotional

aspects of the user experience, and the strengthening of an adaptive and inclusive school ecosystem. By integrating technology, culture, and collaborative capacity, the administrative digitalization process can be truly sustainable and have a significant positive impact on the quality of education in Bantul, Yogyakarta.

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