



TRANSFORMATIONAL LEADERSHIP AS A CATALYST FOR TEACHER PERFORMANCE AND EDUCATIONAL INNOVATION IN THE DIGITAL AGE

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Abstract:

This study aims to analyse the transformative leadership of the headteacher in enhancing teacher performance and educational innovation in the digital age at MTs Hidayatus Sholihin Turus-Gurah-Kediri. The study employs a qualitative approach using a case study design. Data were collected through in-depth interviews, observations and documentation involving the headteacher, deputy headteacher, teachers, school administrators and pupils. Data analysis was conducted using the interactive model developed by Miles, Huberman and Saldana, comprising the stages of data collection, data condensation, data presentation, and the drawing and verification of conclusions. The research findings indicate that the headteachers have implemented transformative leadership through the development of a shared vision, the provision of motivation, intellectual stimulation, professional development for teachers, and guidance on the use of digital technology. These strategies have led to improvements in teachers' digital competence, discipline, innovation , collaboration and performance. The implementation of transformative leadership is supported by the commitment of madrasah heads, a collaborative work culture, and the availability of technological resources; however, it still faces challenges in the form of disparities in teachers' digital competence, infrastructure limitations, and resistance to change. The implications of this research suggest that transformative leadership is an effective approach in supporting digital transformation and improving the quality of education in madrasahs

Keywords: *Internal Quality Assurance System, Pesantren, Education*

INTRODUCTION

The rapid development of digital technology has brought about fundamental changes in various aspects of life, including the field of education. Digital transformation not only alters the learning process but also influences the governance of educational institutions, administrative systems, communication, decision-making, and human resource management. Educational institutions are required to adapt to these developments by enhancing organisational effectiveness, strengthening teachers' competencies, and implementing leadership that is adaptive to change. In this context, the headteacher of a madrasah plays a strategic role as both a leader and an agent of change, responsible for guiding all components of the madrasah so that they are able to face the challenges of education in the digital age (Bass, 1985; Leithwood & Jantzi, 2005)

In addition to adaptive leadership, educational innovation is also required to navigate the digital age. Educational innovation is a systematic process of renewal aimed at enhancing the effectiveness, efficiency, and quality of

educational delivery through the implementation of new ideas, methods, technologies, and policies. Innovation is not merely realised through the use of digital technology, but also encompasses changes in pedagogical approaches, curriculum development, assessment systems, collaborative learning models, and a school organisational culture that is adaptable to change. Consequently, the success of digital transformation in schools is greatly influenced by the ability of the entire school community to embrace, develop and implement various forms of innovation on an ongoing basis (Alam et al., 2023).

Transformational leadership is one of the leadership approaches widely studied in educational management because it is capable of driving sustainable organisational change. This leadership style emphasises a leader's ability to build a shared vision, provide motivation and inspiration, foster innovation or creativity through intellectual stimulation, and pay attention to the needs of each individual. Unlike transactional leadership, which is more oriented towards a system of rewards and punishments, transformational leadership is able to build commitment among organisational members to work beyond their personal interests in order to achieve shared goals (Bass, 1985). Therefore, madrasah heads are required to possess transformational leadership skills so that they can create a work culture that is innovative, collaborative, and adaptable to technological developments

As we enter the digital age, the complexity of educational leadership is increasing. Digital transformation is not only related to the use of information technology in the learning process, but also encompasses the digitisation of madrasah administration, the utilisation of educational management information systems, digital-based communication, technology-based learning evaluation, and data-driven decision-making. In Indonesia, the digital transformation of madrasahs has become one of the government's priorities through various digitisation programmes such as EMIS, SIMPATIKA, e-Rapor, digital libraries, and various technology-based educational service systems. However, the success of digital transformation implementation is not solely determined by the availability of technological facilities and infrastructure; it is also significantly influenced by the ability of madrasah heads to lead change, foster an adaptive organisational culture, and enhance teachers' competence in utilising digital technology.

Teachers are a key factor in the implementation of educational innovation. Various digital transformation policies will only have a tangible impact if teachers possess adequate professional, pedagogical, social and digital competences. In the digital age, teachers are required not only to master the subject matter but also to be able to develop digital learning resources, utilise internet-based technology, integrate artificial intelligence into learning in an ethical manner, and create learner-centred learning experiences . Therefore, improving teacher performance has become one of the key indicators of the success of educational transformation (Wiyani, 2025).

Various previous studies have shown that transformational leadership makes a positive contribution to improving the quality of education. Ismail (2023) states that the transformational leadership of madrasah heads plays a vital role in developing high-calibre human resources through the creation of a conducive working environment, the enhancement of teachers' competences, and the utilisation of information technology. Fauzi (2020) found that transformational leadership has a significant impact on improving teacher performance through supervision, motivation, discipline, training, and teacher

participation in Subject Teachers' Working Groups (MGMP). Furthermore, Rifad (2023) explains that headteachers who practise transformational leadership are able to enhance educators' digital literacy skills through various training and professional development programmes

Although these various studies have contributed to the development of research on transformational leadership, several *research gaps* remain. Firstly, the majority of studies have focused primarily on the relationship between transformational leadership and either teacher performance or digital transformation in isolation; consequently, there has been little research examining the implementation of transformational leadership in comprehensively enhancing teacher performance and educational innovation in the digital age within madrasahs. Secondly, previous research has generally employed a quantitative approach focusing on the influence between variables; consequently, it has not provided an in-depth understanding of the transformative leadership practices employed by madrasah heads in addressing digital change. Thirdly, there is still a limited number of studies that simultaneously examine how transformative leadership practices influence improvements in teacher performance, how transformative leadership drives educational innovation, and the interaction between transformative leadership, teacher performance and educational innovation in shaping school transformation in the digital age.

In light of this gap, this study focuses on the transformative leadership practices of the headteacher of MTs Hidayatus Sholihin Turus Gurah, Kediri, in enhancing teacher performance and educational innovation in the digital age. The novelty of this study lies in its integration of transformative leadership theory with the concept of educational leadership in the digital age within the context of a madrasah. This study not only examines transformative leadership practices but also analyses the madrasah headteacher's strategies for improving teacher performance, as well as their role in fostering educational innovation in the digital age.

RESEARCH METHODS

This research employs a qualitative approach using a case study methodology. This approach was chosen to gain an in-depth understanding of the practice of transformational leadership in enhancing teacher performance and fostering educational innovation in the digital era at MTs Hidayatus Sholihin Turus-Gurah-Kediri. Through the case study approach, the researcher can examine a phenomenon comprehensively in accordance with the actual conditions on the ground, thereby being able to describe the implementation of transformative leadership along with the factors influencing its success.

The research was conducted at MTs Hidayatus Sholihin Turus-Gurah-Kediri, an Islamic educational institution that has implemented various forms of digitalisation in educational management, such as the use of a madrasah information system, digital-based administration, and learning technologies. Furthermore, the head of the madrasah is considered to have applied transformative leadership to improve teacher performance and educational innovation, making this location relevant to the research focus.

In qualitative research, the researcher acts as a 'human instrument' responsible for designing the study, collecting data, analysing data, interpreting the research findings, and compiling the research report. Research subjects were selected using purposive sampling, which involves choosing informants

considered to be the most knowledgeable and directly involved in the implementation of the madrasah headteacher's transformative leadership. Where necessary, the selection of informants was expanded using snowball sampling until data saturation was achieved.

Data collection techniques included in-depth interviews, passive participatory observation, and documentation. Data analysis utilised the interactive model developed by Miles, Huberman and Saldana, which comprises four stages: data collection, data condensation, data display, and conclusion drawing and verification.

Data validity was tested through the application of source triangulation, methodological triangulation, observational rigour, extended researcher involvement in the field, and confirmability of research findings. The application of these techniques aims to enhance the credibility, reliability, confirmability, and transferability of the research findings, ensuring that the research results possess a high level of confidence and are consistent with the empirical conditions in the field

RESULTS AND DISCUSSION

Results

This study aims to describe the implementation of transformative leadership by the headteacher of a madrasah in improving teacher performance in the digital age at MTs Hidayatus Sholihin Turus-Gurah-Kediri. Based on the results of interviews, observations and documentation, three main findings were obtained, namely: (1) the madrasah head's efforts to improve teacher performance in the digital age, (2) the practice of transformational leadership towards educational innovation, and (3) the interaction between transformational leadership, teacher performance and educational innovation shaping school transformation in the digital age.

The Madrasah Head's Efforts to Improve Teachers' Performance in the Digital Age.

The research findings indicate that madrasah headteachers implement various strategies to enhance teachers' performance in response to developments in digital technology. These strategies are not only aimed at improving teachers' pedagogical and professional competencies but also at strengthening their ability to utilise information technology to support the learning process.

Based on interviews with madrasah headteachers and several teachers, it was found that efforts to improve teacher performance are carried out through continuous professional development, academic supervision, motivation, performance evaluation, and the facilitation of various professional development activities. Professional development takes the form of regular meetings, individual mentoring, academic discussions, and training in the use of digital learning resources. In addition, the headteachers regularly carry out academic supervision to provide feedback on the learning processes implemented by teachers.

Motivational support is also a key strategy. The headteacher awards recognition to teachers who demonstrate good performance, encourages participation in training sessions, seminars and workshops, and fosters a working environment that supports innovation in teaching. Furthermore, evaluations are carried out periodically to monitor teachers' performance progress and to serve as a basis for determining future professional development programmes.

Table 1: Efforts by the Head of the Madrasah to Improve Teachers' Performance

No.	Efforts by the Head of the Madrasah	Form of Implementation
1	Guidance	Teacher mentoring, coordination meetings, professional development
2	Supervision	Academic supervision and teaching supervision
3	Motivation	Awards, encouragement to undertake training, strengthening of work culture
4	Evaluation	Monitoring, performance evaluation, follow-up on supervision findings

These findings indicate that improvements in teachers' performance are achieved through a continuous approach, thereby providing teachers with opportunities to develop their professional competencies whilst enhancing their ability to utilise digital technology.

Transformative Leadership Practices in Educational Innovation

The research findings show that the implementation of transformative leadership by the head of the madrasah has reflected the four main dimensions of transformative leadership. All these dimensions are applied in an integrated manner within the madrasah management process, thereby supporting improvements in teacher performance, educational innovation and the development of an organisational culture that is adaptable to change.

In the dimension of idealised influence, the headteachers serve as role models through their discipline, integrity, responsibility and commitment to developing a digital-based madrasah. This exemplary behaviour encourages teachers to demonstrate a better work ethic and enhance their professional responsibility.

The dimension of inspirational motivation is realised through the communication of the madrasah's vision and mission, which are focused on digital transformation; the provision of motivation to teachers; and the creation of a working environment conducive to the development of innovative teaching methods.

In the intellectual stimulation dimension, the head of the madrasah provides teachers with the space to develop their creativity in the learning process, utilise various digital platforms, and produce innovations that meet the needs of learners in the digital age.

Meanwhile, the dimension of individualised consideration is realised through individual coaching, professional mentoring, the provision of opportunities to attend training, and attention to the needs and potential of each teacher.

Table 2: Implementation of Transformative Leadership

Leadership Dimensions	Forms of Implementation
<i>Idealised Influence</i>	Exemplary behaviour, discipline, integrity, commitment
<i>Inspirational Motivation</i>	Motivation, shared vision, organisational communication

<i>Intellectual Stimulation</i>	Innovative learning, use of digital technology
<i>Individualised Consideration</i>	Mentoring, coaching, teacher competence development

Research findings at MTs Hidayatus Sholihin indicate that the headteacher successfully fostered educational innovation through the development of the madrasah's website, the implementation of RFID attendance systems, online student enrolment, the e-PERPUS library system, the utilisation of digital learning resources, and training in technology use for teachers. These innovations reflect the implementation of the dimensions of 'Intellectual Stimulation' and 'Inspirational Motivation' within transformative leadership, whereby the headteacher not only brings about systemic change but also fosters teachers' commitment to continuously improving their competences and the quality of learning.

The Interaction Between Transformative Leadership, Teacher Performance and Educational Innovation Shapes School Transformation in the Digital Age

Educational transformation in the digital age is determined not only by the availability of technology, but also by the quality of leadership and teachers' performance in managing change. Transformative leadership, teacher performance and educational innovation are three interrelated components that form a system supporting the realisation of madrasah transformation. These three aspects have a dynamic relationship, whereby the success of digital transformation depends on the leader's ability to motivate teachers to innovate and improve the quality of learning.

According to Burns (1978), transformational leadership is a leadership process capable of enhancing followers' motivation, commitment and morale so that they are willing to go beyond their personal interests to achieve organisational goals. This concept was subsequently developed by Bass and Avolio (1994), who explained that transformational leaders drive change through four key dimensions: Idealised Influence, Inspirational Motivation, Intellectual Stimulation, and Individualised Consideration. Through these four dimensions, leaders are able to build an organisational culture that is open to renewal and innovation.

In the context of education, transformational leadership acts as the primary driver of improved teacher performance. Teachers who receive motivation, guidance, recognition and opportunities to develop their competencies will demonstrate better performance, whether in the planning, delivery or evaluation of learning. Supardi (2016) explains that teacher performance is the ability of teachers to carry out their professional duties effectively so that learning objectives can be achieved. In the digital age, indicators of teacher performance also include the ability to integrate information and communication technology into the learning process, utilise digital media, and develop learning innovations tailored to learners' needs.

Furthermore, educational innovation is a factor that accelerates the transformation of madrasahs in the digital age. According to the OECD (2020), digital education transformation is a systematic change involving the integration of technology, the enhancement of educators' competencies, learning innovation, and the strengthening of educational institutions' governance to make them more

adaptive to contemporary developments. In the context of the madrasah under study (), this transformation is reflected in the implementation of an RFID attendance system, the madrasah website, online student admissions (PPDB), the e-PERPUS library system, the use of digital learning resources, and the digitisation of academic administration. These various innovations demonstrate that the leadership of the madrasah head is not only focused on administrative changes but also on improving the quality of learning through the enhancement of teachers' competencies.

These findings reinforce the view of Leithwood et al. (1999) that the success of school transformation is greatly influenced by the leader's ability to build a shared vision, develop teachers' capacities, create a collaborative culture, and manage change sustainably. Thus, the interaction between transformational leadership, teacher performance, and educational innovation forms a mutually reinforcing cycle. Transformative leadership enhances teacher performance; teacher performance generates educational innovation,

DISCUSSION

A culture of innovation in schools does not emerge spontaneously, but is built through leadership that provides space for experimentation, collaboration and continuous learning. Teachers who receive support from their headteachers tend to be more motivated to develop digital learning resources, utilise online learning platforms, implement technology-based assessment, and participate in professional learning communities (Pudjaningsih et al., 2026) . Conversely, schools with an organisational culture that is less supportive of change generally face difficulties in adopting innovations, even when they possess adequate technological infrastructure. This indicates that the success of digital transformation is determined more by leadership and organisational culture than by the mere availability of technology.

As well as impacting the learning process, educational innovation also strengthens the school organisation's capacity to cope with dynamic change. Schools that successfully foster a culture of innovation generally exhibit characteristics such as open communication, collaboration amongst teachers, the use of data in decision-making, continuous professional development, and the ability to integrate technology in line with learning needs. In such an environment, teachers are not merely implementers of policy but also act as agents of innovation, actively generating new ideas to improve the quality of education. Therefore, transformational leadership serves as a catalyst that accelerates the process of organisational change through the empowerment of human resources and the strengthening of a culture of learning within the school (Rodiyah et al., 2020) .

Nevertheless, the implementation of educational innovation in the digital age still faces various challenges. Disparities in digital competence among teachers, limited access to technology, resistance to change, administrative burdens, and unequal opportunities to participate in professional development are common obstacles. Therefore, headteachers need to develop adaptive leadership strategies by providing continuous training, guidance on the use of technology, the formation of Professional Learning Communities (*PLCs*), and a system of recognition for innovative practices carried out by teachers. These strategies will strengthen the organisation's readiness to face digital transformation on an ongoing basis.

Based on this discussion, it can be understood that educational innovation is the result of the interaction between transformational leadership, improvements in teacher performance, organisational culture, and the utilisation of digital technology. Transformational leadership not only contributes to enhancing teachers' motivation and competence but also creates a school ecosystem that supports innovative, collaborative and sustainable learning. Therefore, strengthening transformational leadership is one of the key strategies in realising educational transformation capable of addressing the challenges of the digital age whilst continuously improving the quality of education.

CONCLUSION

This study concludes that the implementation of transformational leadership by the headteacher plays a crucial role in enhancing teacher performance and educational innovation in the digital age at MTs Hidayatus Sholihin Turus-Gurah-Kediri. Transformational leadership is realised through various strategies, such as the formulation of a shared vision, the provision of motivation, the conduct of academic supervision, professional development, continuous evaluation, and the organisation of training programmes that support the enhancement of teachers' digital competencies. The implementation of these strategies has succeeded in creating a work culture that is collaborative, innovative, adaptable to technological developments, and focused on improving the quality of education.

Based on Bass and Avolio's theory of transformational leadership, the research findings indicate that madrasah heads have implemented the four main dimensions of transformational leadership, namely idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration. The dimension of idealised influence is manifested through the madrasah head's exemplary conduct, integrity and commitment to leading change. The dimension of inspirational motivation is evident in the ability to develop a vision for a digital madrasah and to motivate teachers. The dimension of intellectual stimulation is applied through the development of technology-based learning innovations and the utilisation of the madrasah's digital systems, whilst individualised consideration is realised through mentoring, guidance, and the development of teachers' competencies in accordance with their individual needs. Nevertheless, the dimensions of intellectual stimulation and individualised consideration still require strengthening so that digital transformation can proceed more effectively.

Educational innovation in the digital age is a transformative process encompassing renewal in learning, school management, the development of teachers' competencies, and the utilisation of technology to improve the quality of education. The success of such innovation is determined not only by the availability of digital infrastructure but also by the school organisation's ability to foster a culture that is adaptable to change.

Thus, educational innovation is the result of synergy between transformational leadership, improved teacher performance, an organisational culture that supports change, and the effective use of digital technology. Therefore, strengthening transformational leadership must be a key strategy in school development to create an innovative, adaptive and sustainable learning ecosystem, so that the quality of education can continue to improve in line with technological developments and the needs of 21st-century society.

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