

KASPATRA: Madrasah Head Training Model for Leadership Competency Transformation

Rahmadani^{1*}, Muhammad Aswad², Cut Nyaknyak Ummu Athiyah³

Badan Moderasi Beragama & PSDM Kementerian Agama, Indonesia^{1,3}

Pusjar SKMP, Lembaga Administrasi Negara, Indonesia²

Email: danirahma.70@gmail.com^{1*}, m.aswad@gmail.com², cut.nyak@gmail.com³

Keywords:	Abstract
Kaspatra; Head Of Madrasah; Transformational Leadership; Research And Development; Transfer Of Training	The transformation of education in the digital era requires madrasah heads to possess adaptive and innovative leadership competencies that integrate educational technology and character education. However, existing training programs remain dominated by conventional approaches and often fail to ensure the sustainable application of training outcomes in the workplace. This study aimed to develop and evaluate the effectiveness of KASPATRA (Knowledge Acquisition–Skill Development–Practice Enhancement–Transformative Leadership) as a training model for madrasah heads. The study employed a Research and Development (R&D) approach using the 4-D model (Define, Design, Develop, and Disseminate). The model was developed through a needs analysis involving observations, interviews, documentation, and a literature review, refined through expert review, and subsequently tested using a one-group pretest–posttest design involving madrasah heads under the Ministry of Religious Affairs in Banjarmasin City. The study produced the KASPATRA training model, which integrated transformational leadership, educational technology, and character education through four learning stages: Independent Learning, Coaching Clinic, Collaborative Learning, and Implementation Assistance. The implementation of the model increased transformational leadership competency by 41%, educational technology competency by 73%, and character education competency by 42%. The novelty of this study lies in integrating these three competency dimensions with a transfer-of-training mechanism within an R&D-based training model, thereby supporting not only knowledge acquisition but also the sustainable application of leadership competencies in the workplace. KASPATRA demonstrated potential as an alternative training model for madrasah heads that is systematic, adaptive, and sustainable.

INTRODUCTION

The transformation of education in the digital era has fundamentally changed the role of madrasah heads from administrators to instructional leaders, change leaders, and drivers of educational innovation. OECD (2023) and UNESCO (2023) emphasize that the success of educational transformation in the digital era depends substantially on the capacity of school leaders to lead innovation, strengthen digital competencies, foster a collaborative culture, and create learning ecosystems that are adaptive to change. In line with this perspective, madrasah heads are required to integrate digital technology, foster a culture of quality, and continuously develop teacher professionalism. Various studies have shown that the success of educational transformation is strongly influenced by the capacity of school and madrasah leaders to integrate digital technology, foster

collaborative cultures, and implement transformational leadership that is adaptive to organizational change (Faisal et al., 2025; Khofi, 2024; Puspitasari et al., 2025).

This transformation is consistent with the Continuous Professional Learning (CPL) paradigm, which views competency development as an ongoing learning process. This paradigm emphasizes the integration of self-directed learning, coaching, mentoring, professional learning communities, reflection, and workplace practice. Accordingly, the professional development of school leaders needs to be designed as a lifelong learning process (OECD, 2023). Various studies have also demonstrated that transformational leadership combined with coaching and collaborative learning can improve teacher motivation, organizational culture, and the quality of learning (Darling et al., 2024; Kraft et al., 2018; Nafi et al., 2024; Husnah et al., 2024; Nuriza et al., 2025).

The Continuous Professional Learning paradigm implies that competency development for madrasah heads can no longer rely solely on incidental training but should be designed as an integrated, sustainable, and implementation-oriented learning process in the workplace. In this context, madrasah heads require complementary competencies to lead educational transformation effectively. Therefore, transformational leadership, educational technology, and character education represent three competency dimensions that need to be integrated into a comprehensive training model (Hadi et al., 2024; Kausar et al., 2025; Ratnawati et al., 2025; Sliwka et al., 2024; Supriatna, 2025).

In line with the CPL paradigm, competency development for madrasah heads requires a holistic and sustainable approach that integrates leadership, educational technology, and character education. These three dimensions provide a foundation for strengthening the leadership capacity of madrasah heads in responding to the demands of educational transformation. Studies have shown that transformational leadership contributes to increased teacher motivation, stronger organizational culture, and greater leadership effectiveness in facilitating school change (Molero et al., 2007; Zhang & Huang, 2022). Educational technology, meanwhile, enables madrasah heads to promote data-driven decision-making, strengthen learning innovation, and improve the effectiveness of educational governance (Schildkamp et al., 2019). Rahmadani (2022) found that an integrated human resource management strategy could improve institutional competencies and competitiveness, while Qomariah et al. (2022) demonstrated that the implementation of a Moodle-based Learning Management System (LMS) strengthened digital learning through a Research and Development approach. These findings indicate that competency development for madrasah heads requires a training model capable of integrating transformational leadership, educational technology, character education, and mechanisms for the sustainable transfer of training outcomes to workplace practices.

Transformational leadership, educational technology, and character education constitute complementary competencies for strengthening the leadership capacity of madrasah heads. Various studies have shown that transformational leadership contributes to teacher motivation and job satisfaction, strengthens organizational culture, and supports the development of professional learning communities that enhance school leadership effectiveness (Lin et al., 2022; Molero et al., 2007; Zhang & Huang, 2022).

Similarly, educational technology enables madrasah heads to promote data-driven decision-making, strengthen collaboration among educators, and improve the quality of educational governance and learning (Schildkamp et al., 2019). Character education also constitutes an important foundation of leadership in Islamic education because it promotes integrity, exemplary conduct, responsibility, and an organizational culture grounded in moral values. These findings indicate that competency development for madrasah heads requires an approach that integrates these three dimensions as the foundation of a sustainable training model. Although Rahmadani et al. (2026) successfully developed an integrative training model, the model primarily focused on effectiveness testing and did not establish a training framework with a sequential learning syntax and a systematic transfer-of-training mechanism linking the training process to competency implementation in the workplace (Arabi & Garza, 2023; Ghanwat, 2026; Hruby, 2026).

These studies demonstrate that approaches to developing the competencies of madrasah heads have advanced considerably through transformational leadership, educational technology, and character education. However, previous studies have generally examined these dimensions independently or integrated only some of them. In addition, most studies have focused on evaluating training effectiveness rather than developing training models capable of supporting the sustainable implementation of competencies in the workplace.

Despite their important contributions, previous studies have generally examined transformational leadership, educational technology, character education, and training effectiveness separately. Consequently, there remains a lack of Research and Development-based training models that integrate these three competency dimensions into a continuous learning framework while systematically facilitating the transfer of training outcomes to the leadership practices of madrasah heads. This condition indicates both conceptual and empirical gaps and highlights the need for a more comprehensive, systematic, and implementation-oriented training model for madrasah heads.

Based on these conceptual and empirical gaps, this study not only evaluated training effectiveness but also developed a new training model designed to bridge the gap between learning during training and the implementation of leadership competencies in the workplace. The study developed KASPATRA (Knowledge Acquisition–Skill Development–Practice Enhancement–Transformative Leadership) as a training model for madrasah heads comprising four learning

METHOD

This study employed a Research and Development (R&D) approach using the 4-D development model—Define, Design, Develop, and Disseminate—developed by Thiagarajan et al. (1974). This approach was used to develop and evaluate KASPATRA (Knowledge Acquisition–Skill Development–Practice Enhancement–Transformative Leadership) as a training model for madrasah heads. The 4-D model provided a systematic

framework encompassing needs identification, model design, development and validation, and implementation.

The study was conducted with madrasah heads under the Ministry of Religious Affairs in Banjarmasin City from January to April 2025. All participants participated voluntarily after receiving information about the study, and confidentiality was maintained throughout the research process. The Define stage involved a needs analysis to identify competency gaps among madrasah heads through field observations, interviews, document analysis, and a literature review. The findings were used to formulate the model structure, targeted competencies, and learning activities according to participant characteristics and organizational needs.

The Design stage focused on developing the initial KASPATRA model, which integrated three competency dimensions: transformational leadership, educational technology, and character education. The model comprised four learning stages: Knowledge Acquisition, Coaching Clinic (Skill Development), Collaborative Learning (Practice Enhancement), and Implementation Assistance (Transformative Leadership). During the Develop stage, experts and practitioners evaluated the model's content validity, construct validity, and feasibility. Their feedback was used to refine the model before field testing. The Disseminate stage involved implementing the KASPATRA model with madrasah head training participants to evaluate its effectiveness in improving leadership competencies.

The research instruments included interview guidelines, observation sheets, expert validation questionnaires, participant response questionnaires, documentation guidelines, and pretest and posttest instruments. Observations and interviews were used to identify competency development needs and evaluate model implementation, while questionnaires were used to assess the validity and practicality of the model and participants' responses to KASPATRA. Documentation was used to support and verify the research data. Pretest and posttest assessments were administered to measure changes in participants' competencies before and after training. Model effectiveness was evaluated using a one-group pretest–posttest design.

Data were analyzed using qualitative and quantitative approaches. Qualitative data were analyzed through data reduction, data presentation, and conclusion drawing to examine model development needs, validation results, and training implementation. Quantitative data were analyzed descriptively and comparatively using pretest and posttest results to evaluate changes in participants' competencies. Model validity and feasibility were assessed through expert validation, revisions based on validator feedback, and field testing.

The development of the KASPATRA model followed the 4-D model proposed by Thiagarajan et al. (1974), with adaptations to the context of madrasah head training. The development process consisted of the Define, Design, Develop, and Disseminate stages, progressing systematically from needs analysis to model implementation. The KASPATRA development process is presented in Figure 1.

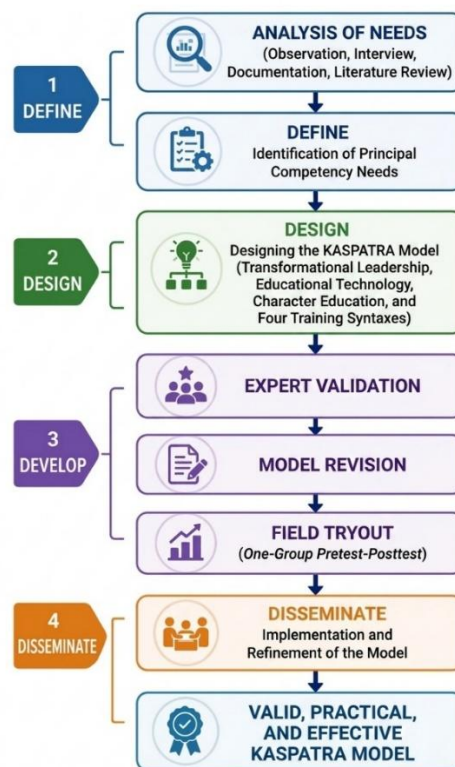


Figure 1. Stages of KASPATRA Model Development

Source: Thiagarajan et al. (1974)

Figure 1 illustrates the development of the KASPATRA model using the 4-D framework. The Define stage involved a needs analysis through observations, interviews, documentation, and a literature review to identify competency gaps among madrasah heads. The findings informed the Design stage, in which KASPATRA was developed by integrating transformational leadership, educational technology, and character education through four learning stages: Independent Learning, Coaching Clinic, Collaborative Learning, and Implementation Assistance. During the Develop stage, the model was validated by experts, revised based on their feedback, and tested using a one-group pretest–posttest design. In the Disseminate stage, the model was implemented and refined within the context of madrasah head training, resulting in a KASPATRA training model that met the established criteria for validity, practicality, and effectiveness.

RESULTS AND DISCUSSION

Field Problems as the Basis for KASPATRA Development

The results of the Training Needs Analysis show that madrasah heads within the Office of the Ministry of Religion of Banjarmasin City are still facing competency gaps in carrying out leadership in the era of educational transformation. The gap is not only related to managerial aspects, but also includes the ability to lead change, utilize educational technology, build a learning culture, and integrate character values in madrasah governance. These findings were obtained through observation, interviews,

documentation studies, and the dissemination of needs analysis instruments to madrasah heads as prospective training participants.

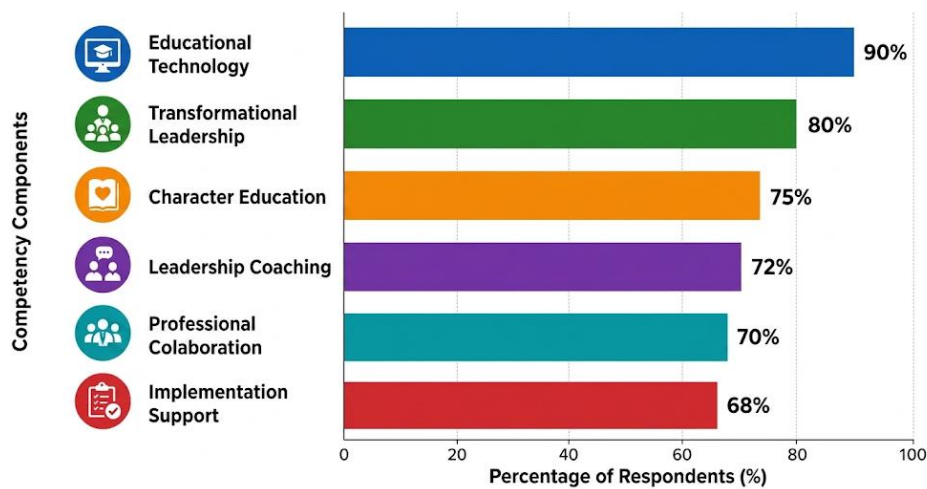


Figure 2. Results of the Competency Needs Analysis of Madrasah Heads
Based on the Results of Training Needs Analysis (n=30)
Source: Primary data processed by researchers (2026)

Based on the results of the needs analysis as shown in Figure 2, the aspects that need the most strengthening include transformational leadership, the use of educational technology in madrasah management, and the strengthening of character education as the foundation of leadership. In addition, most of the respondents stated that the training that had been attended was still dominated by the delivery of material in the classroom so that it did not provide adequate space for coaching, collaborative practices, and implementation assistance after the training was completed. This condition causes the training results to not be fully internalized in daily leadership practice.

The findings show that the main problem lies not in the lack of opportunities to participate in training, but in the lack of optimal learning designs that are able to bridge the learning process with implementation in the workplace. This condition is in line with the Continuous Professional Learning (CPL) paradigm which emphasizes that the professional development of education leaders must take place continuously through independent learning, coaching, collaboration, reflection, and real practice. Thus, training that is only oriented towards knowledge transfer is inadequate to answer the complexity of the leadership demands of madrasah heads in the era of educational transformation.

The results of this needs analysis also reinforce the findings of previous studies that state that improving the competence of madrasah heads is not enough to be done through conventional training, but requires an approach that integrates transformational leadership, the use of educational technology, and character education. However, the results of field observations show that these three aspects are still partially running and have not been accommodated in one systematic training model. Therefore, the results of the Training Needs Analysis are a conceptual as well as empirical basis in designing

KASPATRA as a training model that is expected to be able to bridge the gap between the training process and the implementation of leadership competencies in madrasahs.

The findings show that the development of the competence of madrasah heads requires a training model that not only increases knowledge, but also ensures the transfer of training results to leadership practice.

Development of the KASPATRA Model

The results of the needs analysis show that the development of the competence of madrasah heads requires a training model that not only increases participants' knowledge, but also ensures the sustainability of the implementation of training results in leadership practices in madrasahs. The findings show that the training approach that has been more oriented towards the delivery of material has not been fully able to answer the demands of educational transformation that requires madrasah heads to become learning leaders, agents of change, as well as drivers of innovation. Based on these findings, this study developed KASPATRA (Knowledge Acquisition–Skill Development–Practice Enhancement–Transformative Leadership) as a training model that integrates transformational leadership, educational technology, and character education into one systematic learning framework.

The development of KASPATRA is based on the synthesis of various theories of adult learning and competency development. Transformational Leadership is the foundation for building the capacity of madrasah heads as leaders who are able to inspire change, empower teachers, and build an adaptive organizational culture. Continuous Professional Learning (CPL) provides a framework that competency development is a continuous process that does not stop at training activities, but continues through reflection, practice, and lifelong learning. Meanwhile, Experiential Learning emphasizes the importance of real experience as a source of learning, while Coaching and Collaborative Learning theory emphasizes that competency development will be more effective if participants receive mentoring, feedback, and learning opportunities together in the professional community. All of these theoretical synthesis leads to the creation of the transfer of training results, namely the ability of participants to apply the results of training in real life in leadership practices in the workplace.

The synthesis of the theory is then translated into four learning syntaxs that form the main structure of KASPATRA, namely Knowledge Acquisition, Coaching Clinic (Skill Development), Collaborative Learning (Practice Enhancement), and Implementation Assistance (Transformative Leadership). The fourth sequence of the syntax is arranged in stages following the process of competency formation, starting from the mastery of knowledge, skill development through mentoring, strengthening practices through collaboration, to the implementation of competencies in the real context of the leadership of the head of the madrasah. Thus, each syntax does not stand alone, but complements each other as a continuous learning cycle. The fourth sequence of the syntax is compiled based on the principle of adult learning which places mastery of knowledge as the initial foundation before participants obtain mentoring, develop collaborative practices, and implement competencies in the work environment. This gradual arrangement is expected

to be able to strengthen the process of transferring training results so that the training results do not stop at increasing knowledge, but continue to be a change in leadership behavior.

The synthesis between the results of the needs analysis and the theoretical foundation resulted in KASPATRA as a model for training madrasah heads designed to transform leadership competencies in a sustainable manner. This model integrates the three main competency dimensions into four learning syntax that are systematically arranged through the Research and Development approach. The conceptual structure of KASPATRA is presented in Figure 3.

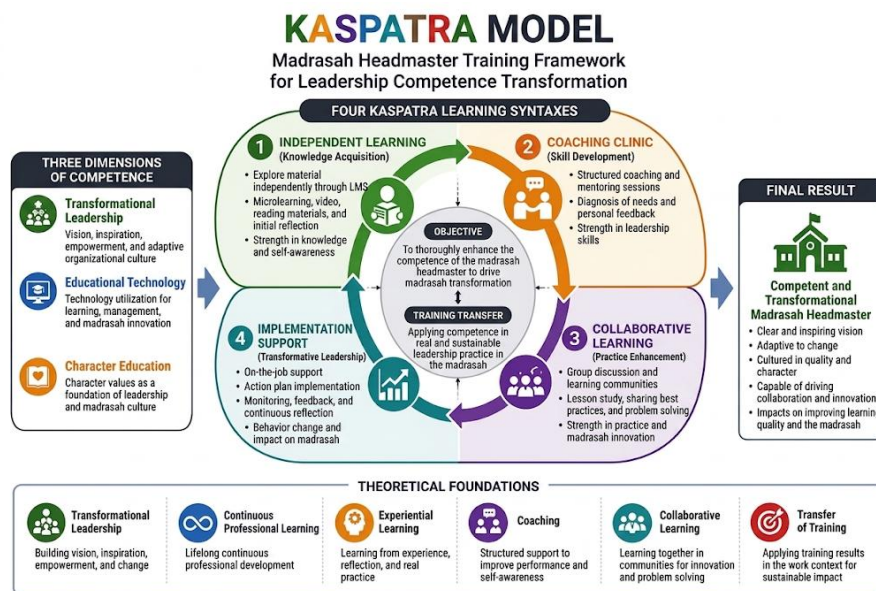


Figure 3. The KASPATRA Model as a Training Framework for Madrasah Heads for Leadership Competency Transformation

Source: Developed by researchers based on synthesis of needs analysis results and theoretical foundations (2026)

Figure 3 shows that KASPATRA is built on three main competency dimensions, namely transformational leadership, educational technology, and character education, which are implemented through four learning syntax, namely Independent Learning, Coaching Clinic, Collaborative Learning, and Implementation Assistance. The four syntax form a learning cycle that is oriented towards the transfer of training results, so that the competencies acquired during training do not stop at increasing knowledge, but continue to change leadership behavior and real implementation in the madrasah environment. The theoretical foundation of this model includes Transformational Leadership, Continuous Professional Learning, Experiential Learning, Coaching, Collaborative Learning, and Transfer of Training, which are integrated into the conceptual basis in the development of KASPATRA.

The KASPATRA model not only integrates the three main competency dimensions, but also connects the learning process with the implementation of competencies in the

workplace through a training outcome transfer mechanism. In contrast to the conventional training model which generally stops at the stage of delivering material or evaluating learning outcomes, KASPATRA places Implementation Assistance as the final stage to ensure that the competencies acquired during the training are truly applied in the leadership practice of madrasah heads. Thus, this model not only results in increased knowledge and skills, but also encourages sustainable leadership behavior change.

This difference is one of the main novelties of this research. Previous studies have generally developed the competence of madrasah heads through transformational leadership approaches, educational technology, or partial character education. Instead, KASPATRA integrates these three dimensions into a research and development-based training model supported by a tiered learning syntax and a training outcome transfer mechanism. This integration is what makes KASPATRA not only a conceptual model, but also an operational model that is ready to be implemented in the development of the competence of madrasah heads.

Improvement of the KASPATRA Model Based on Expert Studies

Before being implemented in field trials, the initial design of KASPATRA was consulted with material experts, learning design experts, and training practitioners to obtain input on the suitability of the substance, the integration of the learning syntax, and the feasibility of model implementation. The review process aims to ensure that the model design is in accordance with the objectives of developing the competence of madrasah heads and can be implemented in the context of training. Based on the results of the study, the experts provided a number of recommendations for improvement related to syntax redacting, the relationship between learning stages, implementation examples, and evaluation mechanisms. All of these inputs were accommodated through model revision before field trials.

Table 1. Summary of Validators' Input on the KASPATRA Model

Aspects	Improvement Recommendations	Follow-up
Model substance	Clarify the integration of the three dimensions of competence	Enhanced in the model description
Learning syntax	Clarify intersyntax relationships	Revised model flow
Implementation	Adding examples of implementation in madrassas	Added to the implementation guide
Evaluation	Clarify success indicators	Evaluation instruments are refined

Source: Data processed by researchers (2026)

Table 1 shows that the expert review process did not change the basic structure of KASPATRA, but contributed to the refinement of substance, learning syntax flow, implementation, and evaluation mechanisms. The input strengthens the conceptual and operational clarity of the model, so that KASPATRA is easier to understand and more ready to be applied to the training of madrasah heads. This refinement process is in line

with the characteristics of Research and Development research which places expert analysis as an important part in producing a model that is feasible to implement.

Expert analysis of the initial design of KASPATRA shows that the model in general has met the principles of competency development of madrasah heads and is feasible to be implemented at the field trial stage. Nevertheless, the experts provided several recommendations for improvement, especially related to the redaction of learning syntax, the affirmation of the relationship between learning stages, the presentation of implementation examples, and the improvement of evaluation instruments. All of these recommendations are accommodated through a revision process so that the resulting model becomes more systematic, operational, and ready to be implemented at the field trial stage. The refinement process reflects the characteristics of Research and Development research that places expert analysis as an important part in producing a model that is suitable for application before empirical testing is carried out.

After going through a refinement process based on expert analysis, the KASPATRA model was implemented in a field trial using the One-Group Pretest–Posttest design to obtain empirical evidence regarding the effectiveness of the model in improving the leadership competence of madrasah heads.

Table 2. Changes in the Competency of Madrasah Heads Before and After the Implementation of the KASPATRA Model

Competency Aspect	Pretest	Posttest	Differences	Increase (%)
Transformational Leadership	58	82	+24	41
Educational Technology	45	78	+33	73
Character Education	62	88	+26	42

Source: Data processed by researchers (2026)

Table 2 shows that the implementation of the KASPATRA Model has a positive impact on improving the competence of madrasah heads in all aspects measured. All indicators experienced an increase in scores after participants participated in the training using the KASPATRA model. The highest increase occurred in the aspect of Educational Technology, namely from an average score of 45 to 78 or an increase of 73%. The biggest improvement in the Educational Technology aspect can be explained by the syntax characteristics of Self-Study and Coaching Clinic which provide participants with the opportunity to practice the use of technology directly through LMS, case studies, and mentoring during the training process. Meanwhile, the aspect of Transformational Leadership increased from 58 to 82 (41%), while the aspect of Character Education increased from 62 to 88 (42%).

A higher increase in the aspect of educational technology compared to the other two dimensions of competence indicates that technical-operational competencies tend to be more responsive to experiential learning strategies (Experiential Learning) and Coaching. These findings show that direct practice, mentoring, and feedback during training are able to accelerate the mastery of digital competencies of madrasah heads. On the other hand,

improving transformational leadership competencies and character education requires a process of internalizing values, reflection, and habituation in leadership practices that takes place on an ongoing basis.

The improvement shows that the KASPATRA model is not only able to strengthen participants' knowledge mastery, but also encourages competency changes in leadership aspects, the use of educational technology, and integrated character strengthening. These findings indicate that the integration of four learning synaxes, namely Independent Learning, Clinical Coaching, Collaborative Learning, and Implementation Assistance, provides a more comprehensive learning experience compared to the training approach that is only oriented towards material delivery.

The results of this study are in line with the theory of Continuous Professional Learning which views competency development as a continuous learning process through reflection, practice, and collaboration. These findings also reinforce the concept of Experiential Learning which places hands-on experience at the core of learning, as well as the theory of Transfer of Training which emphasizes the importance of applying training outcomes in the context of work. Thus, the increase in competence obtained by participants is not only reflected in the results of the measurement after training, but also shows the potential for the application of these competencies in the leadership practice of madrasah heads.

In addition to being supported by theory, the results of this study are also consistent with the findings Kraft et.al. (2018) which shows that Coaching able to increase the professional capacity of educators through continuous mentoring. These findings are also in line with Darling et.al. (2024) which affirms that effective professional development must integrate collaborative learning, real-world practice, and continuous reflection. On the other hand, the results of this study expand the findings Rahmadani et.al. (2026) which has proven the effectiveness of integrative training models. In contrast to the study, KASPATRA not only integrates transformational leadership, educational technology, and character education, but also presents four learning syntaxes explicitly designed to strengthen the mechanisms Transfer of Training, so that the results of the training are more likely to be applied in a sustainable manner in the leadership practice of madrasah heads.

Implications and Novelty of the KASPATRA Model

The results of the study show that KASPATRA not only functions as a training model, but also as a conceptual framework that integrates various competency development theories into one complete learning system. This model connects transformational leadership, educational technology, and character education through four mutually continuous learning syntax, namely Independent Learning, Coaching Clinic, Collaborative Learning, and Implementation Assistance. The integration shows that the development of the competence of madrasah heads is not enough to be done through knowledge improvement alone, but requires a continuous learning process until these competencies are applied in leadership practices in the work environment. Thus, KASPATRA expands the application of the theories of Transformational Leadership,

Continuous Professional Learning, Experiential Learning, Coaching, Collaborative Learning, and Transfer of Training into a single training model that is operational and implementive.

From a practical perspective, KASPATRA provides an alternative training model that is more adaptive to the needs of developing the competencies of madrasah heads in the era of educational transformation. This model can be a reference for the Religious Moderation and Human Resources Development Agency of the Ministry of Religion, the Religious Education and Training Center, and the widyaiswara in designing training programs that are not only oriented to the delivery of material, but also to changes in leadership behavior through independent learning, coaching, collaboration, and implementation assistance. For madrasah heads, the implementation of KASPATRA is expected to be able to strengthen transformational leadership capacity, increase educational technology literacy, strengthen character education, and build a sustainable professional learning culture.

The novelty of this research lies in the development of KASPATRA (Knowledge Acquisition–Skill Development–Practice Enhancement–Transformative Leadership) as a model for training madrasah heads developed through the Research and Development approach. In contrast to previous research that generally develops leadership competencies, educational technology, or character education partially, KASPATRA integrates these three competencies into a single training model supported by four learning syntaxes that are systematically arranged. In addition, KASPATRA places Transfer of Training as the core of the learning process so that the results of training do not stop at improving knowledge and skills, but continue on real implementation in the leadership practice of madrasah heads. These characteristics make KASPATRA not only a conceptual model, but also an operational model that is ready to be implemented in the competency development program of madrasah heads.

Table 3. Comparison of KASPATRA Characteristics with Previous Research

Aspects	Previous Research	Model KASPATRA
Development focus	Develop one or two separate competency dimensions	Integrating transformational leadership, educational technology, and character education in a single model
Training approach	Dominant use of classical training or workshops	Using four continuous learning syntaxs
Learning structure	Oriented to material delivery	Oriented towards gradual competency formation through independent learning, coaching, collaboration, and implementation assistance
Transfer of training results	Not yet a major part of the model	Transfer of Training is at the core of the learning process and implementation

Aspects	Previous Research	Model KASPATRA
Research products	Evaluation of program effectiveness or partial competency development	The KASPATRA training model is developed through a Research and Development approach and is ready to be implemented

Source: Compiled by the researcher based on the synthesis of research results and previous research studies (2026).

Table 3 shows that KASPATRA has different characteristics compared to the training model that has been developed in previous studies. The difference lies not only in the integration of the three main competency dimensions, but also in the learning design that connects the process of developing knowledge, skills, professional practices, and leadership implementation in one complete learning cycle. By placing Transfer of Training at the core of the model, KASPATRA bridges the gap between the training process and leadership practices in the workplace. Therefore, this model not only offers conceptual refinements to previous training models, but also makes a practical contribution in the form of a more systematic, adaptive, and sustainability-oriented training framework for the implementation of training outcomes.

Although KASPATRA showed positive results in improving the competence of madrasah heads, this research was still carried out in the context of madrasahs in Banjarmasin City with a limited number of participants. Therefore, further research needs to test the implementation of KASPATRA in more diverse areas, levels, and characteristics of madrasahs, including through experimental design with control groups to obtain broader empirical evidence regarding the effectiveness and sustainability of the model.

Overall, the results of the study show that KASPATRA has been successfully developed through systematic Research and Development stages, refined through expert analysis, and proven to be able to improve the leadership competencies of madrasah heads in the aspects of transformational leadership, educational technology, and character education. These findings strengthen KASPATRA's position as a training model that not only has a strong conceptual foundation, but is also supported by empirical evidence so that it is feasible to be an alternative in the development of the competence of madrasah heads.

CONCLUSION

This study aimed to develop and evaluate the effectiveness of KASPATRA (Knowledge Acquisition–Skill Development–Practice Enhancement–Transformative Leadership) as a training model for transforming the leadership competencies of madrasah heads. The findings demonstrated that KASPATRA was successfully developed through a Research and Development (R&D) approach by integrating three key competency dimensions—transformational leadership, educational technology, and character education—into four systematic learning stages: Independent Learning,

Coaching Clinic, Collaborative Learning, and Implementation Assistance. The implementation of the model resulted in improvements across all measured competency dimensions, with transformational leadership competency increasing by 41%, educational technology competency by 73%, and character education competency by 42%, indicating the effectiveness of KASPATRA in strengthening the leadership competencies of madrasah heads. The primary novelty of this study lies in the development of KASPATRA as an integrated training model that combines these three competency dimensions with a transfer-of-training mechanism within an R&D-based training framework. Based on these findings, the Ministry of Religious Affairs and relevant training institutions are encouraged to consider KASPATRA as an alternative model for competency development programs for madrasah heads. Future research should examine the implementation of KASPATRA in broader contexts with more diverse participants and employ experimental designs with control groups to provide stronger empirical evidence regarding the sustainability and long-term effects of the model.

REFERENCES

- Arabi, E., & Garza, T. (2023). Training design enhancement through training evaluation: effects on training transfer. *International Journal of Training and Development*, 27(2), 191–219.
- Arabi, E., & Garza, T. (2023). Training design enhancement through training evaluation: Effects on training transfer. *International Journal of Training and Development*, 27(2), 191–219.
- Darling-Hammond, L., Schachner, A. C. W., & Wojcikiewicz, S. K. (2024). Educating teachers to enact the science of learning and development. *Applied Developmental Science*, 28(1), 1–21. <https://doi.org/10.1080/10888691.2022.2130506>
- Faisal, F., Islamabad, T. K., & Haque, R. (2025). [Judul artikel tidak tersedia dalam data yang diberikan]. *ACADEMIA International Journal for Social Sciences*, 4(4), 537–560. <https://doi.org/10.63056/ACAD.004.04.0915>
- Ghanwat, A. (2026). Competency mapping and training effectiveness: A systematic review and conceptual framework for organizational performance. *Minnesota Journal of Business Law and Entrepreneurship*, 2, 2343–2358.
- Hadi, S., Imron, A., Pristian, R., Ranu, M. E., & Jamil, A. S. (2024). Adapted integrated transformational-instructional leadership behaviors: Construct validity and perceptions among teachers and principals in Indonesian vocational schools. *Eurasian Journal of Educational Research*, 109, 214.
- Hruby, J. (2026). From classroom to career: Longitudinal evidence of leadership transfer in executive management education. *The International Journal of Management Education*, 24(2), 101389.
- Kausar, S., Arif, M., & Sebgag, S. (2025). Transformational leadership and the challenges of educational digitalization: A systematic literature review (2020–2025). *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam*, 10(2), 312–332.
- Khofi, M. B. (2024). Optimize the role of the State Islamic High School (MAN) Bondowoso principal in promoting digital-. 1(2), 91–102.
- Kraft, M. A., Blazar, D., & Hogan, D. (2018). The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence. 88(4), 547–588.

- Lin, W., Yin, H., & Liu, Z. (2022). The roles of transformational leadership and growth mindset in teacher professional development: The mediation of teacher self-efficacy.
- Molero, F., Cuadrado, I., Navas, M., & Morales, J. F. (2007). Relations and effects of transformational leadership: A comparative analysis with traditional leadership styles. *10*(2), 358–368.
- Nafi, Z. C., Wachid, A., & Suharto, B. (2024). Madrasah head's strategy in developing the quality of educators and education personnel: A case study at RA Darussalam Kroya. *4*(2), 45–50.
- OECD. (2023). *Towards an effective digital education ecosystem*. OECD Publishing.
- Puspitasari, N. L. G. D., & Haeruddin, A. (2025). Literature study: Challenges and opportunities for school principals in leading technology-based curriculum management innovations. *5*(3), 1321–1329.
- Rahmadani, R., Aswad, M., Nyanyak, C., & Athiyah, U. (2026). Improving madrasah leadership: The effectiveness of integrated training models (transformational, technological, and character) in the digital era. *7*(4), 3582–3587.
- Rahmadani, S. Q. (2022). Creating a sustainable competitive advantage with human resource management strategies in the world of education. *9*(2), 108–117.
- Ratnawati, R., Nursalim, M., & Khamidi, A. (2025). Transformational leadership of madrasah principals based on Islamic values: An integrative model for teacher competency development in the digital era. *Reflektika*, *20*(1), 31–56.
- Schildkamp, K., Poortman, C. L., Ebbeler, J., & Pieters, J. M. (2019). How school leaders can build effective data teams: Five building blocks for a new wave of data-informed decision making.
- Sliwka, A., Klopsch, B., Beigel, J., & Tung, L. (2024). Transformational leadership for deeper learning: Shaping innovative school practices for enhanced learning. *Journal of Educational Administration*, *62*(1), 103–121.
- Supriatna, D. (2025). Transformational leadership-based approach to Islamic education management: Improving the quality of learning and developing student character. *EDUKASIA Jurnal Pendidikan dan Pembelajaran*, *6*(1), 255–266.
- Thiagarajan, S., Semmel, D. S., & Semmel, M. I. (1974). *Instructional development for training teachers of exceptional children: A sourcebook*. Leadership Training Institute/Special Education, University of Minnesota. <https://books.google.co.id/books?id=CaxOAQAAMAAJ>
- UNESCO. (2023). *Planning to fulfil the right to education: Methodological guidelines and toolkit*. UNESCO.
- Zhang, J., & Huang, Q. (2022). The relationships among transformational leadership, professional learning communities and teachers' job satisfaction in China: What do the principals think?