



ANALYSIS OF THE INNOVATIVE MICROTEACHING LEARNING MODEL IN ENHANCING TPACK COMPETENCE OF PROSPECTIVE TEACHERS OF MADRASAH IBTIDAIYAH

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ABSTRACT:

This research aims to analyze the effectiveness of an innovative microteaching model in enhancing the TPACK (Technological, Pedagogical, and Content Knowledge) competence of prospective teachers of Madrasah Ibtidaiyah (MI) at Muhammadiyah University Sidoarjo. Despite the crucial role of technology in contemporary education, MI prospective teachers often encounter challenges integrating TPACK into their teaching practices. Therefore, an innovative microteaching model is adopted as an approach to address these obstacles. The research employs a qualitative approach with a case study design, collecting data through observation, interviews, and documentation. **The results reveal** that MI prospective teachers face obstacles such as limited knowledge of technology and difficulties in designing effective technology-integrated lessons. The innovative microteaching model, involving steps like identifying TPACK needs, instructional design, microteaching implementation, and reflection, proves effective in enhancing TPACK competence. MI prospective teachers experience improvements in knowledge, the development of skills in designing technology-integrated lessons, and enhanced teaching abilities. **Practical recommendations** from this research emphasize the integration of the innovative microteaching model into the curriculum and training programs for MI prospective teachers. The importance of technological infrastructure development in MI is also underscored. With the implementation of this model, it is expected that MI prospective teachers can enhance their TPACK competence and provide quality learning experiences to MI students in the digital era. This research contributes significantly to the development of MI education with a focus on the use of technology in learning.

KEYWORDS: *Innovative Microteaching, TPACK Competence, Prospective Teachers*

INTRODUCTION

Education is foundation important in formation and development individual as well as public (Ata 2018) . In context Islamic education , Madrasah Ibtidaiyah (MI) has role central in give education (TERZİ 2020) quality religion to prospective teacher (Kula Ünver, Özgür, and Bukova Güzel 2020) . However , in the increasingly digital era proceed Currently , prospective MI teachers are

also being sued For own competence technology (Makina and Kadzere 2022) , pedagogy , (Ciampa and Jagielo-Manion 2021) and knowledge strong (TPACK) content To use integrate technology in the learning process (Özonur and Kamişlı 2019).

Development technology information and communication (ICT) has give significant impact _ in various aspect life (Özer, Duran, and Tekke 2020) , including Education (Amusan 2016) . Utilization technology in learning can increase interaction (Grenon, Lafleur, and Samson 2019) , participation (Reshmad' sa Laveena; SN Vijayakumari 2018) , and the effectiveness of the learning process (Özonur and Kamişlı 2019) . However , still there is constraint in apply technology in learning among _ prospective MI teacher (Mehrotra et al. 2022) . A number of obstacles encountered _ covers limitations knowledge (Azhar et al. 2022) and skills prospective teacher (Elsayed Abdelsalam Elghotmy 2020) in use technology (Chand Dayal and Alpana 2020) , as well as lack of understanding in integrate technology (Negassa and Engdasew 2017) with proper teaching _ (Fakhrudin, Yamtinah, and Riyadi 2017) .

In effort overcome obstacles is required _ a learning model innovative (Ha et al. 2021) which can help prospective internal MI teachers develop their TPACK competency (Santandreu Calonge et al. 2013) . One of the learning models that can be done become solution effective is a microteaching learning model (Özbal 2019) . Microteaching is approach possible learning _ prospective teachers for practice Skills teach they in scale small (Ha et al. 2021) , with use controlled devices and environments _ (Kula Ünver, Özgür, and Bukova Güzel 2020) .

Application of innovative microteaching learning models become relevant in increase TPACK competency of M I teacher candidates (Hama and Osam 2021) . This model give chance for prospective teachers for hone Skills technology , pedagogy , and knowledge content they in a way intensive and focused (Darwish and Sadeqi 2016) . With involve use technology in microteaching context , prospective teachers can develop ability they in integrate technology in a way effective in MI learning (Celik 2019) .

However , although microteaching has applied in a number of Educational context (Sagban, AlMumar, and Hashim 2021) , research that special study application of innovative microteaching learning models in increase The TPACK competency of prospective MI teachers at the MI level is still limited (Long et al. 2017) . Therefore _ that , research This aim For analyzing innovative microteaching learning models as strategy effective in increase TPACK competency of prospective MI teachers at Muhammadiyah University of Sidoarjo .

Through analysis of innovative microteaching learning models (Şentürk et al. 2021) , research This expected can give contribution significant in development MI education with focus on usage technology in learning (Gurbuz 2015) . Research result This hopefully can give insights, recommendations practical, and solutions for development TPACK competency of prospective MI teachers. With Thus, prospective MI teachers at Muhammadiyah University of Sidoarjo will more Ready in face challenge learning in the digital era and being able to give experience quality learning _ to students they .

Based on background back above, research _ This will submit a number of question as formulation problem as following; (1) What just obstacles faced by prospective Madrasah Ibtidaiyah (MI) teachers in integrate technology , pedagogy , and knowledge content (TPACK) in the learning process ?. (2) What

is an innovative microteaching learning model ? can applied For increase TPACK competency of prospective MI teachers?. (3) What just benefits that can be obtained obtained by prospective MI teachers develop TPACK competency through implementation of innovative microteaching learning models ?

Objective Study :

Based on formulation the above problem , goal from study This is ; (1) Analyze obstacles faced by prospective MI teachers _ integrate TPACK in learning . (2) Analyzing innovative microteaching learning models as effective strategy _ in increase TPACK competency of prospective MI teachers. (3) Explain benefits that can be obtained obtained by prospective MI teachers develop TPACK competency through application of innovative microteaching learning models . (4) Give recommendation practical for development MI education at Muhammadiyah University of Sidoarjo in implementing innovative microteaching learning models To use increase TPACK competency of prospective MI teachers.

With objective the research _ This expected can give more understanding _ deep about importance TPACK competency in MI context and provide solution practical in increase competence the through application of innovative microteaching learning models .

RESEARCH METHODS

Study This will use approach qualitative with design study studies case . Studies case This will conducted at Muhammadiyah University of Sidoarjo with involve prospective Madrasah Ibtidaiyah (MI) teacher as participant study . (1) Collection : a. Observation : Researcher will observe activity microteaching learning carried out by prospective MI teachers. Observation done For obtain understanding about innovative microteaching learning models that are applied and how TPACK competency of prospective MI teachers is improved through application of the model . b. Interview : Researcher will do interview with MI teacher candidates for get perception they about the obstacles faced in integrate TPACK in learning as well as their benefits _ get through application of innovative microteaching learning models . c. Documentation : Researcher will collect data from documents related , like plan learning , teaching materials , and products resulting learning _ through application of innovative microteaching learning models . (2) Analysis : a. Qualitative data analysis : Data that has been collected through observation , interviews , and documentation will analyzed in a way qualitative . Analysis done with identify patterns , themes , and meaning that emerge in related data with obstacles faced by prospective MI teachers _ integrate TPACK, as well benefits obtained _ through application of innovative microteaching learning models . (3) Validity : a. Triangulation : For increase data validity , methods triangulation will used . Data obtained through observation , interviews , and documentation will each other support and complement For get more understanding _ comprehensive about TPACK competency of prospective MI teachers and the effectiveness of innovative microteaching learning models . b. Peer review: Research results will reviewed by experts education and technology education For get input and validation addition to findings study .

Through method study This is expected can obtained deep understanding _ about obstacles faced by prospective MI teachers _ integrate TPACK as well benefits obtained _ through application of innovative microteaching learning

models . Research result This will give donation important for development MI education at Muhammadiyah University of Sidoarjo and can become reference practical in increase TPACK competency of prospective MI teachers.

input: Kemampuan Techno pedagogik mahasiswa sebelum Pembelajaran

Proses: Implementasi Pembelajaran Microteaching Inovatif

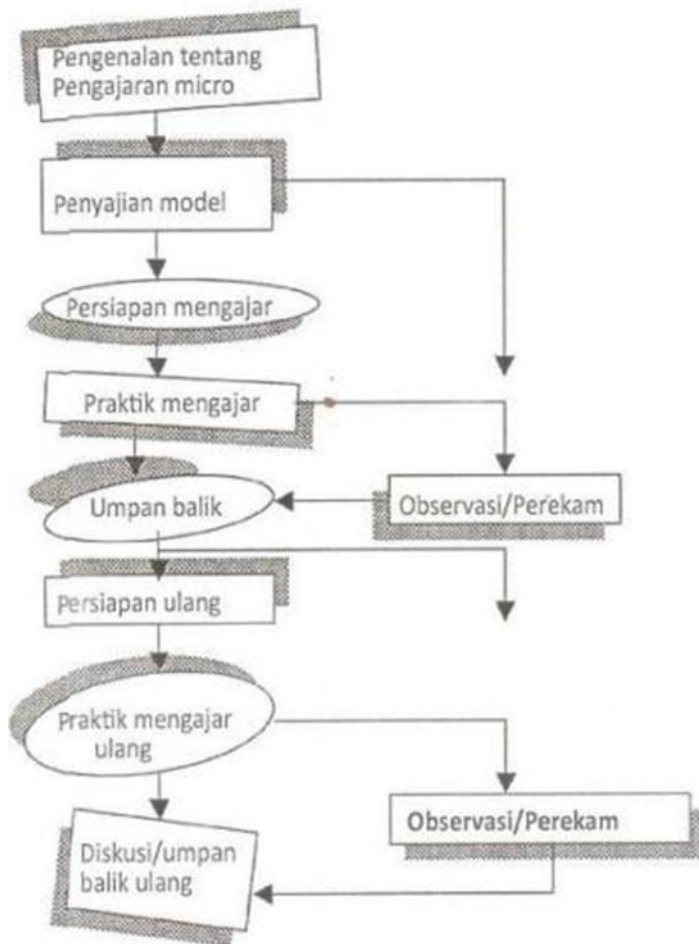
Output: Peningkatan kemampuan Pedagogik setelah adanya pembelajaran

RESULTS AND DISCUSSION

Study This aim For analyzing innovative microteaching learning models in increase TPACK competency of prospective Madrasah Ibtidaiyah (MI) teachers at Muhammadiyah University of Sidoarjo . Following is results research obtained : _

Obstacles in TPACK Integration : Based on observations and interviews with prospective MI teacher, found a number of obstacles encountered _ in integrate TPACK in learning . Constraint the among others: (a) Lack of knowledge about use relevant technology _ with MI context . Prospective MI teachers are often unfamiliar with applications and devices technology that can support learning they . (b) Inability in designing integrated learning _ technology with effective teaching . _ MI teacher candidates need learn appropriate strategies and approaches _ For integrate technology in learning so you can give experience quality learning . _ (c) Lack of access to devices and infrastructure adequate technology in the MI environment . Some MI still face limitations in matter source Power adequate technology _ For support learning .

Innovative Microteaching Learning Model : Innovative microteaching learning model applied For increase TPACK competency of prospective MI teachers. Steps include _ identification TPACK requirements , design learning , implementation of microteaching, and reflection and improvement , are proven effective in increase TPACK competency of prospective MI teachers.



Identification TPACK needs : MI teacher candidates do evaluation beginning and reflection For identify their TPACK needs . With more understanding _ Good about need them , them can direct effort development TPACK competency with more effective .

Design learning : MI teacher candidates design integrated learning _ technology , pedagogy , and knowledge content in a way balanced . In this process , they Study For choose appropriate tools and strategies _ For reach objective learning with use technology with effective .



Implementation of microteaching: MI teacher candidates implement learning in a way simulation in scale small with apply technology . They get bait come back from observers and each other prospective teachers for increase Skills teaching and use technology in learning .

Reflection and improvement : MI teacher candidates reflect learning they , identify strengths and weaknesses , and doing repair For increase their TPACK competency . Deep reflection _ help they develop more strategy _ Good in integrate technology in MI learning .

Benefits of Innovative Microteaching Learning Models : Application of innovative microteaching learning models give significant benefits _ for prospective internal MI teachers increase their TPACK competency . A number of benefits found _ includes, (a) Enhancement knowledge and understanding about use relevant technology _ with MI context . MI teacher candidates become more familiar with devices and applications that can support learning they . (b) Development Skills designing integrated learning _ technology with effective teaching . _ MI teacher candidates study For designing interesting and interactive learning _ with utilise technology with Good. (c) Enhancement Skills teaching and abilities adaptation to development technology . MI teacher candidates become more proficient in integrate technology in strategy teaching they are and are capable adapt with change technology that occurs .

No	TPACK Indicator	Statement
1	Content knowledge (CK)	Melalui inovasi model pembelajaran microteaching, saya lebih memahami Teknik mengajar dengan baik
2	Pengetahuan pedagogik (PK)	Melalui inovasi model pembelajaran microteaching saya dapat menjelaskan konten mengajar semakin baik
3	Pengetahuan teknologi (TK)	Melalui inovasi model pembelajaran saya dapat mengoperasikan media pembelajaran lebih mahir
4	Pedagogical Content Knowledge (PCK)	Melalui inovasi model pembelajaran microteaching saya bisa menjelaskan konten pelajaran dengan baik
5	Technological Content Knowledge (TCK)	Melalui inovasi model pembelajaran Microteaching saya bisa menggunakan media pembelajaran dan bisa menerapkannya
6	Technological Pedagogical Knowledge (TPK)	Melalui inovasi model pembelajaran microteaching, saya bisa menggunakan TPK dengan baik
7	Technological Pedagogical Content Knowledge (TPACK)	Melalui inovasi model pembelajaran Microteaching saya bisa menerapkan Teknologi Pedagogi Content Knowledge dengan baik

Following is acquisition score from the questionnaire that has been distributed to prospective madrasah ibtida'iyah teachers PGMI study program , Muhammadiyah University of Sidoarjo . Score highest is CK and PK abilities are 311

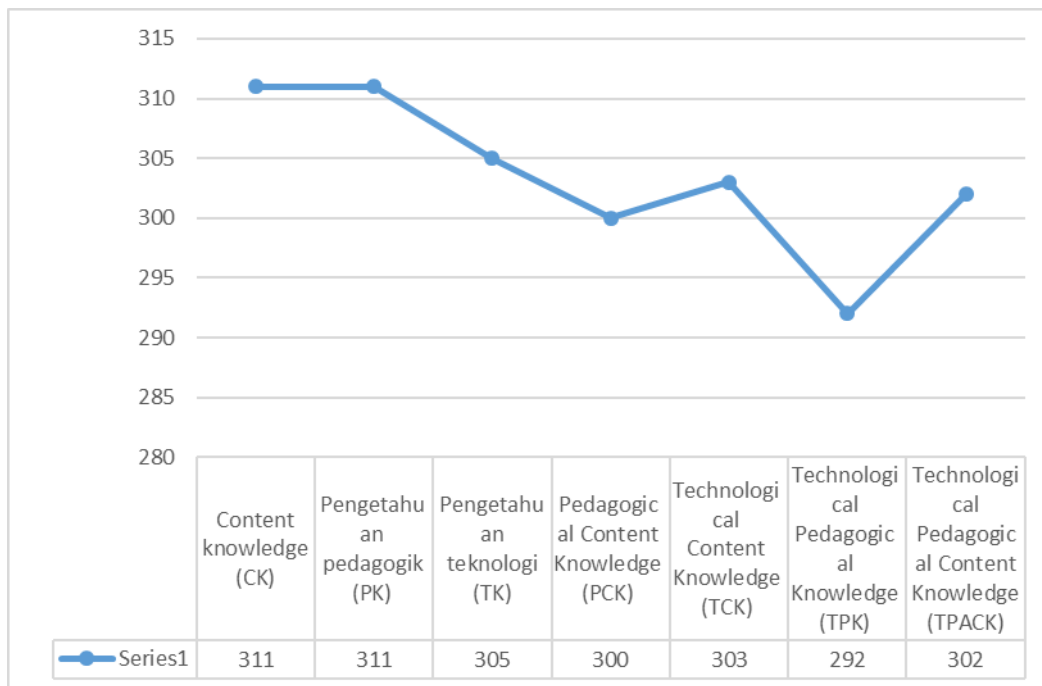


Image: Earnings diagram score from 7 indicators of technology, pedagogy, content knowledge (TPACK).

Research result This show that the microteaching learning model is innovative effective in increase TPACK competency of prospective MI teachers at Muhammadiyah University of Sidoarjo . With through structured steps and in - depth reflection , prospective teachers can develop ability they in integrate technology , pedagogy , and knowledge content in a way holistic in MI learning . In MI context , TPACK integration becomes very important For prepare prospective teachers in face challenge learning in the digital era. With strong TPACK competency , prospective MI teachers can give experience quality , motivating learning _ students , and improve understanding and application deep religious concept learning .

CONCLUSION

Study This aim For analyzing innovative microteaching learning models in increase TPACK competency of prospective Madrasah Ibtidaiyah (MI) teachers at Muhammadiyah University of Sidoarjo . Based on results research and discussions that have been carried out carried out , as follows is possible conclusions _ taken; (1) Obstacles in TPACK integration : MI teacher candidates face a number of constraint in integrate TPACK in learning . Constraint the covers limitations knowledge about use relevant technology , difficulties _ designing integrated learning _ technology with effective teaching , and the lack thereof access to devices and infrastructure adequate technology . _ Awareness will obstacles This important For identify areas of need repaired in development TPACK competency of prospective MI teachers. (2) Innovative Microteaching Learning Model : Innovative microteaching learning model that is applied in study This proven effective in increase TPACK competency of prospective MI teachers. Steps in this model , ie identification TPACK requirements , design learning , implementation of microteaching, and reflection and improvement , provide clear and structured framework _ For develop TPACK competency _

holistic. (3) Benefits of Innovative Microteaching Learning Models : Application of innovative microteaching learning models give significant benefits _ for prospective MI teacher. With using this model , prospective MI teachers can experience enhancement knowledge and understanding about use relevant technology _ with MI context , development Skills designing integrated learning _ technology in a way effective , as well enhancement Skills teaching and adaptation to development technology .

In context MI education , research This give contribution important in increase TPACK competency of prospective teachers. Strong TPACK competency possible MI teacher candidates for face challenge learning in the digital era and making use of it technology with Good in effort increase quality education and application deep religious concept learning .

Recommendation practically possible _ given based on study This is importance development curriculum and training programs that take into account development TPACK competency of prospective MI teachers. Muhammadiyah University of Sidoarjo and institutions education other can consider For integrating innovative microteaching learning models in curriculum they . Besides That also needs to be done effort in increase access to infrastructure and devices adequate technology in the MI environment .

With Thus , through innovative microteaching learning models , prospective MI teachers can obtain more understanding _ Good about TPACK integration and upgrade Skills in integrate technology in learning . This matter will impact positive on quality MI education at Muhammadiyah University of Sidoarjo as well as Ibtidaiyah madrasas in the surrounding area .

Research Suggestions :

Following This is some suggestions for study furthermore with title " Analysis of Innovative Microteaching Learning Models in Increase TPACK Competencies for Prospective Madrasah Ibtidaiyah Teachers at Muhammadiyah University Sidoarjo "; (1) Implementation in more scale _ broad : Research This has conducted at Muhammadiyah University of Sidoarjo with focus on prospective MI teachers. Suggestions for study furthermore is involve more there are many Ibtidaiyah madrasas in more areas wide For observe and analyze effectiveness of innovative microteaching learning models in increase TPACK competency of prospective teachers. (2) Comparison with a learning model others : For expand understanding about effective learning models _ in increase TPACK competency of prospective MI teachers, research furthermore can comparing innovative microteaching learning models with other frequent learning models used in MI context . This matter will give outlook more carry on about advantages and disadvantages each model. (3) Factors Supporters and Inhibitors : Apart identified obstacles _ in study this , research furthermore can explore factors supporting and inhibiting in implementing innovative microteaching learning models . Study This can involve more data collection wide through survey or studies case addition. (4) Development instrument evaluation : Research furthermore can focus on development instrument more evaluation _ detailed and valid for measure enhancement TPACK competency of prospective MI teachers after following an innovative microteaching learning model . This will help in collect more data objective and accurate about impact from the learning model This .

Analysis period length : Important For do study period long For see sustainability and effectiveness period long from application of innovative

microteaching learning models . Engaging observation period long to prospective MI teachers who have graduated and are working as an MI teacher will give outlook about How enhanced TPACK competency can influence quality teaching they in a way whole .

With incorporate these suggestions in study Next , you can done more exploration _ deep about use of innovative microteaching learning models in increase TPACK competency of prospective MI teachers at Madrasah Ibtidaiyah . This matter will give donation important in development MI education and strengthening use technology in future learning . _

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