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# Development of Constructivist Learning Model in Research Methodology Lectures

***Wiwin Arbaini Wahyuningsih[1], Indrayanto[2], Henny Septia Utami[3]**
[1]Institut Agama Islam Negeri Curup, Jl. Dr. AK Gani No. 01, Rejang Lebong, Bengkulu, Indonesia
[2]Universitas Pat Petulai, Jl. Basuki Rahmat No.13, Rejang Lebong, Bengkulu, Indonesia
[3]Queen's University Belfast, University Rd, Belfast BT7 1NN, United Kingdom
*wiwin721004@gmail.com

**ABSTRACT:** *This study aims to analyze the obstacles and identify effective strategies to develop a prototype learning model that enhances students' understanding of research methodology in higher education. At IAIN Curup, a 2023 internal survey involving students from four study programs (PGMI, PAI, MPI, and English Language Teaching) revealed that 72% of students struggled with fundamental research concepts, while 65% lacked confidence in using data analysis software such as SPSS and NVivo. This research employed a qualitative approach, using in-depth interviews and field observations involving both students and lecturers who are actively involved in teaching research methodology. The research was conducted from September to November 2024 at IAIN Curup, located in Rejang Lebong Regency, Bengkulu Province. This institution was selected because it actively implements research methodology courses across various academic programs. The subjects of this research include ten lecturers who teach research methodology and twenty students who have completed the course. The collected data were analyzed using thematic analysis. The analysis included several stages: data transcription, coding, categorization, and interpretation. The study found several key barriers, including limited comprehension of basic methodological concepts, low motivation, and difficulties in applying data analysis tools. External challenges include inadequate supporting facilities, restricted access to scientific literature, and time constraints. Based on these findings, the study proposes a prototype learning strategy that combines practice-based learning, integrated software workshops, and strengthened mentoring systems. This prototype was found to significantly increase student engagement and comprehension during pilot implementation. This study is limited to a single institution and a relatively small sample size, which may affect the generalizability of the findings. Further research is needed to test the prototype across multiple institutions.*

Penelitian ini bertujuan untuk menganalisis kendala dan mengidentifikasi strategi yang efektif untuk mengembangkan prototipe model pembelajaran yang meningkatkan pemahaman mahasiswa tentang metodologi penelitian di

[1] orcid id: http://orcid.org/0009-0003-4178-3275
[2] orcid id: http://orcid.org/0000-0002-1849-4251
[3] orcid id: http://orcid.org/0000-0001-5660-6114

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pendidikan tinggi. Di IAIN Curup, survei internal tahun 2023 yang melibatkan mahasiswa dari empat program studi (PGMI, PAI, MPI, dan Pendidikan Bahasa Inggris) mengungkapkan bahwa 72% mahasiswa kesulitan dengan konsep penelitian mendasar, sementara 65% kurang percaya diri dalam menggunakan perangkat lunak analisis data seperti SPSS dan NVivo. Penelitian ini menggunakan pendekatan kualitatif, menggunakan wawancara mendalam dan observasi lapangan yang melibatkan mahasiswa dan dosen yang terlibat aktif dalam pengajaran metodologi penelitian. Penelitian ini dilakukan dari September hingga November 2024 di IAIN Curup, yang terletak di Kabupaten Rejang Lebong, Provinsi Bengkulu. Lembaga ini dipilih karena secara aktif melaksanakan mata kuliah metodologi penelitian di berbagai program akademik. Subjek penelitian ini meliputi sepuluh dosen yang mengajar metodologi penelitian dan dua puluh mahasiswa yang telah menyelesaikan kursus. Data yang terkumpul dianalisis menggunakan analisis tematik. Analisis tersebut mencakup beberapa tahap: transkripsi data, pengkodean, kategorisasi, dan interpretasi. Studi ini menemukan beberapa hambatan utama, termasuk pemahaman terbatas tentang konsep metodologi dasar, motivasi rendah, dan kesulitan dalam menerapkan alat analisis data. Tantangan eksternal termasuk fasilitas pendukung yang tidak memadai, akses terbatas ke literatur ilmiah, dan kendala waktu. Berdasarkan temuan ini, studi ini mengusulkan strategi pembelajaran prototipe yang menggabungkan pembelajaran berbasis praktik, lokakarya perangkat lunak terintegrasi, dan sistem pendampingan yang diperkuat. Prototipe ini ditemukan secara signifikan meningkatkan keterlibatan dan pemahaman siswa selama implementasi percontohan. Studi ini terbatas pada satu institusi dan ukuran sampel yang relatif kecil, yang dapat memengaruhi generalisasi temuan. Penelitian lebih lanjut diperlukan untuk menguji prototipe di beberapa institusi.

**Keywords:** *Research Methodology, Learning Model Prototype, Student Engagement.*

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## I. INTRODUCTION

Research methodology is a fundamental course in higher education, particularly in Islamic institutions such as Institut Agama Islam Negeri (IAIN) Curup. The course is designed to equip students with essential competencies for conducting rigorous academic research by combining theoretical foundations with practical skills. However, many students continue to face challenges in mastering both conceptual and technical aspects of research methodology.

These challenges often stem from students' limited understanding of core methodological concepts, difficulties in applying data analysis techniques, and inadequate access to updated academic references. Identified that lecturers' lack of experience in implementing practice-based teaching methods negatively affects students' comprehension (Mullen & Warnick, 2025). Further emphasized the lack of infrastructure and access to scientific literature in Islamic universities. According to education experts found that an overemphasis on theory, without simulation or real-

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world application, leads to student disengagement. Revealed systemic barriers in Islamic higher education, such as poor learning infrastructure and lecturer competence. Erlinda et al. (2022) reported that a significant portion of students struggle with interpreting data due to minimal exposure to tools like SPSS or NVivo. Recent research by Education experts highlighted that epistemological rigidity and traditional lecture styles are global obstacles to effective research instruction. Matos et al. (2023) added that the lack of integration between research methodology and digital platforms exacerbates these challenges (Hoadley & Favaro, 2015).

The urgency of improving research methodology instruction is reflected in national statistics. According to the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek, 2022), only around 35% of Indonesian university students complete their final academic projects on time. A key contributing factor is the low mastery of research methodology. Erlinda et al. (2022) found that over 60% of students in Islamic universities struggle with both qualitative and quantitative methods. A 2023 internal survey at IAIN Curup involving 80 students across four departments—Primary School Teacher Education (*Pendidikan Guru Madrasah Ibtidaiyah/PGMI*), Islamic Education (*Pendidikan Agama Islam/PAI*), Islamic Education Management (*Manajemen Pendidikan Islam/MPI*), and English Education (*Tadris Bahasa Inggris*)—showed that 72% faced difficulties understanding research concepts, while 65% lacked confidence in using data analysis software.

The demographic and geographical context of IAIN Curup adds complexity to this issue. Located in a non-metropolitan area of Bengkulu Province, the institution serves students from diverse socio-economic and cultural backgrounds, many of whom have limited access to digital tools, academic mentoring, and exposure to English-language resources. The combination of digital divide and academic unpreparedness creates unique barriers that demand tailored instructional strategies (Simamora et al., 2020).

Ideally, research methodology should be taught through integrative, contextual, and practice-based approaches. Instruction should incorporate digital infrastructure, software training (e.g., SPSS, NVivo, Mendeley), and active learning strategies such as project-based learning and flipped classrooms (Ana et al., 2022; Sinaga et al., 2025). Students should be engaged in formulating real research proposals, collecting and analyzing data, and presenting findings in structured formats. Integration of simulation tools and access to digital academic resources are critical for fostering practical understanding. Moreover, mentoring and personalized feedback from lecturers are essential in guiding students through the research process (Raihani, 2017).

Although existing literature provides valuable insights into the pedagogical and institutional barriers to teaching research methodology, few studies have explored context-specific, scalable interventions tailored to Islamic universities in rural settings (Freitas et al., 2024; Matos et al., 2023; Muali & Albustomi, 2025). Most focus on general challenges, with limited emphasis on developing or adapting instructional models suited to local realities. This gap in the literature signals a need for practical solutions designed with attention to institutional and cultural contexts (Wang & Hannafin, 2005).

Therefore, this study aims not only to analyze the learning barriers faced by students in research methodology courses at IAIN Curup, but also to develop and propose practical, innovative, and scalable strategies. These include the integration of digital tools, peer

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mentoring systems, blended learning models, and the redesign of curriculum to include hands-on practices.

The objectives of this study are to: Analyze the main challenges faced by students in learning research methodology, identify internal and external factors that influence students' understanding of research methodology and propose effective strategies to improve students' understanding of research methodology through practice-based approaches, strengthening lecturer guidance, and increasing access to research resources. By identifying both barriers and solutions, this study is expected to contribute to improved research methodology instruction in Islamic higher education and produce graduates better prepared for scientific inquiry and academic contribution.

## II. METHOD

This study adopts a qualitative research paradigm with a constructivist approach, which emphasizes that reality is socially constructed and shaped by individual experiences (Matovic & Ovesni, 2021). This paradigm was chosen because the research aims to understand the challenges and learning experiences of students and lecturers in mastering research methodology within an Islamic higher education context, specifically at IAIN Curup. The study utilizes a case study design, which enables an in-depth investigation of a specific issue within a bounded context (Mahdi et al., 2020). A case study approach is appropriate for this research, as it focuses on the specific setting of research methodology instruction at IAIN Curup and the unique challenges encountered therein.

The research was conducted from September to November 2024 at IAIN Curup, located in Rejang Lebong Regency, Bengkulu Province. This institution was selected because it actively implements research methodology courses across various academic programs. The subjects of this research include ten lecturers who teach research methodology and twenty students who have completed the course. The object of the research is the teaching and learning process of research methodology, particularly strategies used by instructors, student engagement, and the academic challenges they face.

Primary data were collected through semi-structured interviews and participatory classroom observations, while secondary data were obtained from institutional documents such as syllabi, students' final papers, academic guidelines, and evaluation reports. The participants were selected using purposive sampling. The criteria for selecting lecturers included a minimum of two years' experience teaching the subject and active involvement in curriculum development. For students, selection criteria included being in the fifth semester or above, having varied academic performance, and actively participating in classroom activities.

Data collection techniques involved observing classroom instruction to capture real-time teaching strategies and student responses; conducting interviews with open-ended questions to explore experiences and perceptions; and reviewing documents to support and triangulate data from interviews and observations. Interview questions focused on student difficulties in understanding methodological concepts, effectiveness of teaching strategies, and integration of theory with practice (Taherdoost, 2021).

The analysis included several stages: data transcription, coding, categorization, and interpretation. A hybrid approach to coding was applied deductive coding was informed

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by theoretical concepts such as active learning strategies and blended learning models (Swain, 2018; Taherdoost, 2022; Xu & Zammit, 2020), while inductive coding allowed themes to emerge organically from the data. These codes were grouped into broader categories, such as pedagogical challenges, digital readiness, and students' conceptual understanding. The interpretation phase was closely aligned with the research question, aiming to provide meaningful insights into the challenges faced by students and lecturers.

To ensure data credibility, the study employed source triangulation by comparing interview data, observation notes, and institutional documents (Carter et al., 2014). Additionally, member checking was conducted by sharing interview transcripts with participants to verify accuracy. Further validation was supported by peer debriefing to minimize researcher bias and enhance interpretive reliability.

## III. RESULT AND DISCUSSION

### Research Findings

The study collected data from 20 students across four study programs (PGMI, PAI, MPI, and English Education). The following table includes two main categories: the obstacles they faced and the solutions they suggested.

**Table 1. Categories of constraints and solutions**

| Study Program | Obstacles Faced | Suggested Solutions |
|---|---|---|
| PGMI | Difficulty understanding research methodology concepts. | Intensive guidance and counseling from lecturers on the basic concepts of research methodology. |
| | Lack of study time due to a packed class schedule. | Rescheduling classes or adding tutorial sessions outside of class hours. |
| | Insufficient literature and references on research methodology available in the library. | Providing more books and journals related to research methodology in the library. |
| | Minimal hands-on practice on how to conduct research. | More practical exercises on applying research methodology in assignments and projects. |
| PAI | Too much theory to understand and apply in a short time. | Teaching using more interactive methods and direct application of theory. |
| | Lecturers use too many technical terms that are difficult to understand. | Lecturers should explain concepts using simpler and more comprehensible language. |
| | Lack of examples of research relevant to their field of study. | Providing more research examples directly related to religious and social studies. |
| | Fear of starting their own research due to a lack of confidence. | Offering individual or group mentoring to help students gain confidence in starting their research. |
| MPI | Difficulty in determining the appropriate research methodology. | Further guidance on selecting the right methodology according to the research topic. |

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|---|---|---|
| | Lack of understanding of data analysis tools used in research. | Training and workshops on using data analysis tools like SPSS or other statistical software. |
| | Limited laboratory facilities or research spaces. | Providing better research spaces or necessary equipment to support student research. |
| | Lack of understanding of research ethics and how to conduct proper research. | Providing material on research ethics and detailed explanations of proper research procedures. |
| English Education | Many students struggle with writing research reports in English. | Courses or training on writing research reports in English. |
| | Lack of mastery in proper data processing techniques in research. | Providing mentoring on data analysis techniques and the use of appropriate software. |
| | Limited knowledge in selecting relevant and interesting topics. | Organizing group discussions or mentoring with lecturers to help students choose relevant topics aligned with their interests. |
| | Insufficient time for in-depth research due to other academic activities. | Providing more flexible schedules or reducing other assignments to allow students to focus on research. |

Table Explanation:

1. Study Program: Represents different groups of students based on their study programs.
2. Obstacles Faced: Highlights various challenges encountered by students in research methodology learning.
3. Suggested Solutions: Outlines the solutions or steps suggested by students to overcome these obstacles.

Based on in-depth interviews with 20 students from four academic programs at IAIN Curup and classroom observations, five major themes were identified as key barriers to the effective teaching of research methodology: 1) weak conceptual understanding, 2) limited data analysis skills, 3) low learning motivation, 4) limited access to scientific literature, and 5) insufficient academic guidance from lecturers. To further clarify these findings, the following thematic diagram presents the results of the analysis (Figure 1):

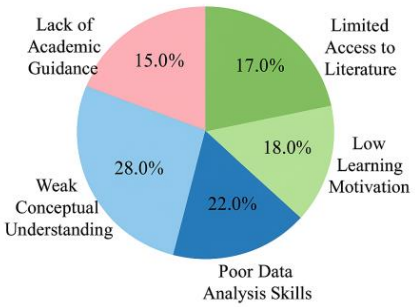


***Figure 1.*** *Thematic diagram of learning obstacles in research methodology*

This study involved 20 students from four study programs: PGMI, PAI, MPI, and English Education. Data collection methods included in-depth interviews, classroom observations, and document analysis. The results revealed that students faced both

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internal and external barriers that hindered the effectiveness of research methodology learning.

*1. Internal Barriers*

The study aimed to identify challenges faced by students in learning research methodology and to explore possible solutions. Data were obtained through in-depth interviews with students and lecturers, as well as direct observations in classrooms and research laboratories. The findings revealed several significant obstacles affecting the effectiveness of learning, categorized as internal and external barriers.

**Table 2. Documents of the Faculty of Tarbiyah, IAIN Curup**

| No | Name | Study Program |
|---|---|---|
| 1 | Dr. Yusefri, M.Ag | HKI (S1-S2) |
| 2 | Wiwin Arbani W, M.Pd | PGMI |
| 3 | Muhammad Taqiyuddin, M.Ag | Perbankan Syariah |
| 4 | Dr. Ihsan Nul Hakim, M.Ag. | MPI |
| 5 | Dr. Helda Yunita, M.Pd. | MPI (S2) |
| 6 | Dr. Nuzuar, M.Pd. | MPI |
| 7 | Prof. Dr. H. Hamengkubuwono, M.Pd. | PAI (S2-S3) |
| 8 | Dr. Sutarto, M.Pd. | HKI (S1-S2 |
| 9 | Dr. H. Beni Azwar, M.Pd., Kons. | Bimbingan Konsling |
| 10 | Prof. Dr. H. Lukman Asha, M.Pd.I. | Tadris Bahasa Inggris |

*First*, Lack of Understanding of Basic Concepts. Students had difficulty distinguishing between qualitative and quantitative research approaches, resulting in confusion when selecting appropriate methods for their academic projects. This finding is in line with Ahmad and Suryani (2020), who noted that insufficient foundational understanding of research methodology adversely affects the quality and direction of student research.

*Second*, Limited Data Analysis Skills. Many students were not proficient in using analytical tools such as SPSS, which hindered their ability to process and interpret research data. This observation supports the findings of Fadilah and Ali (2019), who emphasized that inadequate competence in data analysis significantly impacts students' confidence and accuracy in drawing conclusions.

*Third*, Low Motivation and Interest. Research methodology was often perceived as a difficult and uninteresting subject, which led to low levels of student participation and engagement. This supports the study by Wahyudi (2018), who found that low motivation in learning research skills impedes students' ability to develop independent academic inquiry (Maddens et al., 2023).

*2. External Barriers*

Apart from student-related internal barriers, there were also external obstacles affecting the research methodology learning process at IAIN Curup. These barriers were beyond students' direct control but still significantly impacted the effectiveness of learning.

*First*, Limited Access to Scientific Literature. The unavailability of relevant books and journals in the university library limited students' access to information essential for understanding research methods. This finding resonates with Arikunto (2010), who stated that access to adequate learning resources is a critical factor in developing students' methodological competence.

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*Second*, Insufficient Guidance and Supervision from Lecturers. Students reported limited mentoring and supervision from research methodology lecturers. This lack of support contributed to confusion and hindered their progress in developing research proposals. According to Suryana (2021), effective supervision is essential to enhance the quality of students' academic research.

Based on interviews and observations conducted with students and lecturers of the research methodology course at IAIN Curup, several major barriers were identified that hinder the effectiveness of learning. These obstacles can be categorized into internal and external barriers.

**Research Discussion**

The findings of this study reveal several internal and external barriers that significantly affect the learning of research methodology among students at IAIN Curup. These barriers are consistent with broader research trends in higher education, particularly in Islamic higher education institutions.

1. *Internal Barriers: Conceptual and Psychological Factors*

A significant internal barrier identified is the students' limited understanding of fundamental research concepts, such as distinguishing between qualitative and quantitative methodologies. This gap aligns with assertion that a clear grasp of philosophical assumptions and research paradigms is essential for designing and conducting effective research. Without this foundational knowledge, students may struggle to select appropriate methodologies and frameworks for their studies.

Additionally, students exhibit limited proficiency in data analysis techniques, including statistical tools like SPSS and qualitative coding methods. Emphasizes that robust data analysis is crucial for deriving valid conclusions and maintaining academic credibility. The lack of these skills hampers students' ability to interpret research findings accurately.

Low motivation among students further exacerbates these challenges. The perception of research methodology as complex and unengaging contributes to passive learning attitudes. Self-Determination Theory highlights the importance of intrinsic motivation in fostering meaningful learning and academic success. When students view research as irrelevant or overly challenging, their engagement and motivation diminish.

2. *External Barriers: Institutional and Pedagogical Constraints*

Institutionally, limited access to current literature and research journals poses a significant barrier. In an era where digital databases and open-access journals are increasingly available, the unavailability of such resources in the university library places students at a disadvantage. Hassan & Majid, (2020) argue that access to up-to-date sources is essential for students to explore research trends, methodologies, and frameworks that can enhance the quality of their work (Ghadirian et al., 2014; Miró-Colmenárez et al., 2025).

The lack of active mentoring from lecturers is another critical external factor. Feedback from students indicates that lecturer guidance is often limited to fulfilling formal requirements rather than providing meaningful academic collaboration. Emphasize that the quality of supervision significantly influences the development of students' research competence, especially at the undergraduate level.

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Furthermore, the absence of structured research workshops, academic writing seminars, and hands-on training in using research tools contributes to students' overall lack of preparedness (Rahman et al., 2023). Healey and Jenkins (2019) suggest that embedding research-based learning into the curriculum through activities that simulate real inquiry processes can bridge the gap between theory and practice (Constantinou et al., 2018).

*3. Synthesis with Islamic Higher Education Context*

In the context of Islamic higher education institutions like IAIN Curup, integrating religious values with research practices adds a unique dimension. Research methodology should not only emphasize scientific rigor but also uphold ethical and moral accountability, aligning with Islamic epistemology (Imam et al., 2023). Therefore, efforts to enhance students' research capacity must also focus on developing *adab* (ethics) and *istiqamah* (discipline) in the learning process.

**Efforts to Overcome Barriers**

The barriers identified in this study necessitate a strategic response from both the institution and the students themselves. Based on the findings, several solutions and approaches can be adopted to overcome these obstacles in research methodology learning at IAIN Curup.

*1. Implementing Project-Based Learning (PBL) as a Core Pedagogical Strategy*

One of the key solutions suggested by the students is the adoption of project-based learning (PBL). This approach focuses on practical, hands-on experiences where students engage in real-world research projects that reflect their academic and personal interests. PBL is a well-established method in education that allows students to actively apply theoretical knowledge in a practical context. According to education experts, PBL has been shown to enhance students' problem-solving abilities, critical thinking skills, and motivation (Žerovnik & Šerbec, 2021).

In the context of research methodology, PBL allows students to directly apply the research methods they learn in the classroom to real research questions, promoting deeper understanding and practical skills in data collection, analysis, and interpretation (Husamah, 2015). It also fosters collaborative learning, which is particularly important in developing skills like teamwork and communication, as highlighted by Vygotsky (1978) in his social constructivism theory. Collaborative work also allows for shared feedback and peer learning, which can boost student confidence in research.

*2. Enhancing Academic Digital Literacy*

The second recommendation involves improving students' access to digital academic resources. Given the lack of sufficient academic literature available in the university's library, it is crucial to promote the use of digital libraries and online journals. Increasing academic digital literacy is essential for modern research education (Lupton, 2014).

Developing digital literacy would enable students to efficiently navigate online databases, access scholarly articles, and use digital tools for data analysis and research documentation. This shift would provide students with an expanded range of references and methodologies that are crucial for enhancing the academic rigor of their research projects.

*3. Strengthening Mentoring and Supervision Practices*

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The third key recommendation is to strengthen the mentoring and supervision process, both from lecturers and peer mentors. This solution is aligned with the concept of collaborative scaffolding, where students are provided with guidance not only from their instructors but also from their peers, creating a more supportive learning environment.

Research by Hattie & Timperley (2007) and Al-Bashir et al. (2016) underscores the importance of effective feedback and guidance in promoting student learning outcomes (Hattie & Timperley, 2007. At IAIN Curup, students expressed a desire for more individualized mentoring, particularly in overcoming challenges in conceptualizing and conducting research. Peer mentoring programs can complement formal academic supervision by providing students with additional support from colleagues who are closer in academic experience and understanding.

Moreover, strengthening lecturer involvement in research development through regular check-ins, personalized feedback, and research seminars would ensure that students receive the attention they need to succeed. Furthermore, integrating mentoring into the curriculum, where students are encouraged to engage in research projects alongside their academic advisors, would further enhance the quality of learning and research outcomes (Supsiloani et al., 2024).

4. *Institutional Support: Expanding Research Facilities and Infrastructure*

On the institutional side, providing better research facilities and spaces, such as dedicated research labs or workstations, would improve the overall learning environment. The lack of sufficient space and tools to conduct research was another major barrier reported by the students. In line, offering dedicated research spaces, where students can engage in collaborative research activities, would enable them to focus on their projects without distractions and gain access to the resources they need.

Additionally, providing access to research software and tools, such as SPSS or NVivo, would be invaluable for students in learning the necessary skills for data analysis. Offering workshops on how to use these tools effectively would enhance their competence and confidence in conducting research.

5. *Developing a Prototypical Research Methodology Learning Model*

Finally, the study suggests the development of a prototypical research methodology learning model that incorporates the solutions outlined above. This model would integrate PBL, academic digital literacy, collaborative mentoring, and improved research infrastructure into a coherent strategy for enhancing research methodology learning at IAIN Curup. As proposed by Lauff et al. (2018), a prototype is a working model that can be tested and refined through practical application, providing a foundation for future improvements.

The prototypical model should be piloted in select courses, with feedback from both students and lecturers, to ensure its applicability and effectiveness. This approach aligns with the action research methodology, which emphasizes continuous improvement through cycles of planning, action, observation, and reflection (Kemmis et al., 2014).

## IV. CONCLUSION

The instruction of research methodology at IAIN Curup continues to encounter a range of challenges, stemming from both internal student-related factors and external

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institutional conditions. Internally, students often demonstrate a limited understanding of fundamental concepts, insufficient data analysis skills, and low levels of academic motivation. Externally, obstacles include restricted access to scholarly literature and inadequate supervision from academic staff. To overcome these challenges, this study proposes the development of a project-based learning (PBL) model, the enhancement of academic digital literacy, the implementation of strengthened collaborative mentoring strategies, and the provision of sufficient research infrastructure. This prototype model is expected to enhance the teaching of research methodology in Islamic higher education institutions (PTKI) in a more contextualized and application-oriented manner.

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