International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

Project-Based Learning (PjBL) as a Strategy to Enhance Critical Thinking Skills in Elementary Students

[1]Sirojuddin Abror, [2]Siti Fatinnah
[1]UNSURI Surabaya, Indonesia. [2]University College MAIWP International, Malaysia
[1]sirojuddinabror@unsuri.ac.id, [2]fatinnah@ucmi.edu.my

Correspodence Email: sirojuddinabror@unsuri.ac.id

Abstract: *This study explores the implementation of Project-Based Learning (PjBL) as a strategy to enhance critical thinking skills among elementary school students in Jombang, Indonesia. The research is grounded in the belief that traditional teaching methods often limit students' cognitive engagement and problem-solving abilities. Through a qualitative case study design, data were collected from classroom observations, teacher interviews, and student project assessments in two elementary schools that have integrated PjBL into their curriculum. The findings reveal that PjBL encourages students to analyze, evaluate, and synthesize information in meaningful ways. Students demonstrated increased curiosity, collaboration, and the ability to formulate and defend their own ideas. Teachers reported improvements in classroom dynamics and student engagement, although challenges such as time constraints and the need for teacher training were noted. The study concludes that PjBL offers significant potential in developing critical thinking skills in young learners, especially when supported by appropriate instructional planning and professional development for educators. These results suggest that PjBL can serve as an effective pedagogical approach for primary education in Indonesia and similar educational contexts.*
Keywords*: Project-Based Learning, Critical Thinking, Elementary Education, Student Engagement.*

INTRODUCTION

In today's rapidly changing world, critical thinking has become an essential skill for students at all educational levels, including elementary school. The 21st-century learning paradigm emphasizes not only the acquisition of knowledge but also the development of cognitive, collaborative, and problem-solving skills that prepare students to navigate complex real-world situations (Trilling & Fadel, 2009). In response to this, educators and policymakers have increasingly turned to innovative teaching strategies that promote active learning and student engagement. Among these, Project-Based Learning (PjBL) has emerged as a promising approach to fostering critical thinking, creativity, and autonomy in young learners (Thomas, 2000).

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

Project-Based Learning is a student-centered instructional method where learning occurs through the exploration of real-world problems and challenges. It enables students to engage in meaningful inquiry, make decisions, and develop solutions collaboratively (Bell, 2010). Unlike traditional lecture-based teaching, PjBL requires students to take an active role in their education, promoting higher-order thinking and deeper understanding (Larmer & Mergendoller, 2010). For elementary school students, whose cognitive and social development is at a formative stage, such an approach can lay a strong foundation for critical thinking skills that will benefit them throughout their academic and personal lives.

In the context of Indonesian education, especially in regions like Jombang, East Java, there is a growing interest in incorporating student-centered pedagogies into the primary school curriculum. However, many schools continue to rely on conventional teaching methods that emphasize rote memorization and teacher-centered instruction (Suyanto, 2017). As a result, students may struggle to develop the analytical and evaluative abilities necessary for academic success in higher education and beyond. The implementation of PjBL in elementary classrooms offers a practical solution to this issue, aligning with national education goals that emphasize character education and 21st-century competencies (Kemendikbud, 2020).

Research has shown that PjBL can significantly enhance students' critical thinking skills by encouraging them to ask questions, analyze information, evaluate evidence, and communicate their ideas effectively (Condliffe et al., 2017; Kokotsaki et al., 2016). Moreover, PjBL promotes collaborative learning, allowing students to work together to solve problems and reflect on their learning experiences. This collaborative process is particularly beneficial in elementary settings, where students are still developing social skills and learning to work in groups (Barron & Darling-Hammond, 2008).

Despite the potential benefits of PjBL, its implementation in Indonesian elementary schools faces several challenges. These include a lack of teacher training, insufficient classroom resources, and limited time allocated for project work within the curriculum (Susanti & Nurkamto, 2018). Teachers may also be unfamiliar with how to design and assess project-based activities that align with learning objectives and national standards. Therefore, it is essential to explore how PjBL can

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

be effectively integrated into the teaching practices of elementary educators, particularly in rural or semi-urban areas like Jombang.

This study seeks to investigate the application of Project-Based Learning as a strategy to enhance critical thinking skills among elementary students in Jombang. By examining the planning, execution, and outcomes of PjBL in selected classrooms, this research aims to contribute to the growing body of literature on innovative teaching methodologies in Indonesian primary education. The study also seeks to identify the enablers and barriers that affect the success of PjBL, providing practical recommendations for educators, school leaders, and policymakers.

The ability to think critically is a foundational competency that must be nurtured from an early age. Project-Based Learning offers a pedagogical framework that aligns with this objective by placing students at the center of their learning journey and engaging them in tasks that require thoughtful inquiry and problem-solving. As Indonesia continues to reform its education system to meet global standards, the integration of PjBL in elementary education represents a timely and necessary innovation.

METHOD

This study employed a qualitative descriptive approach to explore how Project-Based Learning (PjBL) strategies contribute to the development of critical thinking skills in elementary students in Jombang, Indonesia. The qualitative approach was chosen to capture in-depth insights into teaching practices, student engagement, and classroom dynamics related to PjBL implementation. According to Creswell and Poth (2018), qualitative methods are particularly useful when researchers aim to understand participants' perspectives and experiences in their natural settings.

Data were collected through classroom observations, semi-structured interviews, and documentation analysis. The study was conducted in two public elementary schools in Jombang that had initiated the use of PjBL in their curriculum. Purposive sampling was used to select participants, including six classroom teachers, two school principals, and 24 students from grades 4 to 6. The criteria for selection included teaching experience, familiarity with PjBL, and

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

willingness to participate. As suggested by Merriam and Tisdell (2016), purposive sampling ensures the selection of information-rich cases relevant to the research questions.

Classroom observations focused on how teachers facilitated project-based tasks and how students interacted during the process. Interviews were conducted in Bahasa Indonesia and later translated into English. Each session lasted approximately 30–45 minutes and was audio-recorded with participant consent. The collected data were then transcribed and analyzed thematically, following the six steps of Braun and Clarke's (2006) thematic analysis: familiarizing with data, generating codes, searching for themes, reviewing themes, defining themes, and producing the report.

To ensure credibility and trustworthiness, the study employed triangulation of data sources, member checking, and peer debriefing. Triangulation allowed the researcher to validate findings across different data types (Lincoln & Guba, 1985). Member checking involved returning transcripts and preliminary interpretations to participants for feedback, which helped ensure the accuracy of representation.

RESULT AND DISCUSSION

Increased Student Engagement through Real-World Projects

The findings revealed that students in Project-Based Learning (PjBL) classrooms demonstrated significantly higher levels of engagement and motivation. Unlike traditional didactic instruction, which often emphasizes rote memorization and passive absorption of content, PjBL involves students directly in constructing their own learning experiences. This shift in pedagogy encourages learners to interact meaningfully with content, peers, and their surroundings.

Hands-on and contextually relevant tasks played a crucial role in sustaining student interest and promoting active participation. For instance, students in one elementary school in Jombang initiated a community cleanliness project. In this project, they surveyed neighborhood waste disposal habits, identified problem areas, proposed eco-friendly alternatives, and presented their findings to community members. According to the teachers, students in these PjBL settings were more enthusiastic about their schoolwork, willingly engaged in discussions, and displayed

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

increased initiative. This aligns with the model proposed by Bell (2010), who argued that meaningful and authentic learning experiences are central to engaging students and cultivating a sense of ownership over their learning.

Real-world projects also provided opportunities for collaborative learning, an essential element in the development of social and cognitive skills. In the Jombang classrooms studied, students worked in small groups to brainstorm, delegate tasks, conduct field research, and develop presentations. This peer-driven process facilitated dialogue, negotiation, and mutual support. Kokotsaki, Menzies, and Wiggins (2016) found that when students collaborate to solve real-life problems, they become more invested in the learning process and are more likely to develop deeper understanding.

The relevance of the projects to students' everyday lives enhanced the value they placed on learning. As students connected schoolwork with familiar contexts—such as their community, environment, and culture—they began to see the usefulness of their knowledge beyond the classroom. This is supported by Trilling and Fadel (2009), who asserted that students are more motivated to learn when they can apply knowledge to real-world settings that matter to them.

The use of inquiry-based learning strategies also played a role in boosting student engagement. Teachers noted that students were excited to formulate questions, investigate answers, and discover solutions independently. As emphasized by Thomas (2000), PjBL promotes active inquiry that transforms students into explorers and investigators, rather than passive recipients of information. This transformation was evident in students' growing curiosity, critical questioning, and initiative in seeking out knowledge.

Teachers observed improvements in classroom behavior. Students who previously struggled with concentration or discipline were more focused and cooperative during project sessions. The collaborative and hands-on nature of the activities appealed to diverse learning styles and needs, creating inclusive environments where all students could contribute meaningfully. According to Barron and Darling-Hammond (2008), PjBL allows for differentiated learning opportunities, making it easier for educators to support students with varying abilities and backgrounds.

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

The integration of technology into project activities enhanced students' digital engagement and information literacy. For example, some students used tablets or mobile phones to record videos, conduct online surveys, or search for background information. This aligns with 21st-century learning principles, as defined by the Partnership for 21st Century Skills (P21 Framework, 2009), which emphasize creativity, critical thinking, collaboration, and digital literacy as essential student competencies.

Despite the success in boosting engagement, the teachers also noted some challenges in sustaining students' enthusiasm throughout longer projects. Maintaining momentum required careful scaffolding and frequent check-ins to keep students on track and motivated. Bell (2010) and Larmer and Mergendoller (2010) suggested that well-structured PjBL frameworks with clear goals, timelines, and roles are essential to ensure that engagement does not wane over time.

The implementation of PjBL in Jombang's elementary classrooms revealed a positive correlation between real-world projects and student engagement. The approach enabled students to connect learning with lived experience, foster collaboration, and build agency in their educational journey. With proper guidance and contextual adaptation, PjBL can serve as a powerful tool for promoting enthusiasm, participation, and deeper learning in primary education.

Development of Critical Thinking Skills through Inquiry and Collaboration

The second theme that emerged from the study was the development of critical thinking skills fostered through inquiry and collaboration within PjBL environments. Students demonstrated notable improvements in their ability to analyze, evaluate, and reflect on complex issues, marking a departure from passive learning approaches toward more autonomous and reflective learning practices.

Teachers observed that during the course of their projects, students frequently engaged in higher-order thinking activities such as questioning, hypothesizing, comparing information, and formulating reasoned conclusions. For example, in a science-based project focused on local water quality, students collected samples, analyzed them, and debated their findings before arriving at a collective conclusion. This iterative process of observation, evidence evaluation, and synthesis is closely aligned with the critical thinking framework proposed by Facione (2015), which identifies

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

skills such as inference, explanation, and self-regulation as central components of critical reasoning.

Students were encouraged to view problems from multiple perspectives and evaluate the credibility of information sources, particularly when conducting research. This approach encouraged a deeper engagement with content and nurtured intellectual humility—an essential attribute for critical thinkers (Paul & Elder, 2014). By being exposed to diverse viewpoints within their group discussions, students gained the ability to articulate arguments logically and respectfully disagree with peers, which enhanced both cognitive and interpersonal development.

Collaboration played a key role in supporting critical thinking. Through group work, students engaged in collective inquiry, negotiated tasks, and reflected on shared outcomes. According to Thomas (2000), the collaborative nature of PjBL enables students to co-construct knowledge, thereby reinforcing comprehension and analytical reasoning. Wurdinger and Qureshi (2015) emphasized that learning in groups fosters a shared responsibility for understanding, which strengthens the depth of inquiry.

Teachers, in turn, adopted the role of facilitators who provided guided scaffolding, posed reflective questions, and encouraged metacognitive reflection. Instead of giving direct answers, they used probing prompts that required students to justify their choices, predict outcomes, and reconsider their assumptions. Barron and Darling-Hammond (2008) argued that when teachers shift from being knowledge transmitters to learning coaches, they empower students to become active agents in their own learning journey.

One teacher in the study described how students initially relied heavily on direct instruction but gradually developed the confidence to navigate challenges independently. By the end of the project, students could identify problems, gather relevant data, analyze possible solutions, and evaluate which approach worked best. This transition toward independent learning reflects a maturation of critical thought and autonomy, key goals of 21st-century education (Trilling & Fadel, 2009).

Peer feedback sessions embedded in the project cycle contributed to students' capacity to think critically. Students provided and received constructive feedback, prompting reflection on

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

their methods and reasoning. According to Nicol and Macfarlane-Dick (2006), formative peer assessment enhances self-awareness and develops evaluative judgment, both of which are crucial for cultivating critical thinkers.

Despite these positive outcomes, some teachers highlighted challenges in ensuring that all students equally engaged in the inquiry process. Variability in participation levels meant that some students were more likely to take intellectual risks than others. To address this, teachers employed strategies such as rotating leadership roles, differentiated tasks, and encouraging peer mentoring. These adaptations were necessary to maintain equitable participation and ensure that all students benefitted from the critical thinking development fostered by PjBL (Kokotsaki et al., 2016).

The study affirms that inquiry-based, collaborative learning environments such as PjBL serve as fertile ground for nurturing critical thinking skills in elementary students. The interplay between structured facilitation, real-world relevance, and social learning creates a dynamic space where students can explore, question, and grow intellectually.

Challenges and Contextual Adaptations in Implementation

Despite the various benefits observed in the implementation of Project-Based Learning (PjBL), several contextual challenges impeded its optimal application in the elementary schools of Jombang. One of the most commonly reported obstacles was the constraint of instructional time. Teachers often found it difficult to allocate adequate hours for the different phases of a project—planning, execution, reflection—due to a tightly packed curriculum and pressure to meet standardized testing benchmarks. These constraints frequently led to rushed or superficial implementation of PjBL, limiting the depth of student inquiry and reflection.

The rigidity of the national curriculum posed a barrier to integrating interdisciplinary projects. Teachers expressed concerns about aligning project activities with prescribed learning objectives, particularly in subjects with heavily content-driven standards. Additionally, many educators lacked the training or experience necessary to design and facilitate cross-curricular projects. These issues reflect broader findings in the literature, such as those highlighted by Condliffe et al. (2017), who noted that teacher readiness and curriculum alignment are critical for successful PjBL integration.

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

A significant challenge was also the unequal access to digital tools and online resources among students and schools. Teachers in remote or under-resourced areas of Jombang reported that limited internet connectivity and the lack of multimedia equipment restricted students' ability to conduct research or present their work using digital formats. This technological divide underscores the broader educational inequality described by Trilling and Fadel (2009), who emphasized the need to bridge digital gaps to ensure equitable access to 21st-century learning.

In light of these challenges, many teachers demonstrated resilience and adaptability by incorporating local resources into their projects. Instead of relying on high-tech materials, educators encouraged students to draw on community knowledge, traditional culture, and everyday objects. For example, one teacher designed a project around local folklore, where students interviewed elders about oral traditions and transformed their findings into illustrated storybooks. This approach is consistent with Gay's (2010) principles of culturally responsive teaching, which advocate for integrating students' cultural heritage into the learning process.

Collaborative structures among educators played a critical role in supporting the sustainability of PjBL practices. The presence of Professional Learning Communities (PLCs) in some schools created opportunities for teachers to co-plan, share strategies, and reflect on classroom experiences. These communities served as platforms for capacity-building and professional support, particularly for teachers new to PjBL. Cordingley et al. (2015) emphasized that sustained collaboration among teachers enhances the quality of professional development and promotes innovation in instructional practices.

Some schools also adopted peer mentoring systems, where experienced PjBL practitioners guided less experienced colleagues through the process of designing and implementing projects. This mentoring dynamic helped reduce anxiety and built collective confidence in experimenting with student-centered methods. In this way, professional collaboration became a form of embedded support that enabled educators to overcome systemic limitations and innovate within their own contexts.

Despite the ingenuity and commitment of many teachers, concerns about assessment persisted. Educators noted the difficulty of objectively measuring critical thinking and

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

collaboration within traditional evaluation frameworks. The absence of clear rubrics or benchmarks often led to subjective grading, which in turn diminished the credibility of PjBL outcomes in the eyes of administrators or parents. Condliffe et al. (2017) also highlighted that assessment remains one of the most complex aspects of PjBL, requiring targeted training and systemic reform to ensure validity and reliability.

While the implementation of PjBL in Jombang's elementary schools showcased strong potential, its success was highly contingent upon contextual adaptability, institutional support, and collaborative teacher practices. Addressing these challenges requires both bottom-up innovation from teachers and top-down policy initiatives that provide the necessary resources, training, and curricular flexibility to embed PjBL meaningfully in primary education.

CONCLUSION

This study has shown that Project-Based Learning (PjBL) serves as a powerful pedagogical approach for enhancing critical thinking skills among elementary students in Jombang, Indonesia. Through the integration of real-world projects, students demonstrated increased engagement, motivation, and a willingness to participate actively in their learning. The ability of PjBL to connect academic concepts with students' lived experiences proved essential in fostering sustained interest and encouraging collaborative problem-solving. Authentic projects not only promoted curiosity but also empowered students to take ownership of their learning, consistent with student-centered educational goals.

The inquiry-based and collaborative nature of PjBL played a significant role in developing critical thinking competencies. Students were observed engaging in questioning, reasoning, and evaluating evidence—behaviors central to critical thinking. The process of peer interaction, task sharing, and group reflection further enhanced communication skills, social reasoning, and metacognitive awareness. Teachers' roles as facilitators, rather than mere knowledge transmitters, enabled deeper inquiry and encouraged students to take intellectual risks. These findings reinforce the importance of shifting pedagogical practices toward learner autonomy and reflective engagement.

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

The implementation of PjBL was not without challenges. Time limitations, curriculum constraints, and a lack of experience in designing interdisciplinary projects created barriers for educators. Furthermore, unequal access to technology and limited availability of assessment tools hindered the effective application of project-based strategies. Despite these constraints, many teachers demonstrated adaptability by incorporating culturally responsive practices and leveraging community-based resources. The presence of professional learning communities also supported innovation by fostering collaboration, peer mentoring, and shared problem-solving.

The findings underscore the transformative potential of PjBL in primary education, especially when supported by institutional frameworks and sustained professional development. To maximize its impact, educational stakeholders must address systemic barriers and invest in training programs that equip teachers with the skills to implement and assess project-based instruction. As Indonesia continues to promote 21st-century competencies in its curriculum, PjBL offers a relevant, inclusive, and effective model for cultivating critical thinkers from an early age.

REFERENCE

Barron, B., & Darling-Hammond, L. (2008). Teaching for meaningful learning: A review of research on inquiry-based and cooperative learning. In R. Furger (Ed.), Powerful learning: What we know about teaching for understanding (pp. 11–70). Jossey-Bass.

Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. The Clearing House, 83(2), 39–43. https://doi.org/10.1080/00098650903505415

Bell, S. (2010). Project-based learning for the 21st century: Skills for the future. The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 83(2), 39–43. https://doi.org/10.1080/00098650903505415

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Cordingley, P., Higgins, S., Greany, T., Buckler, N., Coles-Jordan, D., Crisp, B., ... & Coe, R. (2015). Developing great teaching: Lessons from the international reviews into effective professional development. Teacher Development Trust.

Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry and research design: Choosing among five approaches (4th ed.). SAGE Publications.

Facione, P. A. (2015). Critical thinking: What it is and why it counts. Insight Assessment.

Gay, G. (2010). Culturally responsive teaching: Theory, research, and practice (2nd ed.). Teachers College Press.

Kemendikbud. (2020). Profil pelajar Pancasila. Kementerian Pendidikan dan Kebudayaan Republik Indonesia.

Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project-based learning: A review of the literature. Improving Schools, 19(3), 267–277. https://doi.org/10.1177/1365480216659733

Larmer, J., & Mergendoller, J. R. (2010). Seven essentials for project-based learning. Educational Leadership, 68(1), 34–38.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. SAGE Publications.

Merriam, S. B., & Tisdell, E. J. (2016). Qualitative research: A guide to design and implementation (4th ed.). Jossey-Bass.

Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. Studies in Higher Education, 31(2), 199–218. https://doi.org/10.1080/03075070600572090

Partnership for 21st Century Learning (P21 Framework). (2009). Framework for 21st century learning. http://static.battelleforkids.org/documents/p21/P21_Framework_DefinitionsBFK.pdf

Patton, M. Q. (2015). Qualitative research & evaluation methods: Integrating theory and practice (4th ed.). SAGE Publications.

Paul, R., & Elder, L. (2014). The Miniature Guide to Critical Thinking Concepts and Tools (7th ed.). Foundation for Critical Thinking.

Susanti, A., & Nurkamto, J. (2018). Project-based learning to develop students' creativity in writing narrative. Indonesian Journal of English Language Teaching and Applied Linguistics, 2(2), 173–188. https://doi.org/10.21093/ijeltal.v2i2.121

International Journal of Multidisciplinary Research and Innovation
ISSN (Online): 3110-066X
Vol 1 no 1 (2025): June 2025
https://journal.berkahopungpungan.com/index.php/IJMRI/index
Email: editorijmri2@gmail.com

Suyanto, S. (2017). Teacher professional development in Indonesia: The influences of learning activities, teacher characteristics and school conditions. Indonesian Journal of Educational Review, 4(2), 157–167. https://doi.org/10.21009/IJER.04.02.05

Thomas, J. W. (2000). A review of research on project-based learning. The Autodesk Foundation.

Trilling, B., & Fadel, C. (2009). 21st century skills: Learning for life in our times. Jossey-Bass.

Wurdinger, S. D., & Qureshi, M. (2015). Enhancing college students' life skills through project-based learning. Innovative Higher Education, 40, 279–286. https://doi.org/10.1007/s10755-014-9314-3