

**PENGEMBANGAN MEDIA *POP-UP BOOK* BERBASIS *QUICK RESPONSE (QR) CODE* UNTUK MENINGKATKAN LITERASI SAINS SISWA KELAS IV SD**

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**ABSTRAK**

Kurangnya antusias siswa dan keterbatasan media pembelajaran IPAS yang masih didominasi buku teks juga *PowerPoint* menyebabkan rendahnya literasi sains siswa pada topik bagian tubuh tumbuhan. Pembelajaran yang cenderung bersifat konvensional dan kurang didukung oleh media yang menarik menyebabkan siswa sulit memahami konsep secara mendalam. Oleh karena itu, penelitian ini bertujuan untuk mengembangkan media pembelajaran *Pop-Up Book* berbasis *Quick Response (QR) Code* serta menguji efektivitasnya dalam meningkatkan literasi sains siswa kelas IV sekolah dasar. Penelitian ini menggunakan metode *Research and Development (R&D)* dengan model ADDIE yang meliputi tahap analisis, perancangan, pengembangan, implementasi, dan evaluasi. Subjek penelitian terdiri atas 27 siswa kelas IV sekolah dasar. Pengumpulan data dilakukan melalui lembar validasi ahli, kuesioner respon siswa dan guru, serta tes literasi sains. Analisis data meliputi uji validitas instrumen, uji normalitas menggunakan uji *Shapiro-Wilk*, dan uji efektivitas menggunakan uji-t berpasangan. Hasil penelitian menunjukkan bahwa media yang dikembangkan memenuhi kriteria valid dan layak digunakan dalam pembelajaran. Selain itu, hasil uji-t berpasangan menunjukkan peningkatan literasi sains siswa secara signifikan setelah menggunakan *Pop-Up Book* berbasis *QR Code* ( $p < 0,05$ ). Dengan demikian, media ini efektif dan berimplikasi sebagai alternatif media pembelajaran IPAS di sekolah dasar.

**Kata Kunci:** *pop-up book*, *QR code*, literasi sains, bagian tubuh tumbuhan, sekolah dasar.

**DEVELOPMENT OF A QUICK RESPONSE (QR) CODE BASED POP-UP  
BOOK TO IMPROVE SCIENTIFIC LITERACY OF 4TH GRADE  
ELEMENTARY SCHOOL STUDENTS**

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**ABSTRACT**

*Limited student enthusiasm and the availability of IPAS learning media that are still largely dominated by textbooks and PowerPoint presentations have contributed to low levels of scientific literacy, particularly on the topic of plant body parts. Learning activities that rely on conventional approaches and are not supported by engaging media make it difficult for students to gain a deeper understanding of scientific concepts. Therefore, this study aimed to develop a Quick Response (QR) code-based pop-up book and to examine its effectiveness in improving the scientific literacy of fourth-grade elementary school students. This study employed a Research and Development (R&D) method using the ADDIE model, which consists of the stages of analysis, design, development, implementation, and evaluation. The participants of this study were 27 fourth-grade elementary school students. Data were collected through expert validation sheets, student and teacher response questionnaires, as well as scientific literacy tests. Data analysis included instrument validity testing, normality testing using the Shapiro–Wilk test, and effectiveness testing using a paired-sample t-test. The results showed that the developed learning media were valid and suitable for use in classroom instruction. Furthermore, the paired-sample t-test results indicated a significant improvement in students' scientific literacy after the use of the QR code-based pop-up book ( $p < 0.05$ ). Therefore, this media is effective and can be used as an alternative IPAS learning medium in elementary schools.*

**Keywords:** *pop-up book, QR code, scientific literacy, plant body parts, elementary school.*