Journal of Educational Sciences
Journal homepage: https://jes.ejournal.unri.ac.id/index.php/JES

P-ISSN 2581-1657
E-ISSN 2581-2203

# Development of Riparian Plant Diversity Enrichment Book for Biology Student in Kampar Regency

**Antika Gamiarsih*, Yustina, Fitrah Suzanti**
*Masters Program in Biology Education FKIP Riau University, Pekanbaru, 28293, Indonesia*

**ARTICLE INFO**

*Article history*:

Received: 24 March 2022
Revised: 10 June 2022
Accepted: 07 July 2022
Published online: 24 July 2022

*Keywords:*

Enrichment Book
Diversity
Riparian

**A B S T R A C T**

This study aims to develop an enrichment book for Riparian plant species diversity in Kampar Regency. This research was carried out with an ADDIE development model consisting of the Analysis, Design, Development, Implementation and Evaluation stages. limited to the Development stage, namely the Validity Test due to time constraints. The type of data used is quantitative and qualitative data, the data sources are primary data and secondary data. The parameter in this study is the validity which is measured by using a Validation Questionnaire. Subject Experts who are competent in their fields. The results of the Material Expert Validation of the content feasibility component and the presentation of the material obtained an average score of 5 with a very good category. Media Experts for the Language component and Graphic Component obtained an average score of 5 in the very good category, the Biology teacher for the presentation of material/content, the language component, and the graphic component received an average score of 5 in the very good category. The conclusion of the book on Enrichment of Riparian Plant Species in Kampar Regency is the Valid and Eligible Category for use in the next stage.

## 1. Introduction

Riparian plants are natural resources that have a strategic function as a connector and balancer for terrestrial and aquatic ecosystems. Based on the spatial use map listed in the Riau Regional Spatial Plan (2005-2020) it shows that the use of space in the Kampar watershed area is mostly in the form of production forest areas, large plantations and partly in the form of urban areas. This map is sufficient to provide an overview of the need for realignment of land use in the Kampar watershed area. At present, environmental conditions are still neglected from the attention of the academic world, including schools. Schools have not been able to

* Corresponding author.
E-mail: antikagamiarsih26@gmail.com
Doi: https://doi.org/10.31258/jes.6.3.p.393-404

transmit environmental-charged knowledge so that students do not yet have ecological intelligence or ecological literacy.

Educators also do not use the environment as a source and learning media (Valentine 2015). According to Lamasai, et al (2014) the benefits obtained in using the environment as a source are that students can see directly objects related to subjects in their school, students can prove and apply theories or concepts that have been obtained in everyday life. Direct experience will make students' understanding more concrete (Arsyad, 2010, by observing directly students will have the opportunity to connect theory and reality. According to Muthmainnah (2016) the use of local potential-based media is proven to increase understanding of concepts and attitudes about environmental care learners.

The local potential of an area needs to be developed because it is a characteristic possessed by the area. Humans learn from the surrounding environment which is the first school of humans. From nature humans learn how to adapt, take advantage of, conquer and improve nature. In the process, humans create a certain identity that characterizes the group. That identity will have knowledge, culture and systems that may differ from one another (Ardan et al., 2021). Learning that is integrated with the local potential of an area will have a very good impact on students' curiosity about the potential of their own region. So far, students are not encouraged to know more about the potential of their area, one of which is the potential of plant natural resources. In line with this, the implementation of the 2013 curriculum has also changed the learning approach to a scientific approach. Based on the results of an initial survey of two high schools in Kampar Regency, out of 63 students, 57% of students did not know the diversity of plants, especially Riparian plants in their own area. This will certainly have a negative impact on the preservation of the local potential of the area which if utilized can be useful in supporting and becoming additional knowledge for students.

With local potential that is not yet known and managed properly, it is necessary to integrate local potential in biology learning so that students can empower, preserve and develop the potential of local plants (Mumpun, 2013). Learning resources can be in the form of teaching materials, textbooks, learning media, the surrounding environment, and others. Students must be introduced to objects that come from local potential or the surrounding natural environment. The surrounding environment plays an important role in presenting natural phenomena, scientific problems, and phenomena that are very close to the lives of students (Andira et al., 2021). The learning process is a communication process and takes place in a system, so the learning media occupies a fairly important position as a component of the learning system. Without the media, communication will not occur and the learning process as a communication process will also not take place optimally (Hasanah, 2020).

The lack of students' knowledge of Riparian plant diversity in their own area is due to the lack of learning resources that specifically discuss biodiversity, so this is also the cause of students' lack of curiosity about the existing local biodiversity. The learning process is an interaction between an educator and students or

students who have certain goals such as to improve the abilities of students which can include the values of attitudes, skills and knowledge. The ability to master the material by students can be supported by the existence of learning resources and learning media. (Sarip et al., 2022). According to Riefani (2019) the use of a variety of learning resources and learning media can increase students' attention and stimulate the active role of students towards improving their learning outcomes. Therefore, learning enrichment books are needed to provide information about the diversity of riparian plants in the region, especially in Kampar Regency. . The hope is that with the enrichment book it can add insight to students and teachers about the diversity of riparian plants in the area so that learning is not monotonous.

Enrichment books are expected to be one of the choices of self-study materials. This print media is arranged systematically, emphasizes student learning activities, attractive appearance, and is delivered in a communicative language, is expected to facilitate students learning independently. Kampar Regency. The purpose of this study was to develop a book on Riparian Plant Diversity Enrichment in Kampar district.

## 2. Methodology

This research is an ADDIE development model consisting of Analysis, Design, Development, Implementation and Evaluation stages, and modified according to (Dick & Gettinger, 2005). The research is limited to the Development stage, namely the Validity Test due to time constraints. The research for the development stage of the Riparian Plant Diversity enrichment book was carried out at the Riau University Campus. Meanwhile, research in the implementation of the results of the development of enrichment books was carried out at SMAN 1 Salo. The research was conducted from June to October 2021. The types of data used are quantitative and qualitative data, the data sources are primary data and secondary data. The parameter in this study is the validity which is measured by using a Validation Questionnaire. Subject Experts who are competent in their fields. The stages of the research are described as follows:

### *Analysis*

The analysis carried out by the researcher includes curriculum analysis, analysis of student needs, analysis of learning concepts, analysis of teaching materials. Curriculum analysis, which relates to what curriculum is used, how it is implemented and the problems faced, Analysis of student needs, relating to what students need in the learning process, what kind of learning is interesting for students, Analysis of learning concepts, related to concepts what students feel is difficult to understand, and why the concept is difficult to understand. Analysis of teaching materials and learning media, in the form of identification of the availability of teaching materials that are relevant to learning in schools.

### *Design*

The design stage is to design a textbook based on the local potential of plant diversity in Kampar Regency. According to Millah in Suwarni (2015), textbooks are a set of subject matter material that is systematically arranged to display the integrity of the competencies that will be mastered by students in learning activities.

### *Development*

At this stage, the development of textbooks is carried out in accordance with the learning materials to be taught so that they are ready to be implemented. The validation component is reviewed from the aspect of feasibility of content, language, presentation and graphics (Depdiknas, 2008). Content feasibility is viewed from (1) the suitability of the material with achievement indicators; (2) conformity with student needs; (3) conformity with the needs of teaching materials; (4) the truth of the substance of the material; The linguistic aspect is viewed from readability, clarity of information, conformity with the rules of the language used and effective use of language. Presentation in terms of clarity of purpose, order of presentation, motivation, interactivity (stimulus and response), and completeness of information. The graphic aspect is viewed from the use of letters (type and size), layout, layout, illustrations, graphics, images, and photos, as well as display design. Aspects of validation that are assessed by experts or practitioners are made in the form of a rating scale. The type of scale used is the Linkert scale with a score of 1-5. This scale provides flexibility for validators in assessing learning tools in the form of enrichment books that have been developed. The categorization of the assessments given by the validator is shown in Table 1.

Table 1. Scoring Guidelines for Validator Assessment Sheets

| Category | Score |
|---|---|
| Very good | 5 |
| Well | 4 |
| Pretty good | 3 |
| Not good | 2 |
| Not good | 1 |

(Source: Sugiyono, 2018)

The rating level for each item can be calculated using the following equation:

$$M = \frac{\sum Fx}{N}$$

Information:
M = Average
Fx = Score obtained
N = Number of Validation Components
Analyzing the validity of the riparian plant species enrichment book product, it is determined by calculating the average aspect value for each validator. The

average value of the validator is then matched with the Table of development product validity criteria in Table 2.

Table 2. Criteria for Product Development Validity

| Interval | Category |
|---|---|
| $X > 3{,}4$ | Very good |
| $2{,}8 < X \leq 3{,}4$ | Well |
| $2{,}2 < X \leq 2{,}8$ | Pretty good |
| $1{,}6 < X \leq 2{,}2$ | Not good |
| $X \leq 1{,}6$ | Not good |

(Source: Sugiyono, 2018)

Description: X = the average actual score of the validator

## 3. Results and Discussion

Based on the results of the analysis, the development of the Riparian Plant Diversity Enrichment Book was carried out on the Biology material KD 3.2. Biodiversity. Overall, the results and discussion are as follows:

### *Analysis*

Based on the results of interviews with teachers in the field of biology studies, the curriculum used was already using the K13 curriculum in accordance with government recommendations. The 2013 curriculum is a permanent curriculum implemented by the government to replace the education unit level curriculum which has been in effect for 6 years of the 2006 curriculum (Subari, Wahyudi Nur Nasution, 2018) The current curriculum initiated by the government, namely the 2013 curriculum, emphasizes the application of learning in life everyday (Weldi, 2020). Learning is a number of materials, tools, media, instructions and guidelines used in the learning process. Learning tools become a benchmark in the implementation of the learning process (Sulastri, 2019).

Analysis of the characteristics of students is carried out to determine the motivation of students in the learning process through observation. Based on the results of observations, students do not yet have a strong enough spirit in the learning process and the learning carried out by teachers so far seems monotonous. This is due to the lack of learning resources used in the learning process, teachers tend to use textbooks that have been provided by the government to deliver subject matter, so that it makes students do not have additional knowledge about the learning that is being delivered by the teacher, especially for Plant Biodiversity material. . Teachers can choose varied learning sources, so that the learning delivered will be more meaningful (Asbari et al., 2019).

### *Design*

The development of the Riparian Plant Diversity Enrichment Book in Kampar Regency consists of a cover, an introduction, a Table of contents, a Table of Tables, a list of pictures, an introduction, chapters 1-4, a glossary and a bibliography. The systematics of writing the presentation of material in a coherent textbook starts from the introduction, the body/body page, and the closing section. This is in accordance with the requirements for the preparation of a good textbook listed in the guidelines for preparing textbooks. Basically, the preparation of textbooks is divided into three parts, namely the opening, content, and closing sections (Depdiknas, 2008).

The book design for the Enrichment of Riparian Plant Species Diversity in Kampar Regency is made as attractive as possible in order to attract the attention of students to study the Enrichment Book that was developed. So that students become more enthusiastic in the learning process. Display of the book can be seen in Figure 1.


Figure 1. Cover, Contents and Back Pages of the Riparian Plant Diversity Enrichment Book

### *Development*

The development stage is the stage for developing the design results that have been made previously. Development is carried out on biological objects that have been selected on the material of Biodiversity. The results of the development are in the form of a print out of the riparian diversity enrichment book in Kampar district which will be validated to see the validity of the development results. According to Charlina & Septyanti (2019), Validation aims to provide value and determine the feasibility of non-text books prior to field trials (Ilmiawan, 2018). The validated product requires improvement until the product developed is said to be suiTable for use at a later stage. The development of textbooks is not arbitrary but requires a systematic design referring to the learning system, message design, method or strategy and taking into account the characteristics of the learner. Seeing the results of the development in the form of products for learning

activities, it can be said that textbooks are specifically developed for learning activities (Febrianto & Puspitaningsih., 2020). Validation is done to get suggestions from the validator that will be used by the author to improve the Biology Enrichment book made. The following is a description of the validation results of the Enrichment Book for each Expert:

### *Material Expert Validation Results*

The book was validated by a material expert to see the feasibility of the material in the Riparian Plant Diversity Enrichment Book in Kampar Regency. Validation results can be seen in Table 3.

Table 3. Material Expert Validation Results

| Expert | Assessment Component | Indicator | Score | Category | Score Average | Information |
|---|---|---|---|---|---|---|
| Theory | Content Eligibility | 1 | 4 | Well | 5 | Very Good |
| | | 2 | 4 | Well | | |
| | | 3 | 5 | Very good | | |
| | | 4 | 5 | Very good | | |
| | | 5 | 4 | Well | | |
| | Material Presentation | 1 | 4 | Well | | |
| | | 2 | 5 | Very good | | |
| | | 3 | 4 | Well | | |
| | | 4 | 5 | Very good | | |
| | | 5 | 5 | Very good | | |

Table 3 shows that the assessment of the material expert for the content feasibility component in indicators 1, 2, and 5 obtained the same assessment, namely with a score of 4 good categories, Indicators 3 and 5 obtained a score of 5 with very good categories. The material presentation components for indicators 1 and 3 received the same rating, namely with a score of 4 good categories, indicators 2, 4 and 5 received the same assessment with a score of 5 very good categories. The two components, namely the feasibility of the content and presentation of the material, obtained an average score of 5 in the very good category. Thus, the book on the diversity enrichment of Riparian Plant Species in Kampar Regency is suiTable for use in learning with revisions according to the validator's suggestions so that the enrichment book is even better.

The nature of the objects studied in biology is very diverse, such as size (macroscopic, microscopic), affordability, safety, language (Suryanda et al., 2020). According to Sugiyono (2018) improvements are made to produce better products. In line with this, Akbar (2013) states that a good book is a book that has a match between the competencies that must be mastered with the scope of content, depth of discussion, and the competence of the reader. In addition, the material presented is also adapted to the development of science and technology (Kurniasih & Sani, 2014). Teaching materials that are prepared based on local potential will make it easier for students to understand the role and benefits of organisms in nature and obtain examples according to local conditions and regional potential (Nurfatma et al., 2020).

### *Media Expert Validation Results*

The assessment of the media expert is used to see the feasibility in terms of appearance, the media expert assesses two components, namely the language component and the graphic component. To see the results of the media experts as a whole can be seen in Table 4.

Table 4. Media

| Expert | Assessment Component | Indicator | Score | Category | Score Average | Information |
|---|---|---|---|---|---|---|
| Media | Language Component | 1 | 5 | Very good | 5 | Very Good |
| | | 2 | 4 | Well | | |
| | | 3 | 4 | Well | | |
| | | 4 | 4 | Well | | |
| | Graphics Component | 1 | 5 | Very good | | |
| | | 2 | 4 | Well | | |
| | | 3 | 5 | Very good | | |
| | | 4 | 5 | Very good | | |

Expert Validation Results

Table 4. shows that the assessments of media experts for the Language component in indicators 2, 3, and 4 obtained the same assessment with a score of 4 good categories, Indicator 1 scored 5 very good categories. The graphic components for indicators 1, 3, and 4 get the same rating with a score of 5 very good categories, indicator 2 gets an assessment with a score of 4 good categories. Overall, the Language and Graphics components obtained an average score of 5 in the very good category. Thus, the book on the enrichment of riaprian plant species diversity in Kampar Regency is appropriate to be used in terms of media in learning biology in high school. Guswika (2017) states that a book that has been validated in terms of content and media to get a very good score can be said to be suiTable for use for learning purposes. The book is equipped with personal documentation about plants in detail with the size scale of the original plant, illustrations (pictures) of material from various book references, illustrated descriptions according to the images presented, equipped with various interesting features and updated books (Sulistri et al., 2020 ). so that students do not get bored in reading and studying the Enrichment book. This is in line with Sitepu's (2014) statement that the rules of language which include completeness of sentences, word order, and spelling are things that the author must pay attention to in order to avoid mistakes considering that the book will be used by students as the main source and reference in learning. The use of language and sentences is adjusted to the general Indonesian spelling guidelines with the aim of making it easier for students to understand the material (Elisa., 2021). The use of language in the text of the book must be simple and in accordance with the EYD that applies nationally and its validity is believed to be in accordance with the concept of Indonesian as well as the writing of terms (Sintia., 2021). The same thing was explained by Riefani et al. (2020) that the presentation of teaching materials must be made using a popular language style, simple, concise, easy to learn, not boring,

not bound by scientific writing rules, easy to carry, easy to understand by a wide audience, and does not result in inefficiency in learning.

### *Biology Teacher Validation Results*

Biology teachers assess four components, namely the material feasibility component, material presentation, language component and graphic component. To see the results of the validator as a whole, see. To see the results of the Biology Teacher as a whole, it can be seen in Table 5.

Table 5. Results of Biology Teacher Validation

| Expert | Assessment Component | Indicator | Score | Category | Score Average | Information |
|---|---|---|---|---|---|---|
| **Teacher** | Material Eligibility | 1 | 5 | Very good | 5 | Very Good |
| | | 2 | 5 | Very good | | |
| | | 3 | 5 | Very good | | |
| | | 4 | 5 | Very good | | |
| | Presentation of Material | 1 | 4 | Well | | |
| | | 2 | 4 | Well | | |
| | | 3 | 5 | Very good | | |
| | | 4 | 5 | Very good | | |
| | | 5 | 4 | Well | | |
| | | 6 | 4 | Well | | |
| | Language Component | 1 | 5 | Very good | | |
| | | 2 | 4 | Well | | |
| | | 3 | 4 | Well | | |
| | | 4 | 5 | Very good | | |
| | Graphics Component | 1 | 5 | Very good | | |
| | | 2 | 5 | Very good | | |
| | | 3 | 5 | Very good | | |
| | | 4 | 4 | Well | | |

Table 5 shows that the assessment of the Biology Teacher for the material feasibility component obtained an average score of 5 in the very good category. The material/content presentation components for indicators 1, 2, 5, and 6 received the same rating with a score of 4 good categories, indicators 3 and 4 received an assessment with a score of 5 very good categories. The language presentation component for indicators 1 and 4 received the same rating with a score of 5 categories very good, indicators 2 and 3 received an assessment with a score of 4 good categories. Graphic presentation components for indicators 1, 2, and 3 get the same rating with a score of 5 categories very good, indicator 4 gets a score of 4 categories good. Overall, the components of the material feasibility assessment, the presentation of the material/content, the language component, and the graphic component obtained an average score of 5 in the very good category. Thus, the book on the enrichment of riparian plant species diversity in Kampar Regency is suiTable for use without revision. According to Akbar (2013), the validation of the field of study teacher aims to determine the advantages or disadvantages in terms of material, language and graphics with student-centered learning, based on this assessment the user can provide input for improving the teaching materials developed.

## 4. Conclusion

Development of the Riparian Plant Diversity Book for biology student is in the good category and can be used in the next stage. This research resulted in the Riparian Diversity enrichment book which has been validated by experts, so that this enrichment book is feasible to be given to students at school, it is hoped that it can become one of the learning resources that can increase students' knowledge regarding local potential. The obstacle in making this book is finding relevant sources because it is still rare to find enrichment books that highlight the potential of special areas of riparian plants in Kampar Regency. With this book, besides being a source of learning at school, it is also a source of reading for others outside the scope of the school.

## Acknowledge

Thank you Prof. Dr. Yustina, M.Si and Dr. Fitrah Suzanti, M.Si who has guided the research that has been done. This study was independently funded by the researcher.

## References

Akbar, S. (2013). Instrumen Perangkat Pembelajaran. Bandung: Remaja Rosdakarya.

Andira, N., Noorhidayati, N., & Riefani, M. K. (2021). Kelayakan Buku Panduan Lapangan "Keanekaragaman Pohon di Lingkungan Kampus Universitas Lambung Mangkurat" sebagai Sumber Belajar Mandiri Konsep Keanekaragaman Hayati. *Wahana-Bio: Jurnal Biologi dan Pembelajarannya, 13(1),* 19-30.

Arsyad, A. (2010). Media Pembelajaran. Jakarta: PT Rajagrafindo Persada.

Asbari, M., Wijayanti, L. M., Hyun, C. C., Purwanto, A., & Santoso, P. B. (2019). Effect of Tacit and Explicit Knowledge Sharing on Teacher Innovation Capability. *Dinamika Pendidikan*.

Ardan, A. S., & Sumiyati, S. (2021). Analisis Kebutuhan Pengetahuan Lokal untuk Pengembangan Buku Referensi Mata Kuliah Keanekaragaman Hayati dan Konservasi. *Haumeni Journal of Education*, *1(2),* 1-14.

Charlina, C., & Septyanti, E. (2019). Development of Work Sheets for Students (LKPD) in Writing Explanation Text. *ELS Journal on Interdisciplinary Studies in Humanities, 2(4),* 515-528.

Depdiknas. (2008), *Panduan Pengembangan Bahan Ajar*. Departemen Pendidikan Nasional. Jakarta

Dick, W., & Carey, L. (2005), *The Systematic Design of Instruction. ; 6th ed. Allyn and Bacon*

Elisa, E., Panjaitan, R. G. P., & Wahyuni, E. S. (2021). Pembuatan buku saku submateri pemanfaatan keanekaragaman hayati Indonesia kelas X SMA. *Jurnal Pendidikan Informatika dan Sains, 10(2),* 90-98.

Febrianto, R., & Puspitaningsih, F. (2020). Pengembangan buku ajar evaluasi pembelajaran. *Education Journal: Journal Educational Research and Development*, *4(1),* 1-18.

Guswika, H., Suhadi, S. & Indriwati, S. E. (2017). Pengembangan Media Penyuluhan Berupa Buku Pintar Tumbuhan Obat. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, *2(12),* 1585-1589

Hasanah, F. N. (2020). Keanekaragaman dan Kemelimpahan Tumbuhan Paku di Cagar Alam Donoloyo sebagai Bahan Pengembangan Multimedia Interaktif Biologi di. *Journal of Biology Learning*, *2(2),* 104-111.

Ilmiawan, A. (2018). Pengembangan Buku Ajar Sejarah Berbasis Situs Sejarah Bima (Studi Kasus pada Siswa Kelas X MAN 2 Kota Bima). Jurnal Ilmu Sosial Dan Pendidikan, *2(3),* 102-106.

Kurniasih, I., & Sai, B. (2014). Panduan Membuat Bahan Ajar: Buku teks Pelajaran Sesuai Dengan Kurikulum 2013. Surabaya: Kata Pena

Lamasai, M. M., & Puadi, R. I. (2012). Pemanfaatan Lingkungan Alam Sekitar Sebagai Sumber Belajar Dalam Meningkatkan Hasil Belajar IPA Siswa Kelas III SDN 10 Gadung. *Jurnal Kreatif Online*, *5(3).*

Muthmainah, M., Nurmiyati, N., & Dwiastuti, S. (2016). Pengaruh penggunaan modul berbasis potensi lokal pada topik ekosistem terhadap pemahaman konsep dan sikap peduli lingkungan siswa kelas X. In *Proceeding Biology Education Conference: Biology, Science, Enviromental, and Learning*, *13(1),* 293-298.

Nurfatma, N., Dharmono, D., & Amintarti, S. (2020). Validitas Buku Ilmiah Populer Etnobotani Tumbuhan Leucosyke capitellata di Kawasan Hutan Bukit Tamiang Kabupaten Tanah Laut. *Wahana-Bio: Jurnal Biologi dan Pembelajarannya*, *12(2),* 115-124.

Riefani, M. K. (2019). Validitas dan Kepraktisan Panduan Lapangan "Keragaman Burung" di Kawasan Pantai Desa Sungai Bakau. *Jurnal Vidya Karya*, *34(2),* 193-204.

Riefani, M.K. Badruzsaufari. & Dharmono. (2020). "The practicality of odonatan handout in invertebrate zoology course,". *Phys. Conf. Ser. 1422(1).*

Sarip, M., Amintarti, S., & Utami, N. H. (2022). Validitas Dan Keterbacaan Media Ajar E-Booklet Untuk Siswa SMA/MA Materi Keanekaragaman Hayati. *JUPEIS: Jurnal Pendidikan dan Ilmu Sosial*, *1(1),* 43-59.

Sitepu. (2014). Penulisan Buku Teks Pelajaran. Bandung: Remaja Rosdakarya.

Sintia, S., Zaini, M., & Halang, B. (2021). Validitas buku ilmiah populer tumbuhan aren (Arenga pinnata Merr.). *Jurnal Inovasi Pembelajaran Biologi*, *2(1),* 40-47.

Sugiyono. (2018). Metode Penelitian Kombinasi (Mixed Methods). In *Alfabet*.

Subari, Z., & Wahyudin Nur Nasution, M. (2018). Nilai-Nilai Integrasi Ilmu Pengetahuan Dalam Kurikulum 13. *Edu-Riligia: Jurnal Ilmu Pendidikan Islam Dan Keagamaan*, *2(2).*

Sulastri, S. (2019). Pelatihan Penyusunan Perangkat Perencanaan Pembelajaran Kepada Para Guru. *Jurnal Loyalitas Sosial: Journal of Community Service in Humanities and Social Sciences*, *1(1),* 36-46.

Sulistri, E., Sunarsih, E. & Utama, E. G. (2020). Pengembangan Buku Saku Digital Berbasis Etnosains di Sekolah Dasar Kota Singkawang. Jurnal Kependidikan, *6(3),* 522–531.

Suryanda, A., Azrai, E. P., & Julita, A. (2020). Analisis kebutuhan pengembangan buku saku biologi berbasis mind map (Biomap). *Jurnal Pendidikan Matematika Dan IPA, 11(1),* 86-98.

Suwarni, E. (2015). Pengembangan buku ajar berbasis lokal materi keanekaragaman laba-laba di Kota Metro sebagai sumber belajar alternatif biologi untuk siswa SMA Kelas X. *BIOEDUKASI (Jurnal Pendidikan Biologi), 6(2).*

Valentine, D. A. (2015). Peningkatan ecoliteracy siswa dalam pemanfaatan kebun karet sebagai sumber pembelajaran IPS. *Jurnal Pendidikan Ilmu Sosial*, *24(2),* 217-226.

Weldi, W. (2020). Identifikasi Potensi Materi Ajar Invertebrata di Area Pantai Kecamatan Serasan Pada Materi Pelajaran IPA. *BIO-EDU: Jurnal Pendidikan Biologi*, *5(1),* 10-22.

How to cite this article:

Gamiarsih, A., Yustina, & Suzanti, F. (2022). Development of Riparian Plant Diversity Enrichment Book in Kampar Regency. *Journal of Educational Sciences*, *6(3)*, 393-404.