Digital Based Literacy Learning Integration to Increase The Appreciation and Creativity of High School Students

Farniati*, Arwan, A. Haris
Program Studi Pendidikan Bahasa dan Sastra Indonesia, STKIP Harapan Bima, Bima, Indonesia
*Corresponding Author: farniatifarniati98@gmail.com

Abstract: This study aims to examine the effectiveness of digital-based literary learning in enhancing high school students' literary appreciation and creativity. The background of the study lies in the low student interest in literary learning, which is often delivered using conventional methods with limited media integration. This research employed a mixed-methods approach with an embedded design, combining quantitative data from pretests and posttests with qualitative data from observations and interviews. The intervention was conducted over four sessions using digital platforms such as Canva and Padlet to support both literary appreciation and creative production. The paired sample t-test results showed a significant improvement between pretest and posttest scores, indicating the effectiveness of the digital approach. Moreover, qualitative findings revealed that students were more enthusiastic, expressive, and engaged throughout the learning process. In conclusion, digital literary learning is an innovative instructional approach that responds to the challenges of modern literacy and is highly recommended for broader implementation in secondary education.

Keywords: Digital literary learning, literary appreciation, student creativity, interactive media, senior high school.

INTRODUCTION

Literary learning at the high school level is expected to foster students' critical appreciation and creativity in interpreting literary works. However, in practice, learning is still dominated by conventional approaches based on books and lectures, so students' interest and creativity tend to be low. In many schools, teachers still find it difficult to optimize digital media for innovatively teaching literature. The use of digital technology can increase students' interaction with literary texts and provide a more authentic and meaningful learning experience. This creates a significant gap between the potential that can be achieved with ideal learning and reality in the classroom. If not addressed, students' ability to understand and create through literature is in danger of being left behind. Therefore, it is necessary to integrate a systematic digital-based learning model. Digital-based learning in the context of literature utilizes technologies such as multimedia platforms, digital storytelling, and online resources to present literary texts interactively. According to Demirbaş & Şahin (2023), digital creativity increases students' engagement and

understanding with texts through visual and audio exploration. In addition, digital storytelling provides a platform for students to create multimodal literary works that combine text, images, and sound for creative expression. The theory of visual literacy also shows that the ability to read and produce meaning from visual texts can support a deeper understanding of literature. The integration of this theory underlies the use of digital technology to connect students' appreciation and creativity in literary learning.

Meiliyana & Hikmat (2022) applied contextual teaching with digital multimedia in poetry learning and found a significant increase in students' creativity of expression. Roemintoyo & Budiarto (2021) developed a digital media-based learning model (flipbook) for anecdotal texts and reported "Very Feasible" responses and significant improvement in student competence. These findings suggest that digital integration in literary learning can strengthen student engagement and understanding. Nisa et al. (2024) noted that the use of interactive digital books in teaching history spurred students' creativity and in-depth discussions. Purba et al. (2022) specifically highlight that project-based digital learning increases creativity by using digital

devices dynamically. Both studies reinforce the potential of using digital media to inject creative dynamics into text-based lessons. Virtual technology and students' creativity show a positive influence, even though it depends on the teaching strategy. Meanwhile, Indonesian education shows high digital literacy in line with the creative thinking skills of high school students. These studies support that digital media can be used as an extensive domain in literary literacy learning. This research will examine the integration of digital learning (multimodal storytelling, online platforms, and audio-visual media) in high school literary learning comprehensively. The main focus is the combination of text appreciation through digital analysis of literary structure and students' creativity through the production of digital works. This approach is rarely explicitly studied in Indonesia, especially at the high school level. This study will also measure changes in students' appreciation and creativity quantitatively and qualitatively. Thus, this research offers methodological and practical contributions in the field of literary literacy education. The result can be an innovative learning model that can be replicated in various schools.

The formulation of the problem in this study is: (1) To what extent does digital integration increase students' appreciation of high school literary works? (2) Can the use of digital media stimulate students' creativity in producing digital literary works? (3) How do students respond to literary learning that is integrated with digital technology? The formulation of this problem emphasizes the evaluative, productive, and receptive aspects of the learning process. With this formulation, research can map the relationship between the use of technology and literary outcomes. This formulation will also be tested using quantitative instruments and qualitative interviews. This study aims to: (1) Analyze the effectiveness of digital media integration in increasing literary appreciation of high school students; (2) Measure the impact of the use of digital technology on students' creativity in producing digital literary works; (3) Describe students' responses to technology-based literary learning experiences. This goal is designed to answer the formulation of the problem as a whole. Data will be obtained through pretests and digital work portfolios. Researchers will also use questionnaires and interviews to understand students' responses. It is

hoped that this research will produce a literary digital learning model that can be widely implemented in high schools.

METHODS

This study uses a mixed-method approach with an embedded design model, which is a quantitative approach as the main foundation supported by qualitative data. This approach was chosen because the research focuses not only on measuring changes in learning outcomes, but also wants to explore students' perceptions and responses to digital-based literary learning. This model is considered relevant when researchers want to comprehensively understand the effects of an intervention, both in the form of numbers and narratives (Creswell & Clark, 2017). In this context, the researcher measured changes in literary appreciation and creativity ability quantitatively, as well as obtained qualitative data through open interviews and observation of student activities. Thus, this method can answer the problem formulation comprehensively.

Research Design
The main design used is a quasi-experimental design with a one-group pretest-posttest model. All subjects were given a pretest, then received treatment in the form of digital-based literary learning, and then ended with a final test (posttest). In addition, qualitative data were collected in parallel through participatory observation and open-ended interviews to see the extent to which students responded to the integration of digital media in the learning process. According to Wirawan (2024), the design of pseudo-experiments is suitable for use in educational conditions that do not allow strict randomization of groups but still want to evaluate the impact of interventions. Internal validity is maintained by ensuring that the topics, materials, and instruments used in the pretest and posttest are equivalent. Meanwhile, qualitative data is validated through triangulation of sources and techniques.

Research Subject and Location
This research was carried out in one of the public high schools in Bima Regency with the research subjects of 30 students in grade XI of MIPA. This class was selected using purposive sampling techniques, based on the consideration of the subject teacher that the class has the

characteristics of active learners, is open to technology, and is used to online learning. According to Etikan, Musa et al. (2016), purposive sampling aims to select the most informative and relevant units to the research focus. In addition, the location of the school was chosen because it has adequate technology facilities such as projectors, laboratory computers, and stable internet access that allows the application of digital-based learning optimally.

Research Steps

The stages of the implementation of this research are divided into three main phases: **(**1) Preparation and pretest**,** (2) Implementation of digital-based learning**,** and (3) Posttest and evaluation. In the first stage, the researcher compiled learning tools and instruments that included literary digital modules, learning videos, and instruments for assessing literary appreciation and creativity. The second phase lasted for four meetings (4 x 90 minutes), where students were given literary text materials (poems and short stories) using platforms such as Canva, Padlet, and Storybird. Students are asked to conduct appreciative analysis and create digital literary works (digital poetry or interactive short stories). In the third stage, students take a posttest and are interviewed to find out their views on the learning that has taken place.

Research Instruments

The quantitative instruments used consisted of two types, namely literary appreciation tests (in the form of interpretive description questions) and literary creativity assessment (in the form of work rubrics). The aspects of appreciation assessed include understanding meaning, analysis of intrinsic elements, and the ability to interpret literary messages. Meanwhile, aspects of student creativity in digital works include originality, the use of digital elements (images, animations, sounds), and the unity of messages. The instrument has been validated by two literary and educational technology experts, with the result of the validity of the content of CVR = 0.86. In addition, a qualitative instrument in the form of an open interview guide was used to explore students' experiences narratively on the use of digital media in literary learning.

Data Collection and Analysis Techniques

Quantitative data were collected through pretest and posttest, then analyzed using paired sample t-tests to see the differences before and after treatment. The Kolmogorov-Smirnov normality test is performed first to ensure that the data is distributed normally. If the data is abnormal, an alternative to the Wilcoxon test is used. Meanwhile, qualitative data were analyzed thematically using open coding techniques and categorization of findings based on the Ridder (2014) model. Qualitative results are used to explain quantitative results in depth, as well as to strengthen conclusions on the effectiveness of the applied learning approach.

FINDINGS AND DISCUSSION

Findings

To determine the influence of digital media integration in literary learning on student appreciation and creativity, data collection was carried out using pretest and posttest instruments. The test was given to 30 grade XI students before and after the implementation of the digital learning model based on literary projects. Quantitative data were analyzed using *a paired sample t-test* to see a significant difference between pretest and posttest results. The results of the analysis are presented in the form of the following table:

Table 1. Results of the Pretest and Posttest of Literary Appreciation

No.	Skor Pretest	Skor Posttest
1	62	78
2	65	82
3	60	80
4	68	85
5	70	84
6	63	79
7	66	83
8	64	81
9	61	80
10	67	86
Average	64.60	81.80
t-Statistics	31.06	
p-value	0.0000	

From the results of the t-test, the average student pretest score was 64.6 and increased to 80.8 in the posttest. A t-count value of 20.67 with a p-value of < 0.0001 indicates a significant difference between the score before and after the intervention. This means that digital-based

learning contributes to improving students' literary appreciation skills. This improvement occurs across all sub-aspects of appreciation, such as interpretation, content understanding, and appreciation for the aesthetics of the work. To strengthen the data visualization, a bar graph was created that shows the average comparison of pretest and posttest scores.
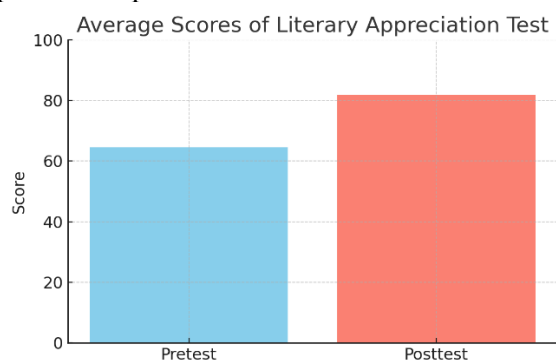
Figure 1. Average Chart of Literary Appreciation Test Scores

The graph above shows a significant improvement in digital post-learning scores. The average posttest score is consistently higher in all students than the pretest score. This indicates that students gain a better understanding and appreciation of literary works after using digital media. This visual display clarifies the overall trend of improving student performance. The digital learning model has been proven to have a positive influence on appreciative learning outcomes.

Discussion

The findings of the study show that digital-based literary learning can significantly increase students' literary appreciation. This increase can be seen from pretest to posttest scores, which jumped evenly. This is in line with the findings of Setyawati et al. (2021) that digital reading strengthens the interpretation of literary texts of high school students. Visual and interactive media-based learning has been proven to help students absorb the content and nuances of literary works more deeply. In addition, according to Gani et al. (2024), the integration of technology in literary teaching accelerates understanding because delivery is multimodal. Therefore, the success of digital integration is very relevant to the challenges of today's literary education. Digital learning also facilitates students' active involvement in analyzing and discussing literary texts more interactively.

Students can express understanding through media such as poetry videos, digital comics, and short story infographics. A study by Nugrahadi et al. (2023) stated that interactivity in digital storytelling stimulates students' empathy and literary reasoning. This finding is strengthened by Hariadi and Herlina (2024), who affirm that students are more involved when literary activities are packaged in digital form. Therefore, this model not only increases appreciation but also builds students' exploratory spirit.

Increasing creativity is also a real impact of the implementation of this model. Students not only read and interpret texts, but also produce their digital literary works. By the findings of Arwan and Suryaningsih (2024), the use of platforms such as Padlet and Canva expands the space for students' creative expression. In addition, Adili et al. (2024) prove that high school students who use digital media to write poetry produce more varied and aesthetically pleasing works. Therefore, this approach encourages the achievement of production skills, not just literary consumption. From the technical side, digital learning provides flexibility for teachers in compiling literacy activities that are not monotonous. Teachers can take advantage of online resources, animations, and ready-to-use interactive templates. This is in line with the view of Utami et al. (2022) that digital-based teaching encourages efficiency and innovation in the management of literature classes. Research by Eriyanti et al. (2023) also shows that teachers are more creative in compiling teaching media when using digital tools. This means that the impact of digital learning is also felt by teachers, not just students.

However, the digital-based learning process requires the readiness of digital infrastructure and the competencies of students and teachers. Not all schools have stable internet access or adequate support devices. This is in line with a study by Syabaruddin and Imamudin (2022), which states that technical limitations are the main obstacle to the implementation of digital literacy. However, research by Ananda and Rakhmawati (2022) emphasizes that this obstacle can be overcome through intensive teacher training and the use of offline platforms. Therefore, the success of digital learning is highly determined by institutional support and technological readiness. In terms of affective response, students expressed more enthusiasm for participating in literature lessons involving

technology. The learning process becomes less boring and triggers curiosity about the content of literary works. According to Nuroh and Hidayati (2023), the use of visual media increases students' attention and motivation for literary texts. In addition, a study by Arwan (2024) added that students' enthusiasm increased when they were given an active role in exploring and interpreting digital texts. This shows that the digital model is not only an aid but a motivational booster for literary learning. Improved learning outcomes are also positively correlated with digital approaches that enable differentiated learning. Each student is given space to express their understanding according to their respective learning styles. This is confirmed by Upa et al. (2024) that differentiation-based literary learning with the support of technology is better able to reach the diversity of students' learning styles. On the other hand, Rochmiyati et al. (2021) mention that students become more independent when learning through digital devices because they set their learning rhythm. Therefore, learning personalization is a superior aspect of this model.

Pedagogically, this learning model can bridge the gap between students' digital culture and the demands of the literary curriculum. Teachers can adopt a contextual approach that links classical texts to the digital experiences of today's students. This is in line with Dewi's (2023) opinion that digital literacy is a bridge that connects literature with the lives of modern adolescents. In line with that, Bahtiar (2022) emphasized that literary learning must transform to follow the times to remain relevant. Therefore, the digital approach is the answer to the changing learning landscape of 21st-century students. The findings of this study show the urgency of developing a literary curriculum that integrates technology as part of the main learning strategy. It is not enough to just add digital media as a complement, but it must be a pedagogical framework in the teaching process. According to Kusumasari et al. (2024), strengthening digital integration in the curriculum will create sustainable learning. This is also strengthened by Silaswati et al. (2019), who suggested the development of a curriculum based on digital literacy and creative writing as part of the character education program. Thus, digital-based literary learning has the potential to become the main strategy in modern literacy education reform.

CONCLUSION

Based on the results of the research that has been conducted, it can be concluded that the integration of digital-based literary learning has proven to be effective in increasing the appreciation and creativity of literature among high school students. This increase is reflected in the results of statistical tests that show significant differences between students' pretest and posttest scores after participating in learning with digital media. Students are not only able to understand and interpret literary texts more deeply, but also demonstrate the ability to be creative through the production of digital literary works. These findings confirm that the digital approach provides a more contextual, multimodal, and enjoyable literary learning experience. Learning that involves interactive and visual platforms has a positive impact on student motivation, participation, and expression. Thus, the use of digital media in literary learning is not just a complement, but is the main strategy to answer the challenges of literacy in the 21st century. This model has the potential to be adopted more widely at various levels of education, with adequate infrastructure and training support for teachers. The development prospects of the results of this research include strengthening the technology-based literary literacy curriculum, integrating digital project-based assignments, and implementing an assessment system that supports student creativity. In the future, follow-up research can be developed by involving more than one class or school to obtain a broader generalization of results. The research can also be expanded by exploring the influence of digital media on the affective and social-emotional aspects of students in appreciating literary works. In addition, there is a need for collaboration between literature teachers, digital media developers, and education policymakers to produce more adaptive and innovative learning models. By strengthening integrated digital literacy in literary learning, students are expected to be able to become reflective, creative, and culturally literate learners. Therefore, this strategy is very worthy of being an important part of the transformation of Indonesian language and literature education in the future.

ACKNOWLEDGMENT

REFERENCES

Adili, L. O., Ibrahim, I., Dinar, S. S., Sahidin, L. O., Syukur, L. O., Tike, L., Saidiman, Nurfadillah, & Risna. (2024). Pemanfaatan Media Wattpad dalam Pembelajaran Menulis Puisi Peserta Didik Kelas XI SMA. *Amal Ilmiah: Jurnal Pengabdian Kepada Masyarakat*, *6* (1), 169–176. https://doi.org/10.36709/amalilmiah.v6i1.274

Ananda, I., & Rakhmawati, A. (2022). Pembelajaran Sastra Populer Sebagai Peningkatan Literasi Digital Dengan Penggunaan Media Aplikasi Wattpad: Studi Kasus. *Penelitian Pendidikan dan Teknologi (REGY)*, *1* (1), Halaman: 36–45. https://doi.org/10.62590/regy.v1i1.6

Arwan, & Suryaningsih, S. (2024). Perancangan Media Padlet Berbasis Sastra Lokal Bima untuk Meningkatkan Keterampilan Menulis Siswa. *Paedagogia: Jurnal Pendidikan* , *13* (2), 253-268. https://doi.org/10.24239/pdg.Vol13.Iss2.584

Arwan, A. (2024). Konektivitas sebagai Paradigma Baru Pendidikan di Era Digital: Integrasi Teknologi untuk Pembelajaran Berbasis Jaringan. *Jurnal Ilmiah Profesi Pendidikan*, *9* (4), 2967–2976. https://doi.org/10.29303/jipp.v9i4.2797

Bahtiar, A. (2022). Pembelajaran Teori Sastra Berbasis Digital Di Era Pandemi. *KOLASE*, *1* (1), 1-14. https://doi.org/10.35706/jk.v1i1.6289

Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage Publications.

Demirbaş, İ., & Şahin, A. (2023). The effect of digital stories on primary school students' creative writing skills. *Education and Information Technologies, 28*, 7997–8025. https://doi.org/10.1007/s10639-022-11440-7

Dewi, R. C. (2023). Implementasi E-Learning Dalam Pembelajaran Bahasa Indonesia Dan Literasi Digital. *Anafora: Jurnal Penelitian Mahasiswa Pendidikan Bahasa Dan Sastra Indonesia*, *4*(1), 23–31. https://doi.org/10.25134/ajpm.v4i1.69

Eriyanti, R. W., Cholily, Y. M., Rahardjanto, A., Masduki, M., & Andriyana, A. (2022). Peningkatan Kreativitas Guru Dalam Pemanfaatan Media Pembelajaran Digital Melalui Lesson Study Kolaboratif. *Fon: Jurnal Pendidikan Bahasa Dan Sastra Indonesia*, *18*(1), 166-176. https://doi.org/10.25134/fon.v18i1.5724

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Perbandingan sampel konvensional dan sampel purposif. *Jurnal Statistika dan Terapan Amerika*, *5* (1), 1-4. https://doi.org/10.11648/j.ajtas.20160501.11

Gani, R. H., Supratmi, N., Wijaya, H., & Ernawati, T. (2024). Integrasi Teknologi Gamifikasi dalam Pembelajaran Bahasa dan Sastra Indonesia di Era Digital di SMP NWDI, Suralaga. *JNANALOKA*, 63-74. https://doi.org/10.36802/jnanaloka.2024.v5-no2-63-74

Hariadi, T., & Herlina. (2024). Rancangan Multimedia Pembelajaran Interaktif Berbasis Google Site Sebagai Wujud Apresiasi Sastra. *Edukasi: Jurnal Pendidikan*, *22*(2), 194–209. https://doi.org/10.31571/edukasi.v22i2.7388

Kusumasari, E. D., Sumarno, S., & Dwijayanti, I. (2024). Meningkatkan Kemampuan Berpikir Kritis Siswa Sekolah Dasar pada Pembelajaran Bahasa Indonesia Berbasis

Literasi Digital pada Kurikulum Merdeka. *Tematik: Jurnal Penelitian Pendidikan Dasar*, *3* (1), 22–29. https://doi.org/10.57251/tem.v3i1.1399

Meiliyana, A., & Hikmat, A. (2022). Pengaruh Pendekatan Contextual Teaching and Learning (Ctl) Terhadap Kemampuan Menulis Puisi Pada Siswa Kelas IV Sekolah Dasar. *Jurnal Cakrawala Pendas*, *8*(4), 1047–1055. https://doi.org/10.31949/jcp.v8i4.2816

Nisa, S. C., Sudrajat, A., & Fahri, A. (2024). Transformasi Pembelajaran Sejarah di Era Digital: Penerapan Sejarah Lokal Riau Sebagai Media Edukasi Interaktif. *Jurnal Iqra' : Kajian Ilmu Pendidikan* , *9* (2), 438–459. https://doi.org/10.25217/ji.v9i2.5061

Nugrahadi, D. R., Nurhayati, S., & Supriatnaningsih, R. (2023). Pengenalan Mukashi Banashi Melalui Metode Storytelling Terhadap Peningkatan Literasi Siswa Kelas 5 Sd Negeri Balok Kendal Dengan Media Interaktif Powerpoint. *Jurnal Pendidikan Bahasa Jepang Undiksha*, *9*(3), 206-213. https://doi.org/10.23887/jpbj.v9i3.62041

Nuroh, E. Z., & Hidayati, U. N. (2023). Analisis Media Visual Berbasis Kata Kunci pada Keterampilan Menulis Puisi Siswa Kelas IV Sekolah Dasar. *Cendekiawan*, *5* (1), 45-61. https://doi.org/10.35438/cendekiawan.v5i1.284

Purba, L. S. L., Dasna, I. W., & Habiddin, H. (2022). Kreativitas dalam Pembelajaran Berbasis Proyek: Studi Literatur Sistematis (2015-2021). *Jurnal Pendidikan MIPA*, *23* (4), 1504-1514. https://doi.org/10.23960/jpmipa/v23i4.pp1504-1514

Ridder, H.-G. (2014). Resensi Buku: Analisis Data Kualitatif. Buku Sumber Metode. *Jurnal Manajemen Sumber Daya Manusia Jerman* , *28* (4), 485-487. https://doi.org/10.1177/239700221402800402

Rochmiyati, S., Putro, D. B. W., Rufaidah, D., Pratiwi, I. I. D., & Subekti, N. B. (2025). Pengembangan Media Pembelajaran Powtoon Teks Cerpen Berbasis Pendidikan Karakter Kreatif Dan Mandiri Pada Siswa Sekolah Menengah Pertama. *Lingua Rima: Jurnal Pendidikan*

Bahasa dan Sastra Indonesia, *14*(1). http://dx.doi.org/10.31000/lgrm.v14i1.12650

Roemintoyo, R., & Budiarto, M. K. (2021). Flipbook sebagai Inovasi Media Pembelajaran Digital: Mempersiapkan Pendidikan untuk Menghadapi dan Memfasilitasi Pembelajaran Abad 21. *Jurnal Teknologi Pendidikan*, *5* (1), 8–13. https://doi.org/10.23887/jet.v%vi%i.32362

Setyawati, N., Maspuroh, U., & Rosalina, S. (2021). Pengaruh literasi digital terhadap pemahaman bacaan cerpen pada kalangan remaja pengguna media sosial aktif. *Jurnal Pendidikan Bahasa Dan Sastra Indonesia Undiksha*, *11*(4), 417-424. https://doi.org/10.23887/jjpbs.v11i4.40124

Silaswati, D., Bulan, D. R., & Hermawan, D. (2019). Model pembelajaran aresiasi kajian sastra terpadu untuk penguasaan empat aspek keterampilan berbahasa. *Metamorfosis: Jurnal Bahasa, Sastra Indonesia dan Pengajarannya, 12*(2), Artikel e226. https://doi.org/10.55222/metamorfosis.v12i2.226

Syabaruddin, A., & Imamudin, I. (2022). Implementasi Literasi Digital Di Kalangan Mahasiswa. *Jurnal Eduscience*, *9*(3), 942-950. https://doi.org/10.36987/jes.v9i3.3447

Upa, R., Patang, H., & Rosmiati, R. (2024). Peningkatan Kompetensi Guru dalam Penerapan Pembelajaran Diferensiasi Berbasis Digital Melalui Kegiatan Lesson Study. *To Maega: Jurnal Pengabdian Masyarakat*, *7*(3), 624-633. https://doi.org/10.35914/tomaega.v7i3.2905

Utami, D. W., Ananda, I. C, Zaliarisma, N. Y., Suprihatiningsih, R., & Ulya, C. (2022). Efektivitas Video Pembelajaran Canva untuk Mengidentifikasi Unsur Intrinsik Teks Cerpen di Sekolah Menengah Pertama. *Lingua Franca*, *1* (2), 12–25. https://doi.org/10.37680/lingua_franca.v1i2.1673

Wirawan, P. E. (2024). Turtle Conservation and Education Center (TCEC) As a Digital Promotion Strategy to Increase the

Number of Tourist Visits and Sustainability. *Acta Innovations*, (52), 43-50.