



Utilization and development of guidance and counseling applications to support the potential development of vocational students

Mohammad Syahidul Haq^{1*}, Asri Ady Bakri², Tukiyo³, Al Halik⁴, Meylia Sari⁵

¹Manajemen Pendidikan, Universitas Negeri Surabaya, Indonesia

²Program Studi Akuntansi, Universitas Muslim Indonesia, Indonesia

³Universitas Widya Dharma Klaten, Indonesia

⁴Program Studi Bimbingan Penyuluhan Islam, Institut Agama Islam Negeri Metro (IAIN Metro), Indonesia

⁵Program Studi Bimbingan Konseling, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sains Cut Nyak Dhien, Indonesia

ARTICLE INFO

Article history:

Received May 1, 2023

Revised May 14, 2023

Accepted May 23, 2023

Keywords:

Digital report of student guidance and counseling
Guidance and Counseling Application
Vocational Student Potential

ABSTRACT

Vocational High Schools (SMK) provide technical and skill-based education, but due to a variety of factors, not all students can attain their full potential. The guidance and counseling department at SMK plays a crucial role in assisting students with the development of their potential and personal issues. However, the implementation of guidance and counseling confronts numerous obstacles, including a lack of socialization among students, ineffective counseling reports, and ineffective document storage. The objective of this study is to develop a Guidance and Counseling Information System application that incorporates information technology as a solution to problems in the implementation of guidance and counseling as a business process. The result of this study is that the system's features are tailored to user needs so that it can assist the guidance counselor in monitoring and profiling disruptive students and identifying each student's potential. The conclusion of the study indicates that the proposed features of the guidance and counseling application include reporting convenience for counselors, access for instructors, students, and parents to view counseling reports, and access to student conduct reports for principals. It is anticipated that the research will facilitate the counseling process, enhance data administration, and promote the growth of student potential.

This is an open access article under the [CC BY-NC](https://creativecommons.org/licenses/by-nc/4.0/) license.



Corresponding Author:

Mohammad Syahidul Haq,
Manajemen Pendidikan,
Universitas Negeri Surabaya,
Lidah Wetan Road, Lidah Wetan, Lakarsantri Subdistrict, Surabaya City, East Java, 60213,
Indonesia
Email: mohammadhaq@unesa.ac.id

1. INTRODUCTION

Education in Indonesia is expanding concurrently with the development of information technology, which has permeated numerous domains, including education. One of the sectors in which the development of information technology can be utilized is education, particularly guidance and counseling in schools (Fauzi et al., 2023; Haq, 2022; Setiawan et al., 2022). Students have a significant demand for vocational high school. Vocational high school offers educational programs that differ from those of other secondary schools in that they emphasize technical competencies and abilities. However, not all vocational high school pupils are able to fully develop their potential due to factors such as a lack of motivation, personal issues, or a lack of environmental support (Idrus et al., 2022; Imaduddin et al., 2022; Triyono & Febriani, 2018).

Most educational institutions now prefer to utilize information technology to facilitate smoothness in the educational process as a support for internal and external academic quality (Halik & Rakasiwi, 2020; Radhitya et al., 2022). With a significant increase in the number of students each year, it causes data accumulation both from student data and other data. The Guidance and Counseling (BK) unit is an assistance service for students, both individually and in groups so that they are independent and develop optimally, in personal guidance, social guidance, study guidance, through various types of services and support activities (Halik, 2020; Sudipa et al., 2022).

Guidance and Counseling in Vocational High School is very important. The Guidance and Counseling Unit can assist students in developing their potential, provide guidance in selecting majors, address personal problems, and assist students in planning their future. However, various problems in the implementation of Guidance and Counseling in Vocational Schools are caused by several things. On research by (Krismona et al., 2021; Risdiansyah, 2017; Sofica & Hidayat, 2018) explained the problems that occur among students, including most students not socializing among their friends, not yet being good listeners, following wrong associations, and lack of supervision, guidance and counseling reporting still uses books and archiving documents that are less effective. Other research (Adhitya & Mirwansyah, 2022; Putri et al., 2023; Setiawan et al., 2023; Udayana et al., 2022) The Counseling Guidance Unit is experiencing problems, including finding it difficult to look back on counseling history and in storing books that are full of student counseling data.

Therefore, the utilization and development of Guidance and Counseling Information System applications can be a solution to overcome these problems. The Guidance and Counseling Information System is a system that integrates information technology in the implementation of counseling in vocational schools. In this system, students can get counseling services online and can access information related to counseling easily and quickly (Haq et al., 2022; Hermanto & Dwanoko, 2019; Pandawana et al., 2022). This study proposes several features to facilitate the guidance and counseling process related to the potential of vocational students, namely access for guidance counseling teachers to easily report student counseling, regulate types of violations, input student violations, create homeroom data, and be able to take action more quickly for students (Ernawati et al., 2022; Yahya et al., 2023).

The implications of this research are intended to be able to assist homeroom teachers, parents in seeing and knowing the behavior of students who are guided by student behavior reports. Homeroom teachers in monitoring and profiling students who do counseling and guidance, and can find out the potential of each student. This process can be done by providing access for the homeroom teacher is to be able to see student guidance, data on student violations, data on sanctions, and reports on student violations so that the homeroom teacher knows the behavior of the students being mentored and becomes a guideline for interaction between fellow students. Access for students can view counseling schedule data, and reports of violations so that they have

an understanding of their own potential. Access for parents to view counseling reports, violation reports that students receive to help take action on problems faced by children. Access for school principals to be able to see reports of violations and reports of student sanctions as student behavior reports.

2. RESEARCH METHOD

2.1 Research Framework

The procedures carried out include (1) research and information collecting, in the form of conducting a literature review regarding the identification of problems in the guidance and counseling process, a literature review regarding the application of guidance and counseling information systems (Alfiah et al., 2023; Setiadi et al., 2023; Sudipa et al., 2023), as well as data collection regarding the research background involving counseling teachers, parents, and students at Industrial Vocational Schools in East Java; (2) planning, this stage is carried out by researchers by analyzing user needs and designing guidance and counseling information system applications for vocational students (Tutik & Rosadi, 2022); (3) development, this stage is carried out by researchers by developing applications which include, a collection of materials, student worksheets, basic forms of applications, and user manuals; (4) testing, at this stage the researcher tested the validity of the system functionality (Ibrahim et al., 2023; Rachmad et al., 2023; Wijasena & Haq, 2021).

2.2 Data source

In this research and development, the data used as background and research literature review came from research on the application of guidance and counseling information systems for vocational students.

2.3 Guidance and counseling

Counseling Guidance is the process of providing assistance through counseling interviews by an expert (called a counselor) to individuals who are experiencing a problem (called a counselee) which leads to overcoming the problems faced by counselees and being able to take advantage of the various potentials they have and existing facilities (Sari & Halik, 2022), so that individuals or groups of individuals can understand themselves to achieve optimal development, be independent and can plan a better future to achieve a prosperous life (Sari & Fadilla, 2022).

Guidance and Counseling which means to show, guide, guide or help, then guidance in general can be interpreted as an assistance or guidance (Juwitaningrum, 2013). According to the term guidance is a process of helping individuals through their own efforts to determine and develop their abilities in order to obtain personal happiness and social benefit (Widodo et al., 2021).

3. RESULTS AND DISCUSSIONS

3.1. Counseling Guidance Business Process Analysis

System analysis is the decomposition of a complete information system into its component parts with the aim of identifying and evaluating problems, opportunities, obstacles that occur, and expected needs so that improvements can be proposed. These steps are in the form of an analysis of the storage of student behavior records and guidance reports in the BK section according to the request of the BK teacher. Based on the results of the analysis there is a problem, namely storing student data in the BK section is still recorded manually and then copied to Ms Excel so that it takes a long time and is inefficient, and is at risk of losing data in the BK unit.

Another problem that occurs in the counseling department is reports to parents by way of home visits which are caused by a lack of communication between parents and guidance counselors, if parents are busy they don't have time to meet the guidance counselor. The results of the home visit conducted by the counseling teacher were not recorded so that the counseling teacher could not maximize the actions taken. Therefore, to overcome some of these problems, an application design was made in accordance with the results of business process analysis in the BK section. To be able to create a new system, you must first know the transaction flow that is still used today. Then a document flow is made that functions to find out in detail the flow of the transaction.

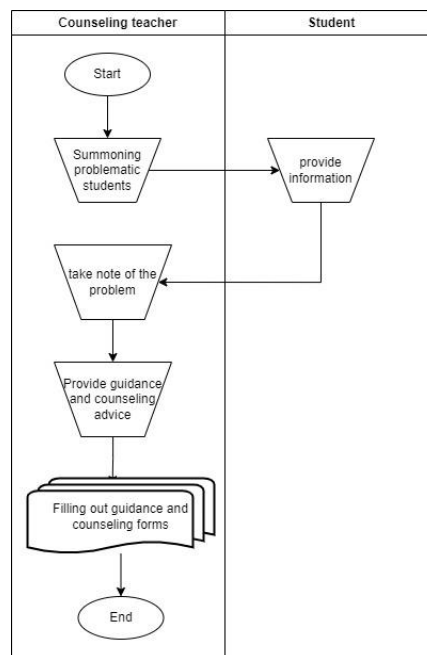


Figure 1. Guidance and Counseling Process Document Flow

3.2. Requirement Analysis

Based on the needs analysis, the needs analysis stage obtains the system features needed by the user to support progress tracking in the student guidance and counseling process as well as in assisting digital recording of every student violation, sanctions received and knowing the self-potential of each Vocational High School student. There are several system features namely:

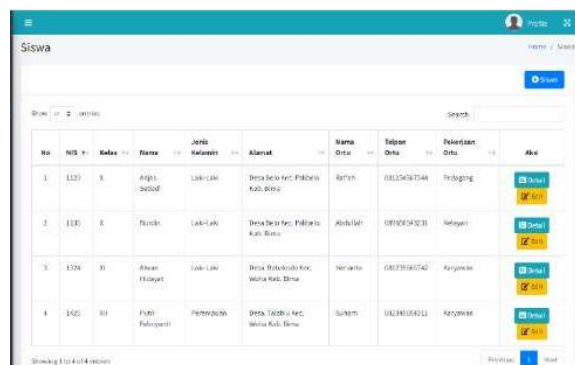
Table 1. Event List of System Features

No	Event List Name	Description of System Features
1	Login	Used as user login for the user
2	Manage User Data	Add User Data, Edit User Data
3	Manage Student Data	Add, change student detail data
4	Manage Violation Categories	Add, Change data on the category of violations committed by students
5	Manage Sanctions Data	Add, Change sanctions data for students
6	Manage Guidance and Counseling Schedules	Add, modify and delete guidance and counseling schedule data
7	Manage Guidance and Counseling Data	Add, change data related to student guidance and counseling materials
8	Managing Student Potential	Add, change potential student data as a profiling feature for each student
9	Print the Guidance and Counseling Report	Guidance and counseling reports, violation percentage reports, student potential reports

3.3. Application Deployments

a. Student Data Page

On the student data page there is student data that has been entered into the system which consists of student biodata and student parents. On this page there are several actions that users can perform, namely adding data, changing data and viewing student data details. The presentation of student data pages can be seen in Figure 2.

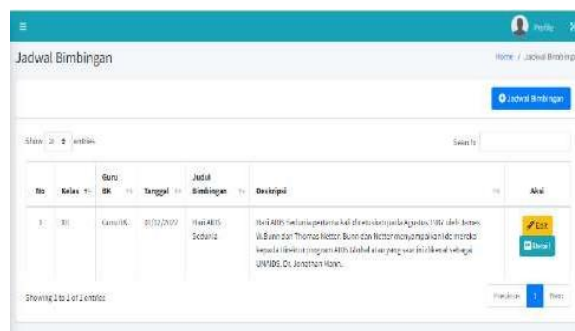


No	NIS	Kelas	Nama	Jenis Kelamin	Alamat	Nama Ortu	Telepon Ortu	Pekerjaan Ortu	Aksi
1.	1123	X	Anggi Susanto	Laki-Laki	Jl. Bina Jaya No. 123, Pekanbaru, Riau, Riau	Agus	08123456789	Perdagangan	[Edit] [Hapus]
2.	1124	X	Rizki	Laki-Laki	Jl. Bina Jaya No. 123, Pekanbaru, Riau, Riau	Abdul	08123456789	Keperawatan	[Edit] [Hapus]
3.	1324	XI	Ahmad Fauzan	Laki-Laki	Jl. Bina Jaya No. 123, Pekanbaru, Riau, Riau	Herianto	08123456789	Karyawan	[Edit] [Hapus]
4.	1423	XI	Fani Fauzan	Perempuan	Jl. Bina Jaya No. 123, Pekanbaru, Riau, Riau	Sunardi	08123456789	Karyawan	[Edit] [Hapus]

Figure 2. Student Data Page

b. Guidance Schedule Data Page

On the guidance schedule page there are classes, tutors, dates, guidance titles and descriptions that have been entered into the system. On this page there are actions that users can take, namely adding guidance schedules, changing guidance schedules, searching for guidance schedule data and details of guidance schedules. The presentation of the guidance schedule can be seen in Figure 3 below.



No	Kelas	Guru BK	Tanggal	Judul Bimbingan	Deskripsi	Aksi
1.	XI	Gunardi	01/02/2022	Hal ARS	Hal ARS (Kerangka Pemertanian) adalah kerangka kerja Agribisnis yang terdiri dari: Bekerja, Usaha dan Thomas Hector. Bekerja dan Hector merupakan istilah yang merujuk kepada (dalam) program ARS (Kerangka Pemertanian) yang merupakan salah satu UNWIS, Dr. Jonathan Hane.	[Edit] [Hapus]

Figure 3. Guidance schedule data page

c. Violation Data Page

On the violation data page, there is data on violations such as categories, points, information and sanctions. On the violation data page, there are actions that users can take, such as adding violations and changing violations. Violation data exposure can be seen in Figure 4 below.

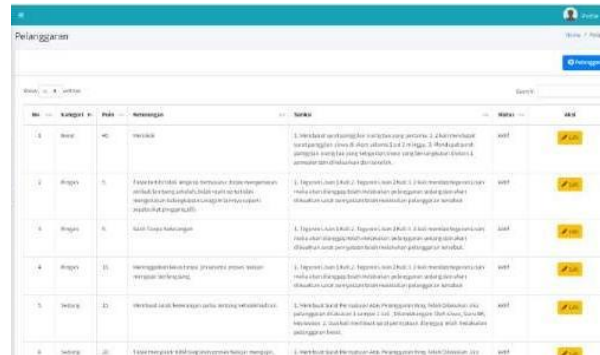


Figure 4. Page Shows violations

d. Guidance Topic Data Master Page

On the guidance topic page, namely personal and group. On this page, users can take action to add guidance topics and change guidance topics. The presentation of the guidance topic page can be seen in Figure 5 below.

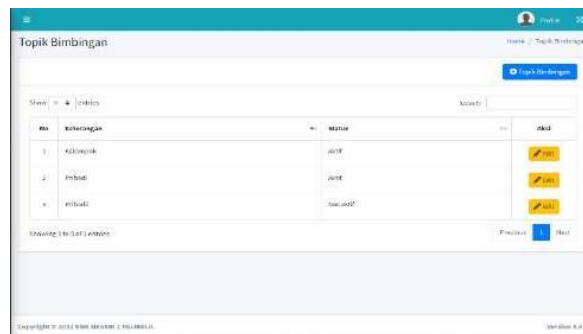


Figure 5. Guidance Topic Page

e. Pages Show Counseling Guidance

On the counseling guidance page there is data on counseling guidance that has been carried out by students either in groups or individually, whether those who committed violations or not. On this page the user can take additional counseling actions, change counseling guidance and the user can see the details of counseling carried out by students. The presentation of the counseling guidance page can be seen in Figure 6.

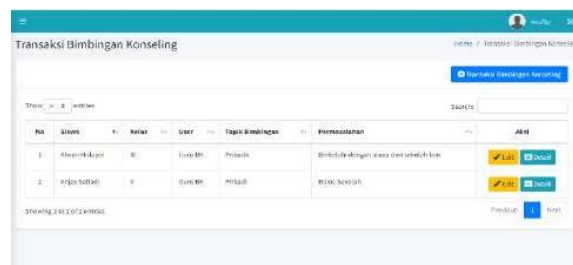


Figure 6. Guidance for BK Teacher User Counseling

f. Student Potential Page

On the student potential page, it can be used for the counseling teacher in checking the types of violations committed by students and the progress of completing each violation. This menu can also input the potential of each individual student both in terms of academic and non-academic potential. Can be seen in Figure 7 below.

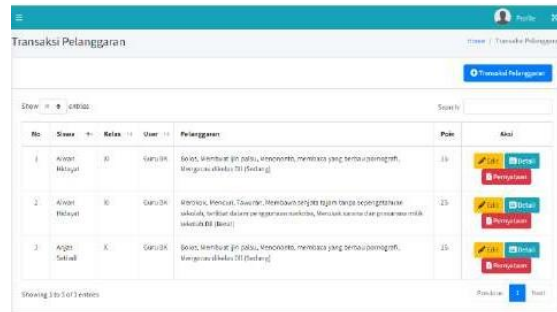


Figure 7. Student Violation Potential and Progress page

g. Violation Report Page

On this page there are reports of violations that have been committed by students and there are actions to search for data and download if the user wants to print the violation report. The exposure on the violation report page can be seen in Figure 8 below.

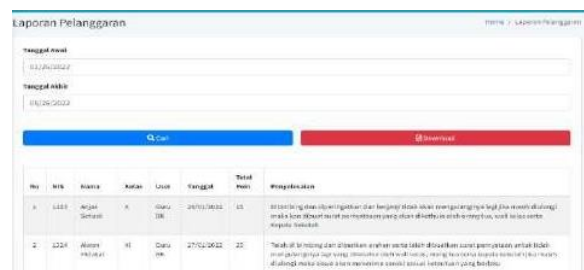


Figure 8. Violation Report Shown

h. Counseling Guidance Report Page

On this page there is a history of guidance counseling that has been carried out by students by searching through the start and end dates of guidance counseling. The presentation on the counseling guidance report page can be seen in Figure 9 below.



Figure 9. The Counseling Guidance Report appears

i. Violation Percentage Report page

On this page there is a report on the percentage of violations of each category of violations that have been committed by students. On this page, users can perform download actions. The presentation on the report page The percentage of violations can be seen in the following figure 10.

No	Kategori	Keterangan	Aksi	Jumlah Pelanggaran	Persentase
1	Mengeja	Terdapat dalam sekolah, tidak memakai seragam sekolah, dan tidak memakai sepatu. Selain itu, ada beberapa siswa yang tidak memakai seragam sekolah.	0	0	0%
2	Maling	Salah seorang siswa yang mengambil barang milik sekolah.	1	1	50%
3	Dorok	Salah seorang siswa yang mendorong atau menendang siswa lain.	1	1	50%

Figure 10. Violation Percentage Report page

j. Counseling Guidance Percentage Report page

On this page there is a report on the percentage of guidance and counseling from each category of guidance that has been carried out by students. On this page the user can perform the action of downloading the Guidance and Counseling Percentage report. On the Guidance Counseling Percentage report page, you can see in Figure 11 below.

No	Topik Bimbingan	Jumlah Pelanggaran	Persentase
1	Pribadi	1	50%
2	Kelompok	0	0%
3	Pribadi	1	50%
Total		2	100%

Figure 11. Counseling Guidance Presentation Report page

4. CONCLUSION

This research was successful and analyzed user needs to create guidance and counseling applications for vocational students, with nine application features that can assist BK teachers in managing student data, sanctions data, guidance and counseling data, student violation data, and violation reports and guidance and counseling reports that are used to check student progress and student potential. The test results indicate that all system features are valid and can function per user specifications. There is a report menu for student guardians to monitor the condition of their students at school. In this study, there are several weaknesses, namely (a) there is no specification of student potential, for example academic or non-academic potential (b) there is no real-time notification to student guardians if students commit violations (c) user experience testing has not been carried out to system users. Suggestions for further research are that there are blast messages to all guardians of students who commit violations either via WA or using sms gateway and there is a report menu for student guardians to check the condition of their students at school.

REFERENCES

- Adhitya, R., & Mirwansyah, D. (2022). Aplikasi Bimbingan Konseling Berbasis Web Di Smk Negeri 16 Samarinda. *Jurnal Informatika*, 1(2), 13–31.
- Alfiah, A., Bakri, A. A., Fatimah, F., Syahdan, R., & Rusman, H. (2023). CAPABILITY TO MANAGE FINANCIAL REPORTS FOR MSMES UTILIZING ACCOUNTING INFORMATION SYSTEMS. *Jurnal Ekonomi*, 12(02), 1356–1363.
- Ernawati, K., Nugroho, B. S., Suryana, C., Riyanto, A., & Fatmawati, E. (2022). Advantages of Digital Applications in Public Health Services on Automation Era. *International Journal of*

- Health Sciences*, 6(1), 174–186.
- Fauzi, A. A., Kom, S., Kom, M., Budi Harto, S. E., MM, P. I. A., Mulyanto, M. E., Dulame, I. M., Pramuditha, P., Sudipa, I. G. I., & Kom, S. (2023). *PEMANFAATAN TEKNOLOGI INFORMASI DI BERBAGAI SEKTOR PADA MASA SOCIETY 5.0*. PT. Sonpedia Publishing Indonesia.
- Halik, A. (2020). A counseling service for developing the qona'ah attitude of millennial generation in attaining happiness. *Journal of Advanced Guidance and Counseling*, 1(2), 82–100.
- Halik, A., & Rakasiwi, N. (2020). Efektivitas Bimbingan Kelompok Teknik Sosiodrama untuk Meningkatkan Kepercayaan Diri Siswa. *Consilium: Berkala Kajian Konseling Dan Ilmu Keagamaan*, 7(1), 32–44.
- Haq, M. S. (2022). *Implementasi sistem informasi manajemen dalam meningkatkan pelayanan pendidikan sekolah di masa pandemi covid-19*.
- Haq, M. S., Samani, M., & Hariyati, N. (2022). Android-Based Digital Library Application Development. *International Journal of Interactive Mobile Technologies*, 16(11).
- Hermanto, E., & Dwanoko, Y. S. (2019). Penerapan Model Sdlc Untuk Rancang Bangun Sistem Informasi Bimbingan Dan Konseling Berbasis Web. *Semnas SENASTEK Unikama 2019*, 2.
- Ibrahim, M. B., Sari, F. P., Kharisma, L. P. I., Kertati, I., Artawan, P., Sudipa, I. G. I., Simanihuruk, P., Rusmayadi, G., Nursanty, E., & Lolang, E. (2023). *METODE PENELITIAN BERBAGAI BIDANG KEILMUAN (Panduan & Referensi)*. PT. Sonpedia Publishing Indonesia.
- Idrus, A., Tukiyo, T., Rosmika, E., Sya'roni, M., & Hidayat, M. (2022). The Influence of The Leadership Style of The Head of Madrasah, Teacher Capabilities on Teacher Performance in Tsanawiyah Madrasah Hikmatul Amanah Mojokerto. *Edukasi Islami: Jurnal Pendidikan Islam*, 11(03), 675–690.
- Imaduddin, I., Putra, H., Tukiyo, T., Wahab, A., & Nurulloh, A. (2022). The Effect of Servant Leadership on the Quality of Education Through the Characteristics of Millennial Teachers. *Al-Tanzim: Jurnal Manajemen Pendidikan Islam*, 6(4), 1092–1102.
- Juwitaningrum, I. (2013). Program bimbingan karir untuk meningkatkan kematangan karir siswa SMK. *PSIKOPEDAGOGIA Jurnal Bimbingan Dan Konseling*, 2(2), 132–147.
- Krismona, E. B., Purwaningrum, R., & Surur, N. (2021). Pengembangan Aplikasi “Kawan SMK” untuk Meningkatkan Perencanaan Studi Lanjut pada Siswa SMK. *Counsellia: Jurnal Bimbingan Dan Konseling*, 11(1), 31–42.
- Pandawana, I. D. G. A., Radhitya, M. L., Sandhiyasa, I. M. S., & Bramstya, B. T. (2022). APLIKASI E-SEWA BARANG BERBASIS MOBILE. *Jurnal Krisnadana*, 1(3), 26–36.
- Putri, R. E., Yusman, Y., & Sari, I. P. (2023). Perancangan Sistem Informasi Bimbingan Dan Konseling Berbasis Website. *KOMIK (Konferensi Nasional Teknologi Informasi Dan Komputer)*, 6(1), 861–867.
- Rachmad, Y. E., Tampubolon, L. P. D., Purbaratri, W., Sudipa, I. G. I., Ariana, A. A. G. B., Faried, M. I., Atmojo, D., & Kurniawan, H. (2023). *Rekayasa Perangkat Lunak*. PT. Sonpedia Publishing Indonesia.
- Radhitya, M. L., Sudipa, I. G. I., Setiawan, I. P. H., Permana, I. P. H., & Putra, I. N. T. A. (2022). Sistem Pengambilan Keputusan Penentuan Jurusan Pada Jenjang Sekolah Menengah Atas Menggunakan Model Yager. *Jurnal Sistem Komputer Dan Informatika (JSON)*, 4(2), 280–287.
- Risdiansyah, D. (2017). Perancangan Sistem Informasi Bimbingan Konseling Berbasis Desktop pada SMA Kemala Bhayangkari 1 Kubu Raya. *Jurnal Khatulistiwa Informatika*, 5(2).
- Sari, M., & Fadilla, D. R. (2022). *Bahan Ajar Entrepreneur Counseling*.
- Sari, M., & Halik, A. (2022). HUBUNGAN PERMASALAHAN KONSEP DIRI REMAJA DENGAN PEMBINAAN ORANG TUA. *Jurnal Bimbingan Penyuluhan Islam*, 4(1), 18–29.
- Setiadi, B., Kraugusteeliana, K., Risdwiyanto, A., Bakri, A. A., & Arief, I. (2023). The Application of Delone and Mclean Framework to Analyze the Relationship Between Customer Satisfaction and User Experience of Mobile Application. *Jurnal Sistim Informasi Dan Teknologi*, 84–89.
- Setiawan, A. C., Haq, M. S., Katerina, E. I., & Wisesa, S. A. (2023). Pengembangan Electronic-Public Relation Melalui “MP Mobile Apps” untuk Optimalisasi Sistem Informasi. *JAMP: Jurnal Administrasi Dan Manajemen Pendidikan*, 6(1), 95–101.
- Setiawan, A. C., Haq, M. S., Khamidi, A., Putri, A. R., & Iswahyuni, D. L. (2022). Development of Digitalization of The “MP Digilib” Library System for Improvement of Academic Services. *JMSP (Jurnal Manajemen Dan Supervisi Pendidikan)*, 6(1), 1–11.
- Sofica, V., & Hidayat, D. (2018). Metode Waterfall Pada Aplikasi Bimbingan Konseling SMK Nurjamilah Bekasi. *INFORMATICS FOR EDUCATORS AND PROFESSIONAL: Journal of Informatics*, 2(2), 125–134.
- Sudipa, I. G. I., Cakranegara, P. A., Ningtyas, M. W. A., Efendi, E., & Wahidin, A. J. (2022).

- Penilaian Aspek Keaktifan Belajar Mahasiswa Menggunakan Metode ORESTE. *REMIK: Riset Dan E-Jurnal Manajemen Informatika Komputer*, 6(3), 436–447.
- Sudipa, I. G. I., Rahman, R., Fauzi, M., Pongpalilu, F., Setiawan, Z., Huda, M., Kusuma, A. S., Putra, D. M. D. U., Burhan, M. I., & Anzani, Y. M. (2023). *PENERAPAN SISTEM INFORMASI DI BERBAGAI BIDANG*. PT. Sonpedia Publishing Indonesia.
- Triyono, T., & Febriani, R. D. (2018). Pentingnya Pemanfaatan Teknologi Informasi oleh Guru Bimbingan dan Konseling. *Jurnal Wahana Konseling*, 1(2), 74–83.
- Tutik, T., & Rosadi, M. I. (2022). Rancang Bangun Aplikasi Tracer Study Alumni SMK Negeri 1 Sukorejo Berbasis Android. *Jurnal Krisnadana*, 2(1), 277–288.
- Udayana, I. P. A. E. D., Kherismawati, N. P. E., & Sudipa, I. G. I. (2022). Detection of Student Drowsiness Using Ensemble Regression Trees in Online Learning During a COVID-19 Pandemic. *Telematika: Jurnal Informatika Dan Teknologi Informasi*, 19(2), 229–244.
- Widodo, H., Sari, D. P., Wanhar, F. A., & Julianto, J. (2021). Pengaruh Pemberian Layanan Bimbingan dan Konseling Terhadap Komunikasi Interpersonal Siswa SMK. *Edukatif: Jurnal Ilmu Pendidikan*, 3(4), 2168–2175.
- Wijasena, A. C., & Haq, M. S. (2021). Optimalisasi sarana prasarana berbasis IT sebagai penunjang pembelajaran dalam jaringan. *Jurnal Inspirasi Manajemen Pendidikan*, 9(1), 240–255.
- Yahya, M. D., Suwarna, A. I., Ginting, D., Bakri, A. A., & Ramli, A. (2023). *The Relationship Between Learning Motivation, Academic Achievement, Student Perceptions And Teacher Performance Of High School Students*.