Student Counseling Information System Design Web Based Using CodeIgniter Framework (Study at Senior High School Plus Al-Amanah)

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Abstract

The administrative process of counseling guidance services at SMP Plus Al-Amanah is still done manually which causes data collection of information on students still using books and filing in the BK room cupboard, counseling guidance at SMP Plus Al-Amanah is also still inputting and reporting achievements as well as violations by committing a private call sent via social media chat that specifically makes students have to go to school without holding an official letter from the BK when getting a call so that parents/guardians are worried and doubtful when the child is called to school if without written evidence. This results in physical exhaustion for both the guidance counselor and the students and creates doubt and concern for parents and guardians of students. To optimize time and distance, judging from these problems, a counseling guidance system was made using the OOAD model. The counseling guidance information system for SMP Plus Al-Amanah, can be used to manage the process of recording user data involved in the information system (administrators, operators, guests), recording violation and achievement data, recording student biodata, BK services, and calling students is a guidance process counseling that has been carried out. In addition, this information system can be used and viewed by parents via the Web so that counseling and data related to students can be monitored and viewed properly.

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Keywords : *information system, counseling guidance, web*

INTRODUCTION

Education plays a crucial role in shaping the growth and development of the younger generation, who are seen as the nation's future. The scope of this involves overseeing behavioral development, material dimensions, and religious aspects, all of which will significantly influence their future trajectories. In the capacity of oversight, education not only imparts instructional content and assignments but also assumes the imperative role of being perceived as indispensable and of utmost importance in facilitating the cultivation of potential and self-actualization.

Academic guidance and counseling is a field within education that corresponds to the requirements for potential growth and self-formation. In education, providing guidance and counseling services plays a crucial role in addressing the mental and personal needs of students seeking consultations. This facilitates the development of students into proactive and innovative individuals in their everyday existence. Moreover, the collection and documentation of student-related information fall under the purview of guidance and counseling, enabling academic counselors to get insights into their students' academic and personal growth.

In the contemporary educational milieu, it is imperative to recognize the significance of guidance and counseling. SMP Plus Al-Amanah, an educational institution in the Bandung Regency, prioritizes guidance and counseling as

an academic discipline that facilitates personal development, moral growth, and realizing students' potential. This emphasis is supported by the Amanah Putra Foundation, which oversees the school's operations. Using data gathering, educators specializing in counseling can monitor the longitudinal growth of students enrolled in the SMP Plus Al-Amanah program.

Nevertheless, the exponential progress of technology has resulted in a substantial lag in the development of the guiding and counseling information system. The current technique of recording student information relies on manual processes, wherein records are stored and organized in the counseling room. Moreover, recording and disclosing accomplishments and transgressions necessitates the issuance of individualized invites through social media messaging platforms, giving rise to a scenario wherein children are compelled to attend school without formal proof upon being summoned. When children are summoned to school, the lack of written documentation raises apprehension and uncertainty among parents or guardians.

In addition, guidance counselors must employ formal correspondence when requesting the presence of students who are facing challenges or have committed infractions. However, it has been observed that SMP Plus Al-Amanah lacks official letters that are generated directly from the counseling department (Ahmad et al. at SMP Plus Al-Amanah, 2021).

Hence, designing a web-based application system that streamlines inputting information, collecting data on potential and self-development, documenting achievements and violations, and allocating points to pupils is imperative. Implementing this approach would enhance the efficacy and objectivity of the advising and counseling activities conducted at SMP Plus Al-Amanah.

RESULT AND DISCUSSION

a) Systems and Information

In his book "Concept of Information Systems," Jeperson Hutahaean (2015:2) elucidates that a system can be defined as a collection of interconnected procedures collaborating to execute tasks or accomplish predetermined goals.

Information refers to data that has undergone processing to enhance its use and significance for the individuals or entities receiving it. Data is the primary source of information, encompassing factual details about events and tangible entities. According to Jeperson Hutahaean (2014:9), events are incidents that occur at particular points in time.

b) Website

Hakim Lukmanul (2004) states, "A website is an internet facility for connecting documents locally and remotely. Documents on a website are called web pages, while links on a website allow users to move from one page to another (hypertext) between pages stored on the same server or servers worldwide."

c) Guidance Counseling

According to Rochman Natawidjaja (1978), "A process of providing assistance to individuals that is carried out continuously, so that the individual can understand himself, so that he is able to

direct himself and can act naturally, in accordance with the demands and circumstances of the school environment, family, community, and life in general."

d) CodeIgniter Framework

According to Budi Raharjo (2015: 3), "CodeIgniter is a web framework for the PHP programming language, a toolkit aimed at people who want to build web applications in the PHP programming language."

System Analysis and Design

a) Business Process Analysis

The following is the flow of business processes in the Counseling Guidance Information System, starting from the BK service by the admin until parents and students can access it.

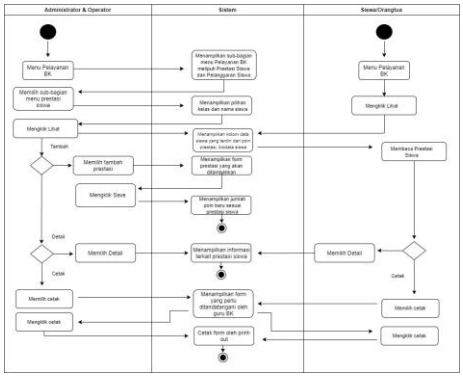


Figure 1. Business Process Analysis

b) Analysis of the Proposed System

This analysis is in the form of system design based on use case. Below is the actor definition and use case definition.

i. Defining Actors

No.	Aktor	Deskripsi
1.	Guru BK / Administrator	Sebagai orang yang memiliki akses dalam sistem untuk dapat melakukan pengolahan data master, kesiswaan, data guru dan wali murid, pelayanan bk, mengelola prestasi dan pelanggaran siswa dan mengelola panggilan siswa
2.	Operator	Sebagai orang yang memiliki akses dalam sistem untuk dapat melakukan pengolahan kesiswaan, pelayanan bk, mengelola prestasi dan pelanggaran siswa dan mengelola panggilan siswa.
3.	Siswa / Orang Tua	Sebagai orang yang memiliki akses untuk melihat kesiswaan, mengelola pelayanan bk dan melihat panggilan siswa

ii. Definition Based on Usecase

No.	Aktor	Deskripsi
1.	*Login*	Memungkinkan aktor untuk masuk dan mengakses layanan sistem
2.	Kelola Data Master	Adalah bentuk umum dari proses pengelolaan yang khusus dikelola oleh Administrator yang meliputi data jabatan, data tahun ajaran, data pelanggaran. Adapun mengelola kelas, pelanggaran, prestasi, kategori pelanggaran dan Laporan BK.
3.	Kelola Kesiswaan	Adalah bentuk umum dari proses pengelolaan kesiswaan yang meliputi kelas jurusan, siswa, dan absensi.
5.	Kelola Pelayanan BK	Memungkinkan Administrator dan Operator mengelola data prestasi siswa dan data pelanggaran siswa
6.	Kelola Penilaian Pribadi Siswa	Memungkinkan Administrator dan Operator menilai seberapa banyak penilaian perilaku, kebiasaan, dan kepribadian siswa terpenuhi selama disekolah
7.	Kelola Pemanggilan Siswa	Memungkinkan Administrator dan Operator mengelola pemanggilan siswa dan dilihat oleh Siswa / Orang Tua.
8.	*Logout*	Memungkinkan aktor untuk keluar dari sistem yang sedang berjalan.

a) New System Proposal

i. Use case diagram

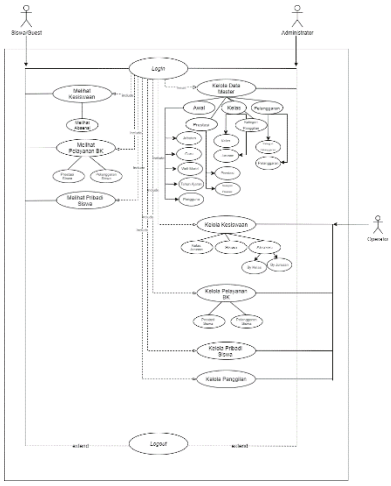


Figure 3. Use case Diagram

ii. Scenario Table

Usecase Spesification	
Usecase	Melakukan *Login User*
Aktor	Administrator, Operator, Siswa / Orang Tua
Main Flow Of Event	
Pre-Condition	*User* tidak bisa mengakses sistem
Actor Action	***Response System***
1. Membuka Sistem	2. Menampilkan halaman utama
3. Memilih menu login	4. Menampilkan halaman login
5. Mengisi *username* dan *password*	6. Memverifikasi *username* dan *password*
	7. Menampilkan dashboard sebagai halaman utama
Exceptional Flow Of Event	
	1. Jika *username* dan *password* terverifikasi, maka secara otomatis akan dapat mengakses halaman utama
	2. Jika username dan password tidak terverifikasi, maka sistem akan menampilkan peringatan untuk memasukkan ulang password dengan benar

iii. Activity diagrams

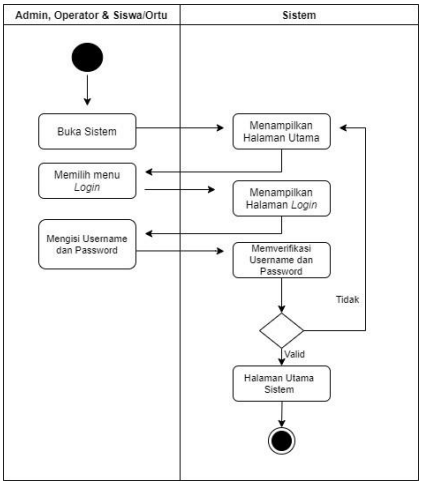


Figure 4. Activity Diagram

b) System Design

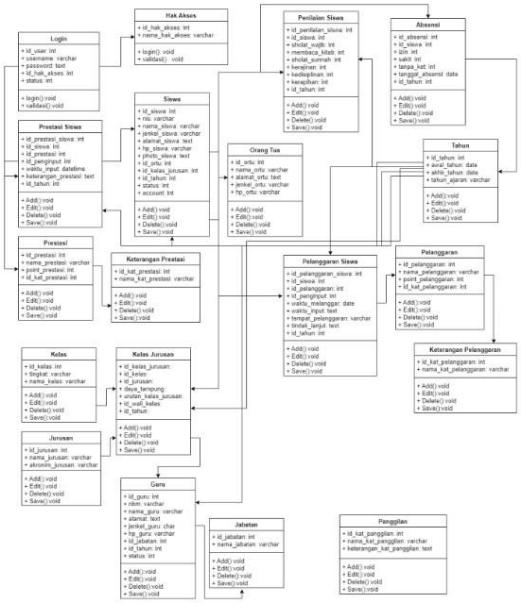


Figure 5. System Design

i. Database Design

Field	Type	Size	Primary
id_user	Integer	11	Key
Username	Varchar	20	
Password	Text		
id_hak_akses	Integer	1	
Status	Integer	1	

ii. Interface Design

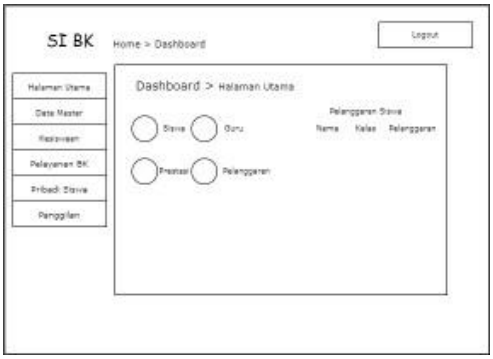


Figure 6. Interface Design

System Implementation

The system implementation stage is the stage of describing an application system so that the application system is ready to operate.



Figure 7. Login Page Display

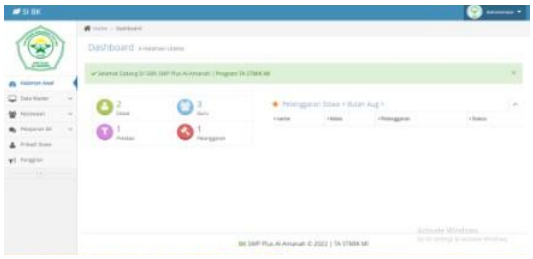


Figure8. Home Page/Dashboard Display

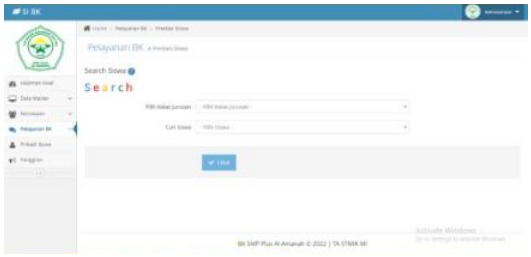


Figure 9. BK Service Display

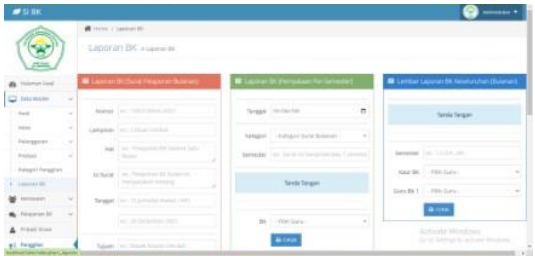


Figure 10. BK Report Page Display

CONCLUSION

The conclusions that can be drawn from this research are:

1. The Guidance and Counseling Information System is packaged to help prevent manual bookkeeping so that schools and counseling guidance teachers no longer recap data with books so that wasted time can be used better.
2. On the counseling guidance website, there is an official letter feature so that the BK no longer makes calls via chat
3. The Information System makes it easy for BK teachers and school operators to collect student data so that the school no longer experiences problems or the system is not fully computerized

As for some suggestions that can be used as input and consideration for further research:

1. The author hopes this information system can be used as well as possible by the place.
2. Homeroom teachers and school operators must use this information system to take advantage of the time to collect information.
3. Users related to this information system need to study this system in detail and, if necessary, be given system maintenance training.
4. Even though the computerized system has been implemented, it is better if the guidance and counseling teacher still has a backup file to avoid something unwanted in the system, for example, by keeping data related to counseling in hard copy form produced by this system.

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