
Satisfaction Level of the Academic Community with the Implementation of WEB-Based SIAKAD IAKN Tarutung (Comparison: Implementation of SIAKAD UIN-Sumatera Utara)

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Article

Satisfaction Level of the Academic Community with the Implementation of WEB-Based SIAKAD IAKN Tarutung (Comparison: Implementation of SIAKAD UIN-Sumatera Utara)

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Abstract: SIAKAD is a system developed to meet the needs of the academic community as a whole. Implementation of SIAKAD is based on three satisfaction indicators: access speed, ease of access and timeliness. Qualitative and quantitative methods on SERVQUAL analysis. Then analysed with statistical data as a comparison of satisfaction implementation in each academic community in IAKN and UIN universities. This study shows that the purpose of satisfaction affects the value of the academic community in providing an excellent and destructive impact on the value of work in higher education as well as the involvement of various elements in higher education to determine how the academic information system (SIAKAD) should be built to meet the expectations of its users and following SIAKAD standards in general in higher education.

Keywords: SIAKAD; implementation; SERVQUAL; satisfaction; academic community

1. Introduction

Teaching and learning activities by utilizing new media such as the internet are things that must be applied by every member of the academic community in the current digital era, the presence of new media will undoubtedly optimize the teaching and learning process during lectures as well as a source of new knowledge for the academic community. With the presence of new media, each institution has a vast opportunity to design and develop an appropriate and valuable academic information system (SIAKAD), with the hope that the academic information system (SIAKAD) built can produce a data management system that honestly answers needs the academic community in terms of data reporting, information management, data processing continuous. As an information media, the website has advantages in terms of content, variety of signals and quick delivering feedback to its users. (Nama & Muludi, 2018) mention is SIAKAD provide updates on every lesson or information related to curriculum, KHS, KRS and lecture schedules.

With the website and academic information system and its various features, students can assess the extent of the existence and readiness of the campus in facilitating students regarding the need for accurate academic information and data. (Sun & Shen, 2017) It is imperative to encourage optimal learning that can make students easy to access learning through the SIAKAD system. Student perceptions also affect their satisfaction with the website used in higher education. Web-based educational information systems have a decisive role in providing information references for prospective students, prospective relationships and the public. Information disclosure, alum achievements, ongoing or ongoing student activities, community service and social actions carried out by students where the information is loaded or published on the website will open up opportunities for cooperation with business people to build and plan various activities with students or alums of IAKN Tarutung. Implementation is one of the factors that can encourage the creation of this.

The results of observations in the field show that the academic community does not fully understand the process of using SIAKAD and that the currently developed system does not meet the

needs of the academic community as a whole. Minimal socialization related to usage procedures, the required user guide has not been distributed thoroughly, besides that the unavailability of technical support is an obstacle at this time. Therefore, this research seeks to find out what factors affect the level of satisfaction of the academic community so that the academic information system implemented at IAKN Tarutung can run well and provide references for databases and academic information managers at IAKN Tarutung. Based on the description above, this is the background for the authors to research the Satisfaction Level of the Academic Community on the Implementation of Web-Based SIAKAD IAKN Tarutung.

2. Materials and Methods

The research method used in this research is quantitative & qualitative research methods with a descriptive approach. The research aims to obtain results with survey data collection techniques in the field. The research involved the academic community at IAKN and UIN North Sumatra. The collected data is classified according to its type, nature, or condition. Once complete, conclusions are made from the findings (Arikunto, 2010).

Tabel A. *Demographic profile of respondents.*

Research Time	Gender	Items	Total Responden	
Agustus-October 2022	Man	Lecturer	IAKN 10	
			UIN 10	
	Woman	Students	IAKN	± 51
			UIN	± 149

The number of samples in the study classified from student and lecturer data. Randomly selected from several faculties. The largest number of participants in this study were students because of the level of use of the website that supports the learning process during lectures. This research process was carried out in the odd semester at the academic level (2022/2023).

The location of this research was carried out in the environment of the Tarutung State Christian Institute of Religion and then, as comparison data at the State Islamic University of North Sumatra. The consideration of researchers taking the research location is due to the use of the website as one of the academic activities routinely used by the academic community in obtaining information related to the teaching and learning process

Data collection involves obtaining empirical data through respondents using certain methods. Questionnaires were distributed using questionnaires to students and lecturers

The questionnaire was developed to measure the satisfaction of the academic community by using the IAKN and UIN web to access e-learning for teaching, study program information, and so on. The questionnaire covers the satisfaction of the academic community with the following variables: Interaction with e-learning, instruction, techniques, and website improvement. Each item has a five-point scale: Very Satisfied (5 points), Satisfied (4 points), Neutral (3 points), Dissatisfied (2 points), and Very Dissatisfied (1 point).

Delone and Mclean's SERVQUAL supports the grouping of the three. This section discusses various aspects of the research design used in the research, which is documented in the form of accurate data. Data collection and subsequent analysis to achieve the research objectives. This research uses qualitative methods for testing SERVQUAL groups in a conceptual model. This approach uses top-down deductive, theoretical framework formation and hypothesis development.

Primary data was collected through a questionnaire survey among respondents identified as given (see appendix 1). The questionnaire survey had multiple choice answers in the demographics section and closed-ended questions with a 5-point Likert scale. The questionnaire survey was developed in 3 different sections. In Section 1, the researcher introduced himself and the purpose of the study. Section 2 consisted of demographic items of the respondent profile and the survey based on constructs related to SIAKAD service quality discussed in Section 3. The instrument measurement was done by distributing questionnaires focusing on the subsections "Ease of Access, Speed of Access,

and Timeliness". The questionnaire was based on comparative study data at UIN obtained from \pm 160 respondents randomly selected from faculties at UIN and IAKN.

3. Results

There were several challenges faced during the implementation of this research program. Therefore, the researcher confirmed the level of challenges faced as a result of the level of satisfaction with implementing the website.

The indicators tested are in the Table 1 shows the level of satisfaction of lecturers on the implementation of website satisfaction, and the level of ease of access obtained a score of 62%, this is included in the neutral criteria, and there are no difficulties on the IAKN website in accessing the system.

Table 1. implementation of the use of data on IAKN Tarutung lecturers.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0 %
		Satisfied (4)	37	148	43 %
		Neutral (3)	35	105	31 %
		Unsatisfied (2)	42	84	24 %
		Very Unsatisfied (1)	6	6	2 %
		Total		120	343
	Maximum Score		550		
	Mean Percentage		62 %		

Table 2. declining results in the quality of access speed.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0 %
		Satisfied (4)	14	56	19 %
		Neutral (3)	47	141	49 %
		Unsatisfied (2)	44	88	30 %
		Very Unsatisfied (1)	5	4	1 %
		Total		120	343
	Maximum Score		550		550
	Mean Percentage		62 %		

From the results of the speed of accessing IAKN, lecturers obtained a relatively low score at the level of dissatisfaction or low criteria with an average number of 53% satisfaction in accessing the university website. Shows a decreasing level of the results of timeliness in using SIAKAD. (See Table 3)

Table 3. decreasing level of the results of timeliness in using SIAKAD.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0 %
		Satisfied (4)	15	56	19 %
		Neutral (3)		141	49 %
		Unsatisfied (2)	37	88	30 %
		Very Unsatisfied (1)	2	4	1 %
		Total		120	343
	Maximum Score		550		550
	Mean Percentage		62 %		50 %

The lowest score is obtained in the satisfaction of the academic community on the timeliness of accessing the website, with meager results from the ease of access. Level 50% is a weakness that makes the website less updated, for example, regarding loading time in processing data searches. Meanwhile, at the student level, the existence of a website is routinely used for lecture needs, as seen in Table 4.

Table 4. Statistical Data 1 of IAKN Tarutung Students.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0 %
		Satisfied (4)	168	56	19 %
		Neutral (3)	49	141	49 %
		Unsatisfied (2)	54	88	30 %
		Very Unsatisfied (1)	15	4	1 %
		Total		120	343
	Maximum Score		550		
	Mean Percentage		62 %		34 %

Table 5. Statistical Data 2 of IAKN Tarutung Students.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0 %
		Satisfied (4)	153	632	66 %
		Neutral (3)	61	182	19 %
		Unsatisfied (2)	64	128	13 %
		Very Unsatisfied (1)	8	8	1 %
		Total		120	343
	Maximum Score		550		
	Mean Percentage		62 %		34%

Table 6. Statistical Data 3 of IAKN Tarutung Students.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0 %
		Satisfied (4)	146	592	64 %
		Neutral (3)	68	204	22 %
		Unsatisfied (2)	54	108	12 %
		Very Unsatisfied (1)	18	18	2%
		Total		120	343
	Maximum Score		550		
	Mean Percentage		62 %		33 %

It can be concluded from the category of students having inadequate scores on implementing SIAKAD satisfaction in higher education.

In searching for information, the underlying thing is curiosity about higher education developments for students in their hometowns. The most frequent access to information they do is to check the latest information on the SIAKAD web. The existence of SIAKAD is often used because of the academic community's needs in teaching and learning. Security management and service requests are things that often occur in accessing SIAKAD. Frequent errors in the SIAKAD system so that the implementation of its use experiences dissatisfaction due to slow problem handling. In timeliness results, reaching a score of 33% is the lowest of the three selected items.

The first and second items show a stable value, at a value of 34%. In comparison, the lowest value is the percentage of timeliness, with an acquisition of 33%. The three items in the category above illustrate the low quality of student satisfaction with the use of the website at the agency. This data shows the academic community's satisfaction level in the SERVQUAL model with less service. The acquisition of data from lecturers and students has a similar level on the timeliness item, which is in the lowest position compared to the other two items. Socialization regarding the Implementation of Web-Based SIAKAD IAKN Tarutung still needs to be done. The SERVQUAL model explains the three items of Ease of Access, Speed of Access, and Timeliness; shows the context of analysis in determining service quality indicators has a level of the consequence of the value of users/customers in visiting the website.

Table 7. UIN Lecturer Statistical Data Group 1.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0%
		Satisfied (4)	102	408	95%
		Neutral (3)	7	21	5%
		Unsatisfied (2)	1	2	0%
		Very Unsatisfied (1)	0	0	0%
		Total		120	343
	Maximum Score		550		550
	Mean Percentage		62 %		78 %

Table 8. UIN Lecturer Statistical Data Group 2.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0%
		Satisfied (4)	105	420	97%
		Neutral (3)	5	15	3%
		Unsatisfied (2)	0	0	0%
		Very Unsatisfied (1)	0	0	0%
		Total		120	343
	Maximum Score		550		550
	Mean Percentage		62 %		79 %

Table 9. UIN Lecturer Statistical Data Group 3.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0%
		Satisfied (4)	102	408	95%
		Neutral (3)	105	420	97%
		Unsatisfied (2)	5	15	3%
		Very Unsatisfied (1)	0	0	0%
		Total		120	343

In searching for information, the underlying thing is curiosity about higher education developments for students in their hometowns. The most frequent access to information they do Comparison to other universities based on the results of the statistical analysis above concluded the results obtained the highest value at 79% on two items and the first item at 78%, which still shows a significant value of the level of satisfaction that is "satisfied" with the implementation of the website. Each individual's needs are different from the others. In general, the academic community already

understands what is expected in each of the needs of implementing the SIAKAD website. Even the website set at a university has certainly set a good standard by starting socialization at the beginning of the performance of using the website. However, several factors affect the level of satisfaction of the academic community.

The factors include: Teaching quality refers to the extent to which users consider the method delivered in the form of socialization of website use to be of high quality. If the academic community believes in the quality of the website offered and the way it works, it makes it easy for users; they tend to feel satisfied (Tessema & Yu, 2012) However, the quality of instructions in the field tends to be unsatisfactory. The lack of thorough socialization in information related to website socialization can make website users in higher education misunderstand the use of SIADAD. The importance of responsiveness from academic community actors also includes compatibility in managing the system in SIAKAD. Then the quality and quantity of human resources in universities are limited in providing socialization and practice to the academic community. Inseparable from the role of the academic community, some are also not ready to accept cultural changes in the world of education, which invites the world of information and communication technology to become the main access to the learning and teaching process. Lack of satisfaction with the implementation of SIAKAD also occurs due to an inadequate operational budget for updating the website system. Adequate facilities and infrastructure are not yet available, so the IT master plan does not maximize its performance.

Compared with UIN to IAKN, both universities have positive and negative values towards SIAKAD performance and perspective; users' satisfaction also varies depending on what they access. Because both have different SIAKAD displays. And, of course, the implementation of user satisfaction also varies.

Table 10. UIN Lecturer Statistical Data Group 1.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0%
		Satisfied (4)		408	95%
		Neutral (3)	0	420	97%
		Unsatisfied (2)	393	15	3%
		Very Unsatisfied (1)	1230	0	0%
		Total			120
		Maximum Score			550
		Mean Percentage			62 %
					78 %

Table 11. UIN Lecturer Statistical Data Group 2.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0%
		Satisfied (4)		408	95%
		Neutral (3)	0	420	97%
		Unsatisfied (2)	664	15	3%
		Very Unsatisfied (1)	962	0	0%
		Total			120
		Maximum Score			550
		Mean Percentage			62 %
					78 %

Table 12. UIN Lecturer Statistical Data Group 3.

Item	Total Item Score	Score	N item	Total Average	Percentage
Ease of Access	11	Very Satisfied (5)	0	0	0%
		Satisfied (4)		408	95%
		Neutral (3)	0	420	97%
		Unsatisfied (2)	664	15	3%
		Very Unsatisfied (1)	962	0	0%
		Total		120	343
	Maximum Score		550		550
	Mean Percentage		62 %		78%

Data on college students vary compared to the implementation of use by other academicians, in this case, teachers or lecturers. While significant results are displayed by the data of each lecturer at the college, the results above with the most prominent complaint is the ease of accessing with a score of 45% compared to another college with the lowest score of 33%. Ease of use negatively affects the use of SIAKAD. Perceived ease of use or ease of operation of SIAKAD does not facilitate student lecture activities such as delivering less timely information. The availability of incomplete KHS and KRS online, the process of SIAKAD online grade information that experiences system errors in accessing and network difficulties when accessing SIAKAD anywhere. Productivity in the SIAKAD maintenance development application, which is still inadequate, makes SIAKAD not a support system within the academic community. The 45% score is the lowest respondent result on SIAKAD data accessibility which still needs evaluation in maintaining the system so that SIAKAD is useful for the academic community so that every complaint can provide answers (responsibility), (answerability) and (liability). The accessibility displayed by SIAKAD is presented on target. It can identify the needs of the academic community supported by information directed on the display menu, and there are no changes at any time without notice. In addition, SIAKAD can be a maximum web system in controlling academic activities in the university environment.

4. Discussion

Authors should discuss the results and how they can be interpreted from the perspective of previous studies and of the working hypotheses. The findings and their implications should be discussed in the broadest context possible. Future research directions may also be highlighted.

4.1. Information motive

The need for information updates makes students' goals to see the developments in higher education. For example, the need for what courses will be opened next semester and filling out study plan cards that still need to be assisted by several college admins because access to filling out KRS for each student still lacks the "fill in yourself" feature on the SIAKAD display. So that the need for taking courses is the college's responsibility, it is hoped that students will not be fooled into taking courses. The most frequent motive is the information about job vacancies for students on the SIAKAD page.

4.2. Number of visits

The number of visits affects the information sought by users or the academic community that suits their needs. Ease of browsing the navigation menu available in SIAKAD. And the information on the SIAKAD page provides up-to-date information every day. However, several complaints often occur in SIAKAD because the timelessness of SIAKAD is not responsive enough to receive complaints from users. One of them is an error in the system when the SIAKAD page is opened. Information that is updated late in SIAKAD. The changes in the KRS or KHS filling schedule change at any time. The decline in the quality of SIAKAD impacts visits made daily on the SIAKAD web. It makes SIAKAD only used temporarily because the quality management of SIAKAD still needs to be addressed.

4.3. Satisfaction with the Use of SIAKAD

Academic (SIAKAD) to produce targeted and transparent information is often used in higher education needs. Using the SIAKAD website with information technology is very important to serve information needs in a timely (fast), accurate, and targeted (relevant) manner. (Maharsi, S. (2000).). SIAKAD is used in the management of education programs, and this is an academic service that is always used in delivering information and communication to the entire academic community. However, this academic service is often part of making the academic community present factors that trigger dissatisfaction with the use of SIAKAD. Salas-Rueda, R. A. (2020), Lecturers in the learning process need to develop technological and pedagogical competencies to achieve success Incorporating E-learning methods in the teaching-learning process with SIAKAD as a connecting tool between lecturers and students.

In this research, SERVQUAL is an important part of analyzing every need of the academic community in using SIAKAD, Buttle, F. (1996) SERVQUAL can provide negative and positive technical, functional and reputational assumptions, even criticism of a system and focuses on user perceptions. Starting from ease of access, speed of access, and timeliness of using SIAKAD in academic community activities. Jabbar, M. N., Hashmi, M. A., & Ashraf, M. (2019) state user satisfaction is essential for educational institutions' development; adequate service quality can provide quality services. Service quality creates an interaction between the user and the quality of the college. SIAKAD provides E-Learning to support education and teaching with an online system. Suhandi, et.al (2022), Emphasizes that the online learning experience during the pandemic involves students interacting with lecturers. SIAKAD is a website helping to provide teaching information through E-learning to continue to improve learning management. Khalid, M. N., & Quick, D. (2016) mention that student satisfaction is defined as "an emotional response that can be caused by products, services, that support to create a comfortable learning environment, such learning online course. The institutions should be to meet the needs of their students. It is consistent with our research findings, which added that it significantly influences student satisfaction in using SIAKAD.

4.4. Ability to solve problems

The level of satisfaction of the academic community can be seen from the acquisition of each participant's score in this study. It is one measure of display quality covering the needs of the academic community. Its relationship with satisfaction affects the results of implementation, which form the complaints of each individual who feels it. The need for the ability to solve problems found is influenced by the reliability and responsiveness of HR performance of employees at all levels so that this situation can find a solution. The level of complaints in the academic community can lead to poor service perceptions and negative values in an agency (Ceylan & Ozcelik, 2016). Therefore, superior service values are driven by technological support to improve service quality. Low service affects the assessment results from 33%-79% of the total 100% superior data acquisition results. Alves, H., & Raposo, M. (2010) The quality of the decrease or increase in the results of higher education data is influenced by elements including speed and ease of access, and timeliness is the result of the implementation of satisfaction that forms the image of higher education in the application of SIAKAD.

4.5. Service Quality and the Indicators of Public Service Quality

Service is an essential factor in increasing satisfaction. Service quality can affect the level of trust and loyalty of a user. It is in line with Tjiptono (2012) Also argue that service quality is a dynamic situation closely related to products, services, existing resources, processes, and environments that can at least meet or exceed the expected service quality. Service quality is measured through several parameters commonly referred to as service quality dimensions: reliability, responsiveness, assurance, empathy, and tangibility (website) Sukesu, S., & Yunaidah, I. (2020). Loyalty is students' satisfaction is also considered because SIAKAD services' performance dramatically affects their

emotions about the satisfaction of using SIAKAD in their daily lives at university. Student perceptions can show high or low university loyalty to users Brown, R. M., & Mazzarol, T. W. (2009).

In contrast to the needs experienced by the academic community at UIN as a measure of satisfaction in the implementation of website use, the results showed a negative gap between user expectations and perceptions of service quality at the agency. Of the three items, there are only a few positive gaps, followed by an average gap that is still negative or the value is relatively low, like the percentage of ease of access for students in Table 5. The low level of satisfaction with a percentage of 45%. Furthermore, the speed of access and timeliness occupy the same percentage of 48%. From the results of satisfaction obtained from the respondents of each college, the comparison with UIN to IAKN colleges is not much different from the level of satisfaction felt by each academic community of indicator.

The satisfaction level affects each academic community's factors; on the academic services displayed on SIAKAD, the productivity of developing system maintenance services needs to be considered. The quality of the information in the SIAKAD display menu is easy to understand and access, so the number of visits to the website will affect the quality and quantity of users of SIAKAD. (Ismail, et.al, 2021) that SIAKAD is a display that aims to benefit users in all situations. The quality of services that faculty and students use is a measure of the quality for identifying the strengths and weaknesses in higher education institutions. The survey conducted in this study of the academic community helped researchers improve the shortcomings of SIAKAD. SERVQUAL model tests satisfaction with various aspects; poor service quality can affect the popularity of the university. The effect will not be fast but relatively slow Akhlaghi, E., Amini, S., & Akhlaghi, H. (2012). The dissatisfaction of the academic community with SIAKAD services needs to be considered again; every feedback from the survey becomes a benchmark for improving the slow SIAKAD system, even though SIAKAD is very important to use in the teaching and learning process. User expectations that can facilitate everything using SIAKAD will affect their psychology towards using weak SIAKAD.

5. Conclusions

This study concludes that, although many factors influence satisfaction with SIAKAD web user implementation, the eleven question-three items proposed on the questionnaire were important and correlated positively and negatively with satisfactory outcomes with the academic community. The findings from our analysis can serve as part of the planning process at institutions/colleges when asked to evaluate the effectiveness of institutions at colleges, departments, and study programs on the website. Colleges or agencies must demonstrate the effectiveness of their programs through reviews to receive support from the academic community on any website usage.

This analysis provides the college with information on which areas to focus on for evaluation and improvement purposes to realize the greatest gains in the satisfaction level of using the SIAKAD website. Furthermore, areas with significantly lower satisfaction levels can be further examined to determine the source of dissatisfaction, and an action plan for improvement can be developed. Administrators, faculty, students, and the review team will want and need evidence or results at the highest and lowest levels each year from the academic community.

Given the need to determine the satisfaction of the academic community with higher education, institutions should continue to conduct, analyze, store, and utilize satisfaction surveys. Survey results should be shared with relevant agencies, departments, and students so that plans or actions deemed lacking can be made for continuous improvement. Satisfaction with services can influence the public in accessing the website, for example, by looking for information related to job vacancies or new student admissions every year. This study expands previous research on the factors that influence student satisfaction by focusing on the level of implementation of satisfaction with the use of the SIAKAD website. It adds to the literature on the satisfaction of the academic community; in this case, empirically testing these three items with eleven types of questions per item affects the satisfaction of the academic community using a sample size collected over time. Therefore, our study has important theoretical and practical implications.

We conclude from our findings that knowing the level of satisfaction of the academic community is necessary but not sufficient. It is necessary to identify factors and the extent to which they affect the satisfaction of the academic community with the use of the SIAKAD website in accessing E-learning, KHS, KRS, and so on. This study shows the purpose of satisfaction affects the value of the academic community in providing a good and bad impact on the value of work in higher education. We hope that for further research, the study of this research can develop even better.

6. Suggestions

This section is not mandatory but may be added if there are patents resulting from the work reported in this manuscript.

Based on the results of the research and discussion that researchers have carried out, several things must be considered, among others:

1. The academic information system (SIAKAD) that has been developed needs to update the system based on user needs so that the entire academic community can optimize the use of SIAKAD.
2. It is necessary to involve various elements in higher education to determine how the academic information system (SIAKAD) should be built to meet the expectations of its users and follow SIAKAD standards in general.
3. Increased awareness by the academic community to actively provide input and evaluation of SIAKAD needs to be done regularly.
4. In the future, socialization of the use of the system needs to be carried out effectively so that users (users) of the academic information system (SIAKAD) can utilize it optimally.

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