

Online Information Service Model at the Distance Learning Program Unit of Open University

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ABSTRACT

This study aims to produce a UT student service system design at the Distance Learning Unit (UPBJJ) by applying Information and Communication Technology (ICT). This research is a research and development using the method developed by Borg and Gall. In the first year, field studies, data analysis, and design development will be carried out. In the second year, application development and field trials were carried out. The results of the study found that the majority of respondents had access. Most respondents had no difficulty accessing THE services, TMK, online tutorials and web tutorials. The limitation of this research is that some of the available information does not match the respondent's needs and is difficult to reach. There is no problem with UPBJJ's internal management. The recommendations given are to adjust the organizational structure of the Distance Learning Unit (UPBJJ) and revise information about THE services, TMK, online tutorials, and web tutorials so that they are easily accessible and the contents can be used as guidelines for students in accessing Open University Services (UT). This research can be developed by focusing on public trust in distance learning.

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1. INTRODUCTION

In various literatures, distance learning and online are dynamic concepts with several interpretations. Some literature mentions that distance learning characterizes digital learning with unpredictable results, unplanned and implicit processes (Adedoyin & Soykan, 2020; Gonçalves et al., 2020; Sulisworo et al., 2020) utilizing many types of technical devices such as smartphones, tablets, computers and others. Online learning is the use of the internet and several other important technologies to develop materials for educational purposes, instructional delivery and program

management (Hasibuan & Nugroho, 2017). Based on various studies realized during 2020, Zoom, Microsoft Teams, and Google Classroom are the main platforms used for digital transformation in teaching (Atlam et al., 2022).

Digital transformation is not new and has been with higher education institutions for several years now (Lata & Chatterjee, 2022; Leszczyński et al., 2018). Digital transformation of Higher Education Institutions is a topical issue that several educational stakeholders must consider, the ability to apply ICT in every area of life is at an increasing level, thus universities must be able to carry out the task of preparing professional potential to be able to face challenges and provide solutions (Bond et al., 2018; Tungpantong et al., 2021) and this transformation has suggested the integration of continuous management to be able to adapt to the modifications imposed as a result of new technologies (Abad-Segura et al., 2020) and the recent pandemic. Digital transformation in the context of higher education institutions can be considered the sum of all digital processes needed to realize a transformation process that provides opportunities for universities to apply digital technology optimally (Education et al., 2018). This process also consists of adequate strategic preparation, trust building, thought in process, incorporation and strengthening of all parties involved, separate, collaborative and organizational knowledge (Determinants et al., 2020). Teo et al. (2020) argues that the contemporary transformation will be seen as a revolutionary modification in the specification of higher education as a process and as an institution in the next 50 years because the transformation has moved face-to-face teaching programs using objectivist teacher-centered teaching methods, to thousands of children, provincial universities and domestic to online and hybrid programs applying digital technologies enhance constructivist, learner-centred, cooperative pedagogy for several hundred "mega-universities" functioning worldwide. The researchers add that online learning is a new social process that has garnered momentum as a replacement for traditional face-to-face classes, but viewed from the perspective of a replacement process that has been labeled a disruptive process. The Covid-19 pandemic initiated the digital transformation of higher education, and as a result of the crisis brought on by the Covid-19 pandemic, novelties in higher education that usually take years due to different managerial regulations are presented quickly in a limited number of days (Strielkowski, 2020) and this has also turned the branding of online learning as a disruptive process into "messiah" status.

When assessing assumptions surrounding the digital transformation of higher education institutions, Jones et al. (2021) provides five general assumptions that are considered more of a barrier to the digital transformation of higher education institutions than their contribution to its realization and these assumptions are related to 1) change, 2) speed, 3) technology, 4) competence and 5) financing. Digitization in higher education should not be called e-learning because online learning is only one of several features of the digital transformation of higher education institutions. Online learning is the educational use of technological devices, tools and the internet (Beinicke & Kyndt, 2020). Chen (2020) adding that the continuous improvement in technological innovation and internet accessibility has increased motivation to learn online since the beginning of the millennium, however Joshi et al. (2020) concluded that the achievement of online learning is still debated because it causes no face-to-face relationship between students, students and instructors. distinguish adequately planned online learning experiences from courses presented online in response to a crisis. These researchers went so far as to refer to online education during this pandemic as "emergency remote teaching" because the latter is the opposite of quality or effective online learning.

Effective online education consists of online teaching and learning, leveraging several research works, principles, prototypes, theories, ethics, and assessments of benchmark concentration on quality online course design, teaching and learning (Bozkurt & Sharma, 2020; Hodges, 2020) because it has been confirmed that effective online learning is a by-product of careful instruction design and planning with the application of organized models to design and develop learning (Valverde-Berrocoso et al., 2020). Instructions in the absence of careful design and development of processes in the migration process gave rise to a rejection of the contemporary online educational experience during this pandemic as effective online education but not as emergency distance teaching (Bozkurt & Sharma, 2020).

Abramovsky (2013) research found that widespread adoption of Information Communication Technology (ICT) increased organizational productivity. This shows that ICT can increase the speed of data and information sharing, processing, and presentation of data. In research in Ethiopia, Mohanty (2019) found that the ICT Development Index (IDI) has a positive correlation with the Human Development Index (HDI). Mohanty's findings indicate that ICT is a medium to improve the competence of human resources. Alejandro (2017) found that *introducing new ICTs enables organizations to process any given amount of information with a shorter delay*. Gruner's findings show that the use of ICT can cut service time. Furthermore, Gruner explained that implementing ICT applications needs to be followed by restructuring by reducing the hierarchy.

These findings indicate that ICT in the service system will be able to increase organizational productivity, cut service time, increase employee competence, and require organizational restructuring. When compared with the findings in 39 Distance Learning Center Units (UPBJJ) owned by UT throughout Indonesia and in the ASEAN region, it can be said that by referring to the findings of other researchers, so that the process of implementing ICT for services, it is necessary to restructure considering UT as a pioneer university. in distance learning in Indonesia. This research focuses on the implementation of ICT in the UT service system after restructuring. Without prior restructuring, implementation will only create a new red tape for UT which has 346,584 students spread throughout Indonesia. This study aims to evaluate the design of the student service system at the Distance Learning Center Unit (UPBJJ) by applying Information Communication Technology (ICT).

2. METHODS

This research is a qualitative research with qualitative and quantitative data. This study aims to reveal the practice of student academic administration services at the Distance Learning Unit (UPBJJ). The data from the study were then analyzed and evaluated for their effectiveness. After that, data analysis was carried out and a new organizational design was drawn up by incorporating the Information Communication Technology (ICT) component. The new organizational design is a transformation from the design that has been used so far into an organizational design that uses Information Communication Technology (ICT) through a "debureaucratization" process. The research took place in two locations of the Distance Learning Unit (UPBJJ) of the Open University, namely UPBJJ Surabaya and Bogor.

Data were collected using interviews, questionnaires and observation. Informants in this study were 4 officials of the Distance Learning Unit (UPBJJ) Surabaya UT and 3 officials of the Distance Learning Unit (UPBJJ) Bogor UT. There were 6 student informants who were interviewed in depth, consisting of 3 students from the Distance Learning Unit (UPBJJ) Bogor and 3 students from the Distance Learning Unit (UPBJJ) Surabaya.

3. FINDINGS AND DISCUSSION

This research aims to develop service design and application design. This research data was collected from data obtained through questionnaires to students and interviews with officials from the Distance Learning Unit (UPBJJ) of the Open University (UT) Surabaya and Bogor, namely the Head of the Distance Learning Unit (UPBJJ), registration and examination coordinator, and learning assistance coordinator. as well as observations in the two Distance Learning Units (UPBJJ) and library searches. Questionnaires were distributed to students by sending emails to 1000 students at random. Questionnaires that returned as many as 589 questionnaires. The majority of students are domiciled in East Java, a few others are from Sulawesi and Sumatra. The majority of respondents are under or equal to 25 years old. The Organizational Structure of the Distance Learning Unit (UPBJJ) consists of the Head, Registration and Testing Coordinator (Regjian), Coordinator of Learning Assistance and Teaching Materials (BBLBA), Head of Administration Sub-section (Ka TU), lecturers, and education staff. The Distance Learning Unit (UPBJJ) partners with study groups and the Salut Open University (UT) service

center in student services. In accessing the services of the Open University (UT), students in addition to dealing with UPBJJ they are also in touch with SALUT. The following is the organizational structure of UPBJJ.

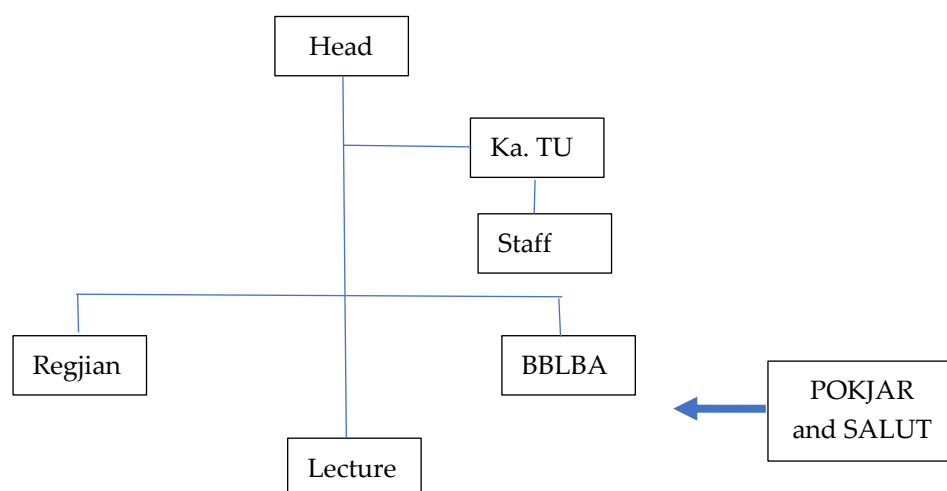


Chart 1. Organizational Structure of UPBJJ

In carrying out their duties, the Head of the Distance Learning Unit (UPBJJ) also assigns tasks to the lecturer as the person in charge of the region. As the person in charge of the region, the lecturer is responsible for student services in certain regions (generally districts or cities) to lecturers. Some staff are also given the responsibility as the person in charge of the area if needed. To assist students in accessing the Open University (UT) services, the Distance Learning Unit (UPBJJ) is also given the authority to establish cooperation with study groups (Pokjar) and UT service centers (SALUT). The number of Salut and Pokjar for each UPBJJ is not the same, because each UPBJJ UT has a different number of districts and cities. Ideally, each district/city has a cooperation partner (SALUT and POKJAR) at least two regional program managers to facilitate student recruitment and coordinate students in remote areas that are difficult to access UPBJJ UT. The map of UT students tends to be in remote areas in Indonesia (<https://www.ut.ac.id/salut>).

3.1. Communication Network

From the results of the interviews obtained information that with the use of information technology (IT) in the management of the Open University (UT), the service becomes faster. Within the internal scope of the Distance Learning Unit (UPBJJ), the use of Information Technology (IT) in the Open University (UT) service system has reduced the hierarchy in decision making and has accelerated the flow of information both downwards, upwards, sideways, and horizontally (<https://www.ut.ac.id/node/234>).

In the external Distance Learning Unit (UPBJJ) service system for students, students have a channel to connect with the Distance Learning Unit (UPBJJ) as well as with Pokjar and Salut. Students are free to choose the communication channel in accessing the service. Students can access services directly to the Distance Learning Unit (UPBJJ) either face-to-face or using media or access services through Pokjar or through Salut. Students can combine access to their services with all existing channels.

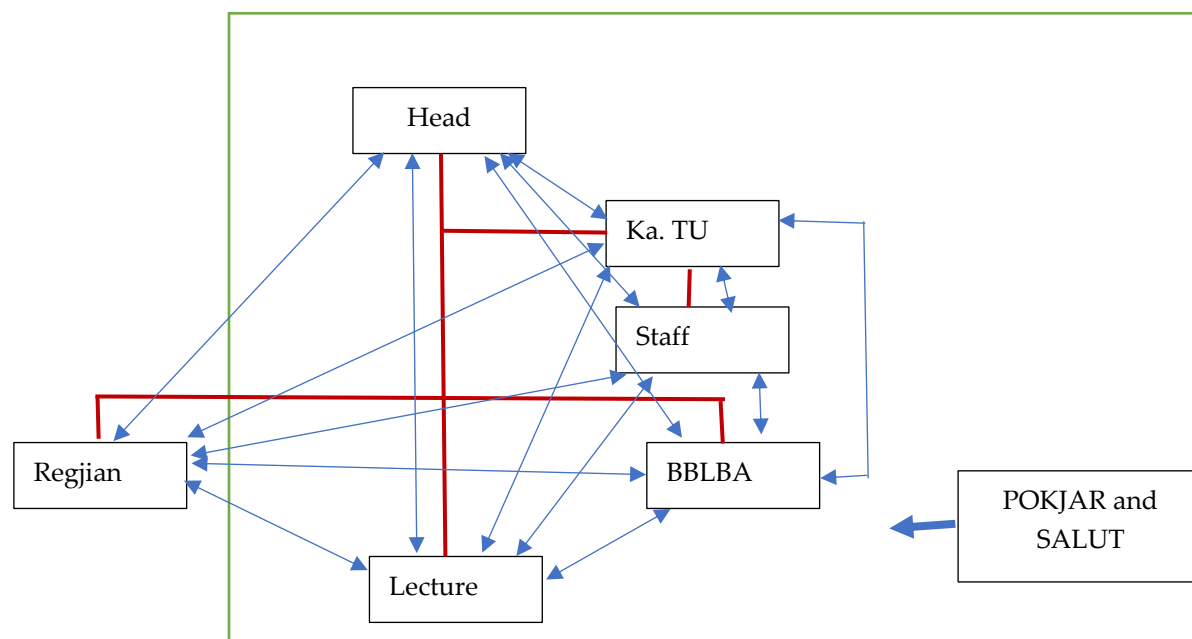


Chart 2. Flow of Internal and External Information at UPBJJ

From Chart 2 above, it can be seen that information flows in all directions without any hierarchical barriers. Information Technology (IT) has changed the organizational information flow of the Distance Learning Unit (UPBJJ) from a formal flow of information through a hierarchy to a networked information flow model that is not bound by hierarchy and time. This finding is different from what was stated by Mejia (2018), modern computer-based information systems have become central components of many organizations' structures. Chart 2 shows that the organizational structure of UT is not in line with the ongoing communication flow. The findings also strengthen the opinion of Jones (2021) which states that ICT plays a role in "delaying" (flattening) of the organizational hierarchy and a move toward greater decentralization and horizontal information flows within organization.

In terms of access to information, students find it easy to access information from UPBJJ. One of the factors that makes it easy to access information is the availability of information, employee disclosure, and supporting equipment and assistance from Pokjar. Meanwhile, the obstacles in accessing information felt by students were 1) difficulty downloading digital BA, tutorial procedures, how to use google drive, and how to use ecampus; 2) lack of clear information about TMK for students who do not follow tuton; 3) information about tuton/Tuweb/TMK lacks notification of next steps; 4) LMS likes hard to see value; and 5) the number of websites or applications provided by UT makes students confused.

From the data obtained from the questionnaire and then processed by cross-table, it appears that 462 respondents (79%) are at most 25 years old and only 9% of students aged over 31 years. This data indicates that the age of UT students is getting younger than in previous years. In general it can be said that the younger a person is, the faster they accept new things.

The communication tools that respondents mostly use to access information about THE, TMK, Tuton, and Tuweb services are WA and computers, two other media are brochures and print media are not widely accessed by respondents. The student's acknowledgment also illustrates that with WA and computer respondents, it is easy to obtain information related to THE, TMK, Tuton, and Tuweb services (Suryadi, 2020).

Respondent data confirmed that 60% of the 462 respondents under 25 stated that accessing THE, TMK, Tuton, and Tuweb services online was easy. Meanwhile, 13% (79 people) stated that accessing THE, TMK, Tuton, and Tuweb services was very easy. In general, only 5% of respondents stated that accessing THE, TMK, Tuton, and Tuweb services was difficult. Interviews obtained information that

some students do not know they have to access. Informants stated that they did not receive information about the need to access THE, TMK, Tuton, and Tuweb services. Researchers suspect that they have personal problems such as lack of skills, no tools or no access to the network.

Information collected through questionnaires turned out to be WA is the most widely used tool to receive and communicate about THE, TMK, Tuton, and Tuweb services, namely Whatapps media, then the UT website and information from friends. Only a few respondents opened the UPBJJ website to obtain information about THE, TMK, Tuton, and Tuweb services. The media that is traditionally used to transmit information, namely letters, ranks the lowest among other media. However, it turns out that email as an official medium for sending information does not get a good response. Email only ranks fifth. Another source that is quite important in providing information about THE, TMK, Tuton, and Tuweb services is information from friends.

The majority of respondents stated that 91% of the 725 answers stated that it was very easy to access information. However, 17% of respondents stated that the available information did not meet their needs. Meanwhile, 35% stated that the available information was not easy to understand. The management of UPBJJ Bogor also experiences this. They stated that the deficiency was information related to the student service scheme. Information about what students should do is still lacking. For example, information about the meaning of Sipas and Nonsipas scheme services. In Sipas and Nonsipas information, students are still having problems getting information about the amount of fees, the steps that must be taken in accessing services, are still unclear. The information conveyed is still general, less specific. Then information about TUWEB and OSMB is also still lacking. Information about the rights and obligations of tutoring participants is less clear, such as information about the rights and obligations of students as participants of tutors and tutors. Information material is not what students need. Students need information about how to formulate calculations so that students can answer.

According to the informant, in accessing the SIA Application, students must know 1) the steps and procedures for finding service information; 2) rights and obligations as service users, such as tuweb and tuton services; and 3) communication channels to obtain specific information.

The available information can be stated that although the majority of respondents stated that information can be accessed easily, there are still shortcomings, namely the quality of the information available does not meet their needs. In addition, this survey was conducted online, so the respondents who answered were respondents who had online access, so it is suspected that this answer did not represent students who were in difficult areas or could not access the online network.

3.2. Decision-making

The questions in this subsection explain whether the decision-making level policy in the Distance Learning Unit (UPBJJ) is by the needs, meaning that employees who have to make operational decisions have the authority to make operational decisions. Officials are given the authority to make decisions regarding their work. Their decisions are reported to the Head of the Distance Learning Unit (UPBJJ). The type of decision taken is a decision that is appropriate to the field of work. Meanwhile, the officials feel the decision-making authority to be sufficient in completing the task. In relation to decision-making regarding THE, TMK, Tuton, Tuweb activities, the decision-making authority is for THE, Registration, and SUO activities, the decision-making authority lies with the Registration and Examination Manager. Meanwhile, for activities related to TMK and Tutor Recruitment, the authority to make operational decisions is given to the BBLBA Manager. Then the authority related to the fulfillment of resources is given to the General Manager (Terbuka, 2020).

3.3. Work System and Procedure

The question is to answer whether the current performance of the information delivery system at UPBJJ has met the needs of the students. If UPBJJ's internal work systems and procedures are effective, it is assumed that students will also find it easier to access information. The following is the explanation

of UPBJJ Bogor and Surabaya officials regarding the performance of the current work system and procedures.

The organizational structure and procedures that have been built have resulted in effective communication between officials and employees. Likewise, vertical communication between superiors and subordinates, both in the form of upward and downward communication, takes place effectively. Horizontal communication between employees also takes place effectively. This is indicated by the absence of reports of conflicts between employees and officials. Likewise, there are no reports of student complaints regarding UPBJJ services.

Internal organizational communication with systems and work procedures in information management of THE, TMK, Tuton, and Tuweb is currently quite clear. The employees also stated that the information was available as needed. No employees "hide" information, resulting in poor service. According to respondents' opinion, there are three main problems in providing information on THE, TMK, Tuton, and Tuweb, namely 1) communication lines are too long; 308 answers (54%) out of 574 answers; 2) Communication lines are not clear; 144 answers (25%); and 3) the information I need is not available; 122 answers (21%).

The data findings on problems related to the provision of information appear that the answers of student respondents are in line with the answers of UPBJJ management. The obstacle in online communication at UPBJJ is the competence of some employees, especially senior employees. Limited IT skills for some senior groups hinder online communication, but the juniors/millennials have no problem, they can follow along well. The obstacles in the systems and procedures of THE, TMK, Tuton, and Tuweb information services that employees feel are that the systems and procedures still need to be improved: 1) communication lines are too long; 2) some communication lines are not clear, namely some communication lines are not clear, especially the procedures for accessing information services by students; 3) the type of information available is information related to student service schemes. In the student service scheme, information related to guidance on what students should do is still lacking. For example, what is a saved and non-passable schema service. Students are still having problems getting information about the amount of fees, the steps that must be taken in accessing services are still unclear. The information conveyed is still general, less specific; 4) difficulty contacting students because they often change numbers; 5) students very much need the SIA application because the SIA application is the main media to access UT services and information; 6) SRS needs to be customized because the implementation of activities between UPBJJ is different from one another. UPBJJ needs to be given access to inform students of their activities; 7) UPBJJ Still have to remind students the schedule of activities because students often forget; and 8) need an information door that makes it easier for students to access information.

3.4. Technology

From the results of the distribution of questionnaires, information was obtained that the majority of respondents accessed THE, TMK, Tuton, and Tuweb services using mobile phones and computers. Very few still rely on print media. Most of the respondents stated that they had easy access to information, but in terms of information content there were still problems in the sense that the information they needed was not fully available. There are sixteen types of services at UPBJJ. The sixteen types of services require information to be conveyed to students. UT uploads all the information to the UT website and the respective UPBJJ websites.

Problems in accessing information and information quality were complained by 59% of HP users and 38% of computer users. The biggest problem is the problem of information that is difficult to access. Technically, there is information that is of low quality or not even accessible by HP. This information can only be accessed using a computer. It is suspected that designers do not take into account the gadgets used by students in accessing information. As a result, the same information and the same application are not problematic when opened on a computer but have problems when accessed via HP. The existing data is suspected that information is difficult to access on a cellphone or computer. In

addition, some respondents feel that the information received is not easy to understand, both by respondents who access information using cellphones and computers. Some stated that there was information that was less relevant to the respondents' needs. From the results of interviews in Bogor, there are clues as to why the information is less understandable by the respondents.

Meanwhile, in the respondents' answers, they complain about information related to registration, web tutorials, online tutorials, and online exams. From the processed data, respondents' answers are quite spread out. From respondents who have very easy access to information, those who have easy access and difficult to access information, there are still those who complain that the information they need but is not available. The information submitted in the UT information system is incomplete. respondents still complain that there are many services, but if they are sorted according to priority the information problem is centered on online tutorial services, tutorials via the web and online exams.

In accessing information, many students who have difficulty or are unclear about the information then submit their complaints to UT. However, what is interesting is that only 7 answers out of 1049 answers stated that they submitted their complaints to UT via online media, namely Halo UT, and only 1 response submitted their complaints via email. There are 314 answers (30%) submitting complaints to UPBJJ via email or cellphone. The majority of respondents conveyed their complaints through study groups.

Data obtained from respondents showed that many respondents who did not submit complaints directly to UPBJJ either came directly or by using the media. The role of study groups in bridging student difficulties is quite large. In interviews with UPBJJ Bogor students, it was also revealed that Pokjar and Salut were very helpful if they faced difficulties accessing information.

3.5. Recommended Information Provision Model

The various information and analyses presented above show that although the information is readily available and easily accessible, there are still shortcomings. Respondents mostly use cellphones and computers or a combination of both in accessing UT information. To overcome the shortcomings in providing information, students are helped by the existence of pokjar and salute. Internally, there are no problems with systems, procedures, and equipment in providing information about THE, Tuweb, Tuton, and TMK. The problem faced is the lack of knowledge and skills of UPBJJ HR in accessing and operating online services. Meanwhile, the problems faced by students are more on application integration and less comprehensive information content. The internal communication model of UPBJJ and UPBJJ with external parties can be described as follows.

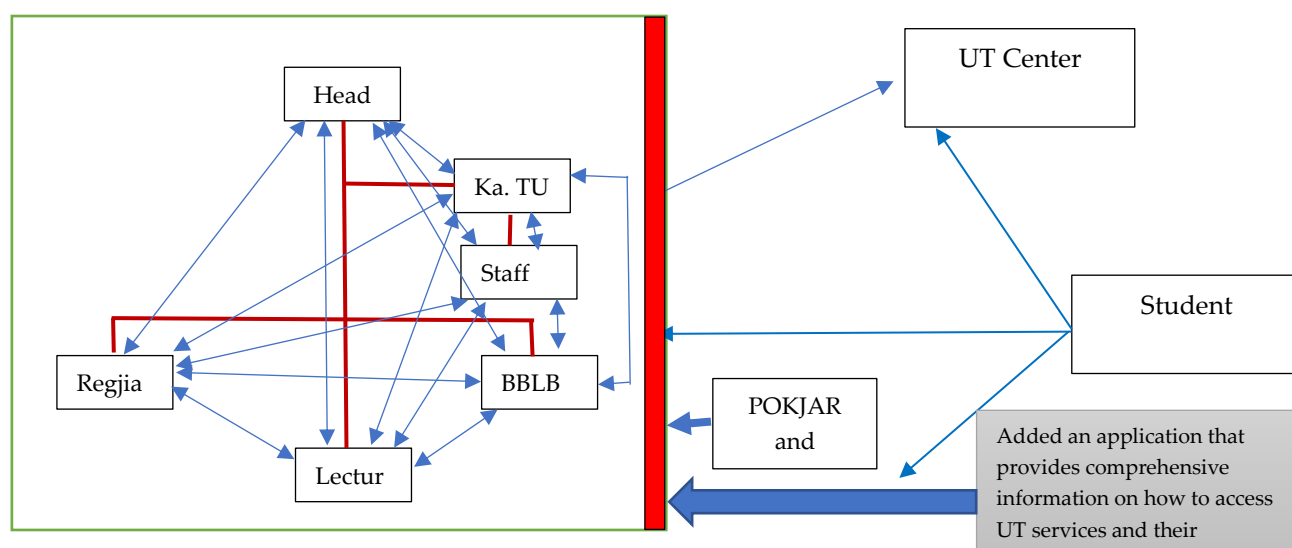


Chart 3. UPBJJ and UPBJJ internal communication models with external parties

The Open University (UT) is currently an organization with modern computer based information systems that have become the central components of many organization's structures. Implementation of IT in the organization will change the organizational structure. Thus the organizational structure of UPBJJ needs to be adjusted to the needs of organizations that implement IT. UPBJJ organization needs to be structured by "to combine an adhocracy with bureaucratic element based on advanced information systems".

4. CONCLUSION

The use of information technology in the Open University (UT) management makes services faster. Within the internal scope of the Distance Learning Unit (UPBJJ), the use of information technology in the UT service system has reduced the hierarchy in decision making and has accelerated the flow of information, both downwards, upwards, sideways, and horizontally. Employees who have to make operational decisions have the authority to make operational decisions. The authority to make operational decisions is given to the BBLBA Manager. Then the authority related to the fulfillment of resources is given to the General Manager. Internal organizational communication with systems and work procedures in information management of THE, TMK, Tuton, and Tuweb is currently quite clear. The employees also stated that the information was available as needed. No employees "hide" information, resulting in poor service.

The majority of respondents access THE, TMK, Tuton, and Tuweb services using mobile phones and computers. Very few still rely on print media. Most of the respondents stated that they had easy access to information, but in terms of information content there were still problems in the sense that the information they needed was not fully available. Respondents still complain that there are many services, but if they are sorted according to priority, the information problem is centered on online tutorial services, tutorials via the web and online exams. The Open University (UT) is currently an organization with modern computer based information systems that have become the central components of many organization's structures. Implementation of IT in the organization will change the organizational structure. Thus, the organizational structure of UPBJJ needs to be adapted to the needs of organizations that apply information technology. The UPBJJ organization needs to be structured with "to combine an adhocracy with bureaucratic elements based on advanced information systems".

The limitation of this research is that some of the available information does not match the respondent's needs and is difficult to reach. There is no problem with UPBJJ's internal management. The recommendations given are to adjust the organizational structure of the Distance Learning Unit (UPBJJ) and revise information about THE services, TMK, online tutorials and web tutorials so that they are easily accessible and their contents can be used as guidelines for students in accessing the Open University Services (UT). This research can be developed by focusing on public trust in distance learning.

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