DIGITAL TRANSFORMATION OF MADRASAS TO IMPROVE THE QUALITY OF EDUCATION SERVICESat MTs AL KAUSTAR DEPOK CITY

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Abstract

Indonesia has entered the digital era 4.0 and the digital era should not only be a jargon. The most important thing at this time is adaptation to transformation and all forms related to the digitization of Information Technology. The problem that occurs today is the weak willingness and ability of human resources (HR) in facingthis digital era. This research aims to find out the challenges and solutions in facingDigital transformation to improve the quality of education services at MTs Al Kautsar Kota Depok, as for this research method using a combination method (*mixed methods*), *action research* model, and research and development (*Research and Development)*. From this research, several things become priority suggestions for institutions to continue to consistently face the digital era, including human resources (HR) must have good qualifications and competencies, have agility, innovation, anticipation, creativity, experimentation, open-mindedness and extensive networks so that madrasah digital transformation to improve service quality can be carried out effectively and efficiently.

Keywords: Digital transformation, service quality, digital madrasah

Introduction

The word "madrasah" is derived from the root "darasa-yadrusu-darsan _ learning". The word madrasa, as isim makan, means "a place of learning". Madrasahs in Indonesia are the result of the modern development of pesantren education which, historically, existed long before the Dutch colonized Indonesia. The first Islamic educational institution to exist was the pesantren. In the early 20thcentury, madrasahs with a classical system began to appear in Indonesia.

In the historical development of madrasas, it is inevitable that madrasas contribute to the intellectual life of the nation (Hamruni & Kurniawan, 2018). However, not a few people argue that madrasas in Indonesia are outdated educational institutions and are synonymous with backwardness (Asmani, 2013).

The development of technology is currently unstoppable, while human resources (HR) spearhead the progress and development of digital technology. Madrasahs are religious-based schools that are always considered to be left behindwhen it comes to technology. There are many challenges and weaknesses faced by madrasas in adapting to the current digital transformation, and the main problem isthe inability of human resources to manage technology in every dynamic that occurswhile madrasas already have adequate computers and internet networks to supportthe running of madrasa digital transformation to improve service quality can be carried out effectively and efficiently.

The 4.0 phenomenon with all its dynamics encourages madrasas to quickly take action to adapt to the development of digital information systems in providingmanagement administration services both for internal, namely for academic staff and administrative services and external services, namely presenting digital publications that are easy to understand and gain

customer trust, namely from the community.

Syamsul Kurniawan in Jurna Intizar Vol. 25 No. 1 June 2019 discusses the problem of 21st century challenges for madrasas in Indonesia which discusses the mental revolution of teachers and students to be integrated with technological developments. While in his discussion does not discuss digital transformation as a challenge. Babara Suryanto in the journal Al Madrasah Vo.6 No 3 2022 with the title management of Islamic educational institutions in the face of the digitalization era discusses the challenges and solutions of the digital era which are carried out only by conducting library research, while in this research the author uses a *mix method* that allows for more in-depth research results. In the journal Tadbir Muwahid, Erina, Hamengkubuwono and Hendra Harmi discuss teacher competence and only focus on the output and learning process but do not include competence in academic services.

The purpose of this research is to find out the challenges and solutions of tahaban in facing digital transformation to improve the quality of education servicesthat are effective and efficient, strengthen the competence of Human Resources (HR) and improve the *branding of the* quality of madrasah education services to thecommunity.

Theory Review

The use of new digital technologies (social media, mobile, analytics, or mobile devices) can enable greater business improvements (such as improving customer experience, streamlining operations, or creating new business models), Fitzgerald et al. (2014). A digital transformation strategy is a blueprint that supports companies in organizing the transformation that arises due to the integration of digital technologies, as well as in their operations after the transformation, Matt et al. (2015). The use of technology to radically improve a company's performance or reach, Westerman et al. (2011, 2014). Digital transformation involves utilizing digital technologies to enable major business improvements, such as improving customer experience or creating new business models, Piccinini et al. (2015b). The use of digital technology to radically improve company performance, Bekkhus (2016) Digital transformation includes process digitization with a focus on efficiency, and digital innovation with a focus on enhancing existing physical products with digital capabilities, Berghaus and Back (2016).

Digital transformation is the deep and accelerating transformation of activities, processes, competencies and business models to fully leverage the changes and opportunities brought about by digital technologies and their impact across society in a strategic and prioritized way, Demirkan et al. (2016). Digital transformation includes the digitization of sales and communication channels, which provide new ways to interact and engage with customers, and the digitization of a company's offerings (products and services), which replace or augment physical offerings. Digital transformation also describes the triggering of tactical or strategic business moves with data-driven insights and the launch of digital business models that enable new ways to capture value, Haffke et al. (2016). Digital transformation is concerned with the changes that digital technology can bring about in a company's business model, resulting in changes in product or organizational

structure or process automation. These changes can be seen in the increasing demand for internet-based media, which has led to overall business model changes (e.g. in the music industry), Hess et al. (2016).

The use of new digital technologies, such as social media, mobile, analytics,or embedded devices, to enable major business improvements such as enhancing customer experience , streamlining operations, or creating new business models, Horlacher et al. (2016). Change and transformation are driven and built on the foundation of digital technology, Singh and Hess (2017). Within an enterprise, digital transformation is defined as the organization's shift to big data, analytics, cloud, mobile and social media platforms. While organizations continue to changeand evolve in response to the changing business landscape, digital transformation is a change built on the foundation of digital technologies, ushering in unique changes in business operations, business processes, and value creation, Nwankpa and Roumani. Digital transformation is not a software upgrade or a supply chain improvement project. It is a planned digital shock to what may be a reasonably functioning system. The expansion of the use of advanced IT, such as analytics, mobile computing, social media, or embedded smart devices, and the increased useof traditional technologies, such as enterprise resource planning (ERP), to enable

major business improvements, Andriola (2017) Chanias (2017). Digital technology changes can occur in a company's business model, resulting in changes in product or organizational structure or process automation, Clohessy et al. (2017). Itdistinguishes itself from previous IT-enabled business transformations in terms of   its speed and holistic nature, Hartl and Hess (2017). Transformationwithin the organization driven by new enabling IT/IS solutions and trends, Heilig et al. (2017).

Digital transformation as encompasses the digitization of sales andcommunication channels and the digitization of a company's offerings

(products and services), which replace or augment physical offerings. Furthermore, digital transformation entails tactical and strategic business moves triggered by data-driveninsights and the launch of digital business models that enable new ways to capturevalue, Horlach et al. (2017). The best understanding of digital transformation is adopting business processes and practices to help organizations compete effectivelyin an increasingly digital world, Kane et al. (2017). Digital transformation describeschanges imposed by information technology (IT) as a means to (partially) automate tasks. Legner et al. (2017). Digital transformation highlights the impact of IT on organizational structures, routines, information flows, and the organization's ability to accommodate and adapt to IT. In this sense, digital transformation emphasizes the technological roots of IT and the alignment betweenIT and business, Li et al. (2017). An evolutionary process that utilizes digital capabilities and technologies to enable business models, operational processes, andcustomer experiences to create value, Morakanyane et al. (2017). The use of new digital technologies, to enable key business improvements in operations and markets such as improving customer experience, streamlining operations or creating new business models, Paavola et al. (2017). Existing fundamental changesand the creation of new business models in response to the diffusion of digital technologies such as cloud computing, mobile Internet, social media and big data, Reman et al. (2017).
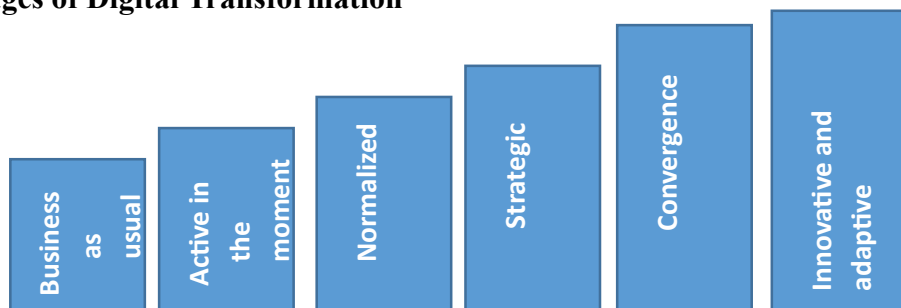
Stages of Digital Transformation

Figure 1. 6 Stages of Digital Transformation

6 Stages of Digital Transformation

Stage 1: Ordinary Business, at this level 1, the business organization operates like a typical business that focuses on consumers, business processes, business matriculation, business models, and technology, and believes that it is still relevantin today's digital world. Stage 2: Active in the Present, business organizations that have experimental units that promote a more digitally literate and creative culture.These experimentation units may differ from each other, but both aim to improve and strengthen the performance of specific business processes and targets. Stage 3:Formalized, experimentation is done deliberately to achieve more promising and feasible things. The initiative becomes more assertive, and as a result, these digital change agents begin to seek a level of corporate executive buy-in for the necessaryresources and technology support. Stage 4: Strategy, at this stage, the formerly independent groups begin to identify the power of collaborating their work, research, and perspectives to contribute to the strategic direction of corporate policytowards digital transformation efforts, investment, and ownership. Stage 5: Convergence, at this stage, a team is formed that specifically handles and guides the digital enterprise change process in terms of consumer-focused strategies and operations. The infrastructure established at this stage is used as rules, models, rolemodels, processes and systems that support the validated transformation process. Stage 6: Innovative and Adaptive, at this stage, the digital change process has become a way of doing business for the company. The executive level and policy makers begin to identify that change is constant and will continue. Creating a new ecosystem that always observes market trends and emerging technologies to be anticipated or implemented on a small or large scale within the company.

Concept of Education Quality

There are at least six common views of quality given by educators: quality as reputation; quality as resources and inputs; quality as process; quality as content;quality as outputs and outcomes; and quality as "added value". "The basis of reputation, although usually not entirely clear, includes information or assumptionsabout inputs and outputs. Definitions of quality often revolve around "a good quality program is one that produces good outcomes" or "high quality schools associated with excellence,"

and thus are of little value for planning or evaluation purposes. Don Adams (1993). Quality is often defined, synonymously with effectiveness, as the degree ofgoal attainment or desired level of achievement. Therefore, higher quality is usually the occurrence of real and calculated improvements in effectiveness, i.e. "better" orgreater outputs, processes, inputs or outcomes.

The measure of this quality is the attainment of cognitive skills, the entry ratio to the next level of education. Quality as process suggests that not only inputs or outcomes but also the nature of the intra-institutional interactions of students, teachers and other educators, or the "quality of life" of the program, school or system." Teachers usually incorporate and sometimes emphasize the quality as process view. There is an assumption that quality judgments need not wait for assessment of outcomes, outputs and results but can be made from assessment checks, enjoyment, enthusiasm, or other interpretations of teachers and students. The process itself can be the goal, or the process of student interaction andengagement can be seen simply as a proxy for the outputs sought.

Quality as content reflects the particular bias of a country, community or institution towards a particular body of knowledge, skills or information. To some extent, although many regional and community variations can be found around theworld, common educational content trends can be recognized in the movement towards internationally

recognized core curricula at the early school level (nationallanguage, social and history).

Curriculum (core or extended) can be understood as a multifaceted process of interaction involving various cognitive, affective and social activities in the search for meaning. Thus, in one conceptualization curriculum process and contentcan be seen as inseparable. with professional accreditation bodies and is also widelyreflected in the work of international agencies.

Education Services

Services are classified in seven criteria (lovelock, 1987), namely: (1) marketsegment, (2) level of embodiment; rented goods service, Owned good service, Non

- goods services (3) service provider skills, (4) organizational goals; comercial service and proit service, (5) regulation, (6) level of employee intensity, and (7) level of contact between service providers and customers; high contact service andlow contact service, Yahda Sudarya (2007).

Opportunities and ChallengesOpportunities

Digital transformation opens up opportunities for a wider market share. Notonly that, digital transformation also helps run an effective and efficient business. Currently, there are various cloud service options that can help implement digital activities. Digital transformation efforts undertaken by a company can be very diverse. In the process, entrepreneurs do not have to completely migrate to a digital platform. However, you can choose to implement it gradually. For example:Migration to the cloud, in this effort, encourages a change from the habit of physical

data storage to cloud services as a means of archiving data. Customer service improvement, can also carry out digital transformation with the aim of

improving consumers. In this way, it can get a better level of customer satisfaction. IT modernization, the use of cloud services can improve the performance of the company's IT department. Especially if you use products from leading companies like Microsoft.

Barriers

There are 5 aspects that hinder the realization of digitalization efforts, namely: Organizational culture, many human roles feel that they will be replaced if digital transformation efforts are completed if an agency has used the latest technologicaltools and devices. The solution to this aspect is to consider the ability of the organization as a whole to adapt to the changes. Without a balanced process for these conditions, business digitization will not have the maximum impact. To overcome this problem, it is necessary to communicate effectively. On this occasion, it is necessary to encourage workers and stakeholders to start learning themselves with technology, tools, and things related to digital. That way, the transformation phase can run more smoothly.

The obstacle is limited human resources (HR). Research from Capgeministates that 77% of companies claim not to have IT staff who can help themaccelerate the business digitization process. The solution to this problem is to utilizea cloud service platform that can reduce the workload of employees in the IT field.

The third obstacle is a minimal budget, many companies are reluctant to startthe process of digitizing their business because they think this decision will be verycostly. The situation is exacerbated when the company does not have a clear planning direction in its digital transformation efforts. The solution to this problem is to involve every department in the planning process. Furthermore, it can set a flexible budget, because there will be many problems that arise with the implementation of new technology. In addition, it can opt for a gradual digitalization process.

The fourth barrier, digital security, SoftServe says that 55% of companies consider security to be a major challenge in digitalization. This is quite common, given the many cybercrime threats that continue to emerge. The good news, is to minimize this problem by utilizing cloud services that have a high level of security such as Microsoft Azure.

The fifth obstacle is data management. The final challenge in the digitization process is related to data management. The effectiveness of digital transformation depends on the effective and efficient collection, storage, and exploitation of large amounts of data. The solution to this problem is to practically use the various features of cloud services. Here, not only can you use cloud-based storage services. However, there are many other features that help make data management easier.

Research Methods

This research method uses a combination method (*mixed methods*), *action research* model, and research and development (*Research and Development*). *Mix Methods* is a research method by combining two methods at once, qualitative and quantitative in a research activity so that more comprehensive, valid, reliable and objective data will be obtained (Sugiono, 2001: 18).

Discussion

Profile of MTs Al Kautsar, Madrasah Tsanawiyah Al Kautsar Depok is a private educational institution under the YAYASAN AL KAUTSAR with Notary Ak Mrs. Sri Hastuti Tjahjadi, SH. Deed No. 4 of 1986. MTs Al Kautsar is accredited A based on SK BAN SM West Java No. 02.00/543/BAN-SM/XI/2010 dated November 9, 2010.

The vision of MTs Al Kautsar is the realization of a Madrasah that is leading, achieving and responsive to change. While the mission of MTs Al

Kautsaris to make Madrasahs that are recognized for their existence by the community andgovernment. Improve the human resources of educators and education personnel. Forming an Islamic and moral generation. Creating human resources with insights into Science, Technology, Arts and the Environment. Excellence in academic and non-academic achievements.

The following is the condition of the teachers of MTs Al Kautsar Kec. Sukmajaya Depok City. Human resources or teachers and employees plus managers total 67 people with a master's degree category of 5 people, a bachelor's degree of 61 people and a high school diploma of 1 person.

No.	S2	S1	HIGH	AMOUNT
1	5	61	1	67

While the state of MTs Al Kautsar Students Sukmajaya Kec Depok City Year 2022/ 2023. Students at MTs Al Kautsar Sukmajaya Subdistrict, Depok City as a whole amount to 767 students with details of 396 male students and 371 female students,all of whom are MTs Al Kautsar students in both regular and fullday classes.

NO.	MALE STUDENTS	FEMALE STUDENTS	TOTAL
1	396 Students	371 Students	767 Students

Implementation of Digital Information at MTs Al Kaustar

The administration was originally very manual, only 3 people consisting of 1 administrative staff and 2 finance staff, the manual side still uses the general ledger cash book and is transformed into MS Excel. Teacher

data and still using MS Access and finance using MS Excel. Along with the times the Head of Madrasah thinks how to make the system work efficiently, effectively and efficiently can work flexibly and easily, the first thing to do is socialize the importance of change in all lines in the form of digitalization online using the SIS (school information system) program, Aan Setiawan (2022).

The scope of the madrasah digitalization area at MTs. Al Kautsar starts with administrative and financial management carried out by the Administration. As stated above, the administration section carries out manual-based administrative records, manual data collection and manual financial system management, so gradually socialization is carried out and various training on digital administrative and financial governance is held. As a result of the training, MTs Al Kautsar has produced human resources(HR) who are able to operate various digital equipment, ranging from hardware tosoftware in an integrated information system. The education management information system aims to collect, integrate, process, maintain, and disseminate data and information to support decision-making, policy analysis and formulation,planning, monitoring, and management, while eRKAM is used as a school'sobligation to make planning and budgeting in using the funds obtained, one of which is BOS funds. This must be planned in the form of eRKAM. What is being

 socialized is to make eRKAM in electronic form with a centralized system. SPP billing system with SIS In the digital financial system, MTs Al Kaustar uses SIS ++ from Rajawali Mega System. The SIS (school information system) used is a form of systematic and integrated digitalization, so that it can integrate various madrasah needs in various ways including: integrated financial records to tuition payments, student savings, and various other financial administration needs can be managed digitallyusing this software, all student financial data can be managed and accessed with SIS, tuition

payments are made with an integrated

transfer system with SIS including student tuition arrears data can easily be seen with this software, this is very helpful for financial administration officers in carrying out their duties.

SIS (school information system) is also integrated with an online and realtime new student admission system that allows madrasah administrators to monitor the movement of prospective students who have registered through the online system. Even this online student admission system has made an android version application that can be installed via the link: https://apkpure.com/ppdb- online-mts-alkautsar/com.rajawali.sis. However, MTs Al Kaustar also continues tofacilitate registrants who come directly and then the data is covered in the system. This is done to maintain harmony and continue to provide the best possible serviceto the community.

SIS new student admission flow is integrated
with the PSB Online Form

Implementation in the curriculum is also carried out using SIS (School Information System) which MTs Al Kautsar already has. Careful planning of the learning system that integrates SIS with the process of learning activities, teachingmaterials, computer-based evaluation, and even reporting student grades can be accessed by students and parents through student SIS accounts. Also, student attendance using a barcode ID makes it very easy for students to take attendance and be monitored by parents through SIS. This is an update of the SMS gateway system. The curriculum also extends to the system of teaching and learning activities (KBM). E-learning has truly replaced paper-based teaching. E-learning has made budget savings compared to manual learning.

As a manifestation of digitalization, each classroom has long been equipped with an infocus. This is done to improve the quality of teaching and learning, make learning fun and make it easier for teachers to deliver learning in this digital age. Honorarium for teachers and employees, which was originally donemanually, namely by the teacher attending the treasurer, then signing and giving the honorarium, in the digital transformation of madrasah, the honorarium system is now carried out with an integrated *payroll system with* banks.

Digital transformation at MTs Al Kautsar has had a significant impact, the calculation of financing can reduce the budget compared to manual methods, although it seems that at the beginning the procurement of various supporting facilities is quite expensive, but quickly the level of effectiveness and efficiency can be felt in doing many things related to madrasah management management work. The madrasah's achievements have increased with various awards and MTs Al Kaustar has become a model for other private madrasahs in Depok City.

The increasing number of students is concrete evidence of increasing public confidence in the quality of services provided by MTs Al Kautsar to the wider community. This adds to the confidence of MTs Al Kaustar to keep moving to realize its vision and mission and provide satisfying results for the institution and the public.

Conclusion

The digital era is a challenge for human resources (HR) who have limitations. MTs Al Kautsar has opened the insights of its human resources (HR) with socialization and held various trainings related to the management of madrasah in a digitalized manner starting from administration and finance, infrastructure, curriculum and student affairs. SIS (school information system) has really helped MTs Al Kaustar realize the success of madrasah digital transformation. With the digitalization of this madrasah, it has demanded that human resources (HR) must have good qualifications and competencies, have agility, innovation, anticipation, creativity, experimentation, open-mindedness and a wide network so that madrasah digital transformation to improve service quality can be carried out effectively and efficiently.

As a recommendation for institutions, MTs Al Kautsar has become an example of developing a madrasa model in the city of Depok, this must

be maintained, must be consistent, and continue to innovate in its creativity in managing madrassas in a digitalized manner. As for other private madrasahs, MTs Al Kautsar should be a model madrasah that has successfully transformed madrasah in digital form to achieve optimal, effective and efficient quality of education services.

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