

Knowledge and Information Management Skills for the

Workplace

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Executive Summary

The report provided a brief overview of Amazon's success during the Covid-19 pandemic. The report has explained different knowledge management theories like organizational, ecological, and techno-centric knowledge management theory. The report has examined that during the pandemic, Amazon started selling products like safety gear, masks, gloves, sanitizers to keep the customers and employees secure. The report showed that knowledge management is essential for Amazon to optimize the training process, increase employee retention and market shares. It has been examined that during the Covid-19 pandemic, Amazon faced supply management issues so it used artificial intelligence and machine learning technologies for improving supply chain management. The report demonstrated that Amazon's profits and sales increased by 37 % during a pandemic by using information systems like AWS, transaction processing, customer relationship management, and enterprise resource management.

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Introduction

The report explains knowledge management theories applied by Amazon. The report also examines the significance of creating, storing, applying, and integrating information for Amazon to implement good knowledge management practices. The report evaluated the effectiveness of the knowledge and information management culture in Amazon to create knowledge assets and maintain effective customer relationship management. This report further identifies potential challenges faced by Amazon related to knowledge management. The report also provides a recommendation to help Amazon strengthen knowledge management practices.

Company Overview (Amazon)

Amazon is a technology company that mainly focuses on artificial intelligence, digital distribution, cloud computing, and e-commerce. This company was founded by Jeff Bezos on July 5, 1994. The head office of Amazon is located in Seattle, Washington, US. In Amazon, about 1,298,000 workers are employed globally while 841,000 are employed in the US. The company earned revenues of US\$ 386.064 in the year 2020 despite the pandemic impact (Rainer et al., 2017). The major products offered by Amazon include Echo, Fire Tablet, Fire OS, Kindle, and Fire TV. Amazon also sells apparel, furniture, toys, food, software, games, furniture, and jewelry. The major objective of Amazon is to increase customer experience with the use of the internet and advanced technologies. The goal of Amazon lies in understanding the shopping habits of customers so that it can deliver better experiences and satisfaction to them. Data analytics are mainly used by Amazon to optimize customer experience, anticipate customer needs, deliver relevant products and offer personalized services. In the US it is the second-largest employer that employed 36,400 workers during the pandemic at the end of June 30 (Natalicchio et al., 2017). Amazon is one of the most valuable brands and is referred to as the most influential cultural and economic force in the global world. The company is widely known for industry disruption through technological innovation. Amazon is one of the few firms in the market that is positively benefited from the Covid-19 pandemic effect. The company spent billions of sums on Covid-19 related investments such as safety gear and internal testing called Project Ultraviolet to protect employees.

Knowledge Management Theories

Knowledge is mainly explained in three forms like explicit, implicit, and tacit (Webb, 2017). Explicit is considered as the knowledge that is intangible form such as articles, books, and newspapers. Implicit is considered as the knowledge that is transferred into tangible forms like documentary or news article. Tacit is considered as that knowledge that is very hard to capture like individuals perception or feelings. Thus, information about any organization is not captured, stored, or written in the history books but it originates from some knowledge sources (explicit and implicit) like current leaders, customers, and employees (Abubakar et al., 2019).

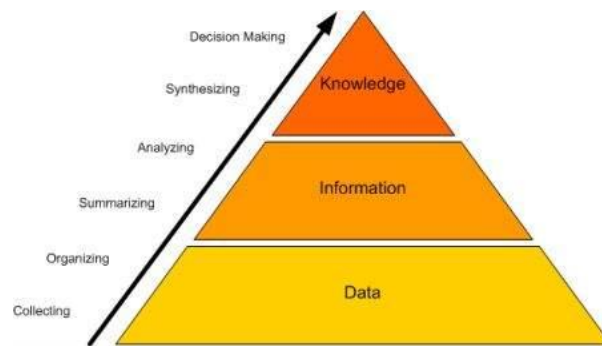


Figure: 1 Knowledge management (Abubakar et al., 2019)

Knowledge management is considered as streamlining the process related to capturing, distributing, and using the knowledge (Abualoush et al., 2018). The process of knowledge management includes data, information, and knowledge. Analysis elements are called data and information takes place when data reaches a complex level. Knowledge is called the collected information used for making informed decisions. For instance, the major tool used in knowledge management is the intranet website of a corporation. The intranet tool of Amazon stores information virtually that includes blogs, videos, announcements, or news articles. Thus internal site used for storing information is intranet but the process to compile, store and make the information readily available to customers and employees is called knowledge management. Amazon is able to effectively access, share and update knowledge that made it more cost-effective and productive during a pandemic. The ability of Amazon to access the correct knowledge during the Covid-19 pandemic helped to make accurate decisions while stimulating innovation and collaboration (Razzaq et al., 2019). Knowledge management helps Amazon to

improve data or information quality, secure intellectual property, optimize training and enhance communication through the organization. The key knowledge management theories are as followed:

Organizational Knowledge management theory: This Knowledge management theory is mainly focused on examining the way organizational structures of business are hierarchically or culturally designed and also manage the knowledge process. This theory of knowledge management can help Amazon to improve organizational agility, solve the problem, support employee growth, or improve communication and business processes (Rainer et al., 2017). This theory can also help companies to increase innovation rate, make faster decisions, and share specialist expertise.

Ecological Knowledge management theory: This Knowledge management theory is related to learning communities, relationships, and the people. It mainly includes the interaction among different employees and business organizations to share knowledge (Salloum et al., 2017). This theory can help Amazon to streamline work, ensure harmony across the business and improve quality. Ecological knowledge management theory can also help the company to avoid effort duplication that saves money and time.

Techno-centric Knowledge management theory: This Knowledge management theory is concerned with using technology to facilitate knowledge flow and information storage. This theory of knowledge management can help Amazon to reduce the training need for employees for developing and maintaining data (Foote and Halawi, 2018). It can also help the company to accelerate customer delivery by sharing innovation and knowledge internally. It helps an organization to stimulate cultural changes and innovation for meeting business needs.

Importance of information system for Amazon

The information system provides organizations and individuals with the collection, filtering, processing, creating, and distributing of large data. An information system is important for Amazon to store operational data, documents, and communication records (Santoro et al., 2018). The information system also helps Amazon to improve decision making, enhance competitive edge, and efficiency. An information system is very essential for Amazon due to the following reasons:

Developing new products and services: Information system is essential for Amazon to improve and secure future business operations with a coordinated and well-established information system. During the pandemic, Amazon started selling products like safety gear, masks, sanitizers to keep the customers and employees secure (Backes et al., 2019). Information system helps Amazon to examine the independent process of introducing valuable products or organizing activities. An information system helps Amazon to gain a competitive advantage in the marketplace by offering innovative and differentiated products to customers.

Information storage: All business organizations need activities record so that problems and effective solutions may be determined. So, the information system can help Amazon to store operational data, documents, and communication records (Bermudez et al., 2019). It can help the company to store data in a sophisticated and comprehensive database so that it can be easily available. With such an information system, Amazon can also analyze the way certain actions are affecting business operations to prepare forecasts and cost estimates.

Easier decision-making: Without an information system, Amazon may take a lot of energy, cost, and time in making decisions. However, by using an information system, all the relevant information can be delivered to the company for making effective decisions. The management team in Amazon can then use an information system for choosing the best action and carrying out an important task (Amazon, 2019). During the Covid-19 pandemic, Amazon focused on moving fulfillment operations to almost entirely in house. This decision of Jeff Bezos during pandemic helped sellers to ship the products to Amazon warehouse and then products are sold by company to the customers.

Behavioral change: The information system can help Amazon to communicate with customers and employees effectively and rapidly. The company uses emails to communicate with employees but using an information system can help the company to store documents in the folder so that they can be shared and accessed by workers (Shao et al., 2019). Information systems can help employees to become more dedicated and motivated towards the task. During the pandemic, Amazon adopted remote working practices and also provided safety gear to workers. Amazon used internal testing initiatives during pandemics to keep the warehouse and delivery workers secure.

Importance of creation, storing, application, and integration of information for good knowledge management practices

Creating, storing, sharing, applying, and integrating information for knowledge management practices is important for a company to boost business efficiency of decision-making ability (Rainer et al., 2017). It can help the company to make foster innovation within organizations that reduce employee turnover. Creating, storing, sharing, applying, and integrating information for knowledge management practices can help Amazon to encourage team members to share the expertise and provide training to employees. It can help the company to make an efficient workplace, make better decisions, increase collaboration, and build organizational knowledge. Knowledge management is essential for Amazon to optimize the training process, increase employee retention and market shares. Sharing data and information is the prime focus on Amazon that enabled innovation culture during the Covid-19 pandemic (Chua et al., 2019). The major knowledge management principles adopted by Amazon during a pandemic to create customer value are one portal, consistent presentation, personalization, crowdsourcing, and consistent transaction. Effective knowledge management development practices can help Amazon to support the creation and utilization of knowledge for attaining organizational objectives. Creating, storing, sharing, applying, and integrating information for knowledge management practices is important for Amazon to facilitate organizational strengths and informed decisions. It helps to improve employee's performance by supporting the creating and sharing of information knowledge management system.

Creating, storing, sharing, applying, and integrating information for knowledge management practices helps Amazon to stimulate cultural changes and also improve the workplace. It can help Amazon to share crucial information and improve employee's productivity. Good knowledge management practices also help the company to provide development opportunities to employees by effectively sharing the information (Rainer et al., 2017). For instance, during the Covid-19 pandemic, Amazon faced supply management issues so it uses artificial intelligence and machine learning technologies for improving supply chain management. Artificial intelligence and machine learning helped Amazon to anticipate buying patterns of customers during pandemics so that products can be offered to them effectively (Abualoush et al., 2018). Creating, storing, sharing, applying, and integrating information for knowledge

management practices helps Amazon to recognize employee contribution and align the employees' goals with organizational goals to increase morale.

Information systems implemented by Amazon

Amazon to interact with a large customer base uses the cloud computing information system. The AWS product of Amazon helps in successfully integrating and managing information systems (Shao et al., 2019). The greatest success factor of Amazon during the Covid-19 pandemic is the implementation of an advanced information system. Integrating information systems into the business process helps the company to increase efficiency and decentralize the decision-making process. The company uses two pieces of information management systems like Simple Storage Service which is connected to Amazon Web Service for promoting access to the e-commerce platform (Backes et al., 2019). With the Amazon Web Service information system, Amazon allows a large customer base to create accounts and also personalize their profiles for improving greater efficiency in the transaction process. The Amazon Web Service includes different systems and functionalities for promoting information management system efficiency and business process delivery. The information system of Amazon is very advance that helps to promote effective communication between sellers, buyers, and employees of the company. During the Covid-19 pandemic, the Amazon Web Services information system helped to provide technical support to help customer research, adopt remote working practices and offer effective solutions to communities (Abualoush et al., 2018).



Figure: 2 Amazon Web Services (Backes et al., 2019).

The robust AWS of Amazon includes several features such as security, efficiency, reliability, and reliability to effectively deliver business processes using customer relationship management systems. An integrated smart analysis search system of Amazon provides optimal security for offering personalized services to customers based on their profile (Santoro et al., 2018). This information system of Amazon is relatively built on Service Oriented Architecture for promoting service decentralization so that system scalability can also be improved. The transaction processing system of Amazon is also considered an important component of the information system that helps customers to efficiently and securely make purchases. Distinctive features of such transaction processing information system of Amazon include 1-click purchase and credit card payment that is highly reliable (Foote and Halawi, 2018). The information system of Amazon also integrates special functionalities such as a recommendation system that helps to analyze search queries of customers to offer them personalized services that are known as data mining. This data mining and personalization technique make the information system of Amazon highly interactive leading to increased customer satisfaction. The information related to customer's orders is mainly processed by using a supply chain management system which is later integrated into the web services and payment system. All information collected by a company using web services is then directed to the Enterprise Resource Management System which operates on an Oracle database management system (Backes et al., 2019). This Enterprise Resource Management System of Amazon helps to automate ordering procedures with greater accuracy related to delivery tracking and order scheduling. During the pandemic, Amazon reaped several benefits like scalability, integrated inventory management, better customer service, and product listing by integrating enterprise resource management systems.

Customer relationship management system is considered as another critical part of the information system of Amazon that increases business growth. This helps Amazon to collect data of customers such as transaction history, order records, and credit card information for storing information in the customer profile (Foote and Halawi, 2018). This helps the company to encrypt sensitive information of customers regarding credit card data or personal information to the delivery system for shipment. The customer relationship management system also helps Amazon to collect customer information related to customer queries, product reviews, and feedback for improving efficiency and scalability. The effectiveness of the information system of Amazon is

mainly determined by the business process efficiency such as transaction processing, order delivery, customer relationship management, and order.

To improve business process analysis during the Covid-19 pandemic, Amazon successfully integrated different information system components with the customer relationship management and database (Santoro et al., 2018). This helps the company to increase information transparency and decentralize the process of decision-making. Information systems made it possible for Amazon to effectively utilize business intelligence analytics for understanding the market environment and also informing improvement strategies to encourage customers to process more orders. The information management system of Amazon is used for creating a virtual copy of the physical marketplace to understand demand and supply variability. Integrating communication structures with the information management system helps the company in business process automation and resolving customer queries (Webb, 2017). Moreover, the delivery systems and order processing helps Amazon to enhance the real-time resolution of customer problems for increasing the smooth flow of the business process. When orders are placed by customers using AWS then the query is sent to the data warehouse through an information system. Once the customers of Amazon are satisfied then they add products to the cart for making payment.

The transaction information system of Amazon records payment details which are sent to the supply chain system where orders are prepared by employees for shipping. The supply chain information system later notifies customers through SMS and mail services that the product is shipped. Despite the increased competition faced by Amazon from another e-commerce website, the company is able to attract and retain a large customer base for improving business processes. Amazon profits and sales increased by 37 % during the pandemic by using information systems like AWS, transaction processing, customer relationship management, and enterprise resource management (Abubakar et al., 2019). The information system helps Amazon to analyze the customer interests and personality for offering them personalized recommendations that helped the company to increase customer acquisition and retention during a pandemic. This shows that the information system helps Amazon to enhance customer care, enrich their experience and also attract more customers to the website.

Effectiveness of knowledge and information management culture

Organizational culture plays greater role in mediating relationship between organizational knowledge and individuals. Organizational culture can help Amazon to determine how effective it is to create, store, apply and manage the knowledge process. The organizational culture of Amazon shows that it is completely a customer centric company. Amazon builds strong relationship with customers by keeping the record of their past purchases to offer them personalized services. Knowledge management helps Amazon to optimize creating, storing and distributing knowledge (Abualoush et al., 2018). Knowledge and information management culture shows that Amazon pushes employees to take risk and explore innovative ideas. Knowledge and information management culture helps Amazon to use data intensive information technologies for improving e-commerce business. The Knowledge and information management culture of Amazon depicts that the company continuously tries to determine customer preferences to increase their satisfaction.

Knowledge assets: Knowledge assets are considered as the intellectual resources of the business organization (Natalicchio et al., 2017). Knowledge assets are shown as critical patents, personal expertise, or invention used by Amazon to catapult innovation in the marketplace. This shows the knowledge processed by business organizations in form of capabilities, technical skills, ideas, and information. Creating knowledge assets help Amazon to gain a competitive advantage by effectively utilizing available capabilities. Amazon creates knowledge assets for increasing customer value by examining the know-how of individuals as well as routine knowledge that is embedded in the organizational routines (Abualoush et al., 2018). The company uses systematic knowledge assets for codifying knowledge and then storing it in the form of databases and documents (Handa et al., 2019). Amazon uses conceptual knowledge assets to express information in the form of brands and design. It has been examined that during the Covid-19 pandemic, knowledge assets helped Amazon to gain a competitive advantage using digitalization and data mining.

According to WIPO, it is examined that Amazon has about 5,000 patents. A few examples of knowledge assets in Amazon are the algorithms that determine recent advances in drone technology and shopping recommendations. Knowledge assets help Amazon to drive innovation in the organization during the pandemic by relatively optimizing the shopping experience of a

large customer base (Dayan et al., 2017). Amazon focuses on innovating at a rapid pace and it also filed a patent that enabled customers to pay the sum by selfie. It has been analyzed that Amazon made about 52 investments and 64 acquisitions. The company also invested in ionic security during the Covid-19 pandemic to get access to new technologies through mutual knowledge share. Leading innovation by leveraging knowledge assets helped Amazon to get long-term benefits during the crisis (Thomas and Chopra, 2020). The company is relatively able to push the innovation boundaries by investing sums in knowledge assets to offer a unique shopping experience to potential customers. Amazon shares the knowledge assets internally for saving duplicated efforts and increasing visibility to accelerate innovation.

Customer relationship management: Customer relationship management is considered as the combination of certain technologies and strategies for managing and analyzing the interaction of customers (Shao et al., 2019). Customer relationship management helps Amazon during the Covid-19 pandemic to increase customer avenues, enhance customer loyalty, simplify the marketing process and improve productivity. It also helps the company to enhance customer service, make faster decisions, and acquire new customers. Amazon has relatively built its own customer relationship management software for encapsulating customer data like location, previous purchase, and transaction history to customize the overall experience of customers (Chua et al., 2019). CRM helped Amazon during a pandemic to effectively tackle the customer queries and it also helps customers to access order history and see the product delivery status. Amazon mainly encourages customers for creating personal accounts that make it easier for them to track orders and make future purchases. The customer's account provides a targeted marketing mechanism to Amazon during the pandemic that helps Amazon to communicate with customers using email. The company provides discounts, coupons, and offers to customers based on their previous order during the pandemic that helped to increase sales to US\$ 386.064 in the year 2020 (Abualoush et al., 2018). CRM helps Amazon to provide a personalized recommendation to customers based on their past buying habits.



Figure: 3 Amazon profit during pandemic (Abualoush et al., 2018).

Potential Knowledge management challenges

Knowledge management is all about converting raw data into useful information. Knowledge management effectively contributes to streamlining ideas, solving problems, and developing new products. The major challenges Knowledge management challenges faced by Amazon are:

- It is very challenging for Amazon to keep the employees engaged and motivated for storing and sharing data. Amazon faces a lot of hurdles in motivating employees to share the work and ideas for increasing productivity (Handa et al., 2019).
- There are constant changes taking place that affects Amazon to operate the business effectively. The company faces support and funds for implementing information systems.
- Amazon faces greater issues in providing the right security level to the data. The company also faces knowledge management challenges in updating and verifying the information continuously (Dayan et al., 2017).
- Amazon faces greater challenges during the Covid-19 pandemic in balancing technology, process, and employees in the organization.
- The company faces a lot of hurdles in balancing cash flows as it pays an amount to third-party sellers every two weeks (Chua et al., 2019).
- The company faces excessive competition in the marketplace that affects customer acquisition and retention (Abualoush et al., 2018).

Recommendation to strengthen knowledge management practices

Amazon can relatively keep the employees motivated by embodying a culture of sharing, change, improving, and learning. Amazon can use permissions and security levels to make sure that information is shared in the correct channels with the right employees. Amazon can focus on mapping or standardizing the information so that information can become more meaningful for others. The company should also consider data relevancy to avoid overloading the users with unnecessary content (Thomas and Chopra, 2020). Amazon can encourage employees to form relationships for knowledge sharing. The company may create opportunities for employees to share ideas and thoughts for improving organizational culture. One of the best ways through which Amazon can strengthen knowledge management practices is taking employee's feedback to solicit their expertise, advice, and opinions.

Amazon can strengthen knowledge management practices by updating the knowledge management system to a collaborative online workspace. The company may invest funds in search functionality to help employees easily and quickly find out the information from the system to improve productivity. Amazon can strengthen knowledge management practices by using tags in the documents so that employees can easily search documents of the relevant topics. The company may reorganize content on information system by location and project with multiple operational roles and services (Abualoush et al., 2018). Amazon can strengthen knowledge management practices by creating a database of collective business knowledge. The company can make the content interactive and enjoyable by sharing it with employees during events like Q&A sessions and webinars. Amazon can strengthen knowledge management practices by developing a community of practice to help them identify and manage new resources, technologies, and tools for applying to the knowledge management systems.

Amazon can strengthen knowledge acquisition using machine learning and artificial intelligence. Machine learning can help the company to increase customer value, brand loyalty, build data to customer profile and increase profits. By using artificial intelligence for knowledge acquisition, Amazon can increase operational efficiencies, avoid mistakes, save time, optimize routine tasks and improve productivity (Chua et al., 2019). Amazon can improve knowledge retention by providing immediate feedback and incorporating game mechanics for boosting employee's engagement, interest, and motivation. Amazon can strengthen knowledge transfer by providing

training to employees so that they can use advanced technologies for improving customer experience.

Conclusion

It can be concluded from the report that knowledge management helps Amazon to improve data or information quality, secure intellectual property, optimize training and enhance communication through the organization. The report explained different knowledge management theories like organizational, ecological, and techno-centric knowledge management theory. The report showed that information system also helps Amazon to improve decision making, enhance competitive edge, and efficiency. The report examined that artificial intelligence and machine learning helped Amazon to anticipate buying patterns of customers during pandemics so that products can be offered to them effectively. The knowledge and information management culture of Amazon depicts that the company continuously tries to determine customer preferences to increase their satisfaction. The report also provided a recommendation to help Amazon strengthen knowledge management practices.

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