

SYS713

Advanced Knowledge Management Technology

Analysis of the effects of ICT in knowledge management and innovation

THE CASE OF ZARA GROUP

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BACK



CITIZENS! 8

BLACK WOOL JACKET

659.00 MYR



PATTERNED SWEATER

199.90 MYR



MIRRORED SUNGLASSES

99.90 MYR



COTTON RAMIE BLAZER

499.00 MYR



PRINTED T-SHIRT

119.90 MYR



FLEECE BIKER JACKET

229.00 MYR



About ZARA

Zara is a Spanish **clothing and accessories retailer** based in Arteixo, Galicia, **Spain** and **founded in 1975** by **Amancio Ortega** and **Rosalía Mera**. It is the flagship **chain store** of the **Inditex group**, the world's largest apparel retailer. The fashion group also owns brands such as Massimo Dutti, Pull and Bear, Uterqüe, Stradivarius, Oysho and Bershka.

ZARA Achievements

It is claimed that Zara needs just **one week to develop a new product and get it to stores**, compared to the **six-month industry average**, and launches around **12,000 new designs each year**.

Introduction

- Zara case study is about **best practice** and **integrative way** to **enhance knowledge management** and **innovation** through the use of **ICTs**.
- How combined use of **ICT tools** will **affect KM process**?
- Which **technologies** and **KM processes** that are worthy to implement?

Literature about KM and ICTs

Information as strategic resource to create and develop **competitive advantage**.

{ **KM** is a discipline that promote an **integrated approach** to **identify, capturing, evaluating, retrieving** and **sharing** all enterprise information **asset. }**

Literature about KM and ICTs

**{ asset - databases, documents, policies,
procedures, uncaptured expertise, experiences }**

Literature about KM and ICTs

Lindblom & Tikkanen (2010)

Conscious strategy of getting the **right knowledge** to the **right people** at the **right time** and helping people **share** and **put information into action** in ways that will **improve** organisational **competitiveness**

Literature about KM and ICTs

Nonaka and Takeuchi (1995)

Tacit - Personal knowledge, developed from experiences. Difficult to transmit, reproduce and embody. Shaped by ideas, abilities and values.

Literature about KM and ICTs

Hislop (2013)

Explicit - Formal and codified. Easy to define and transmit.

Literature about KM and ICTs

KM Process

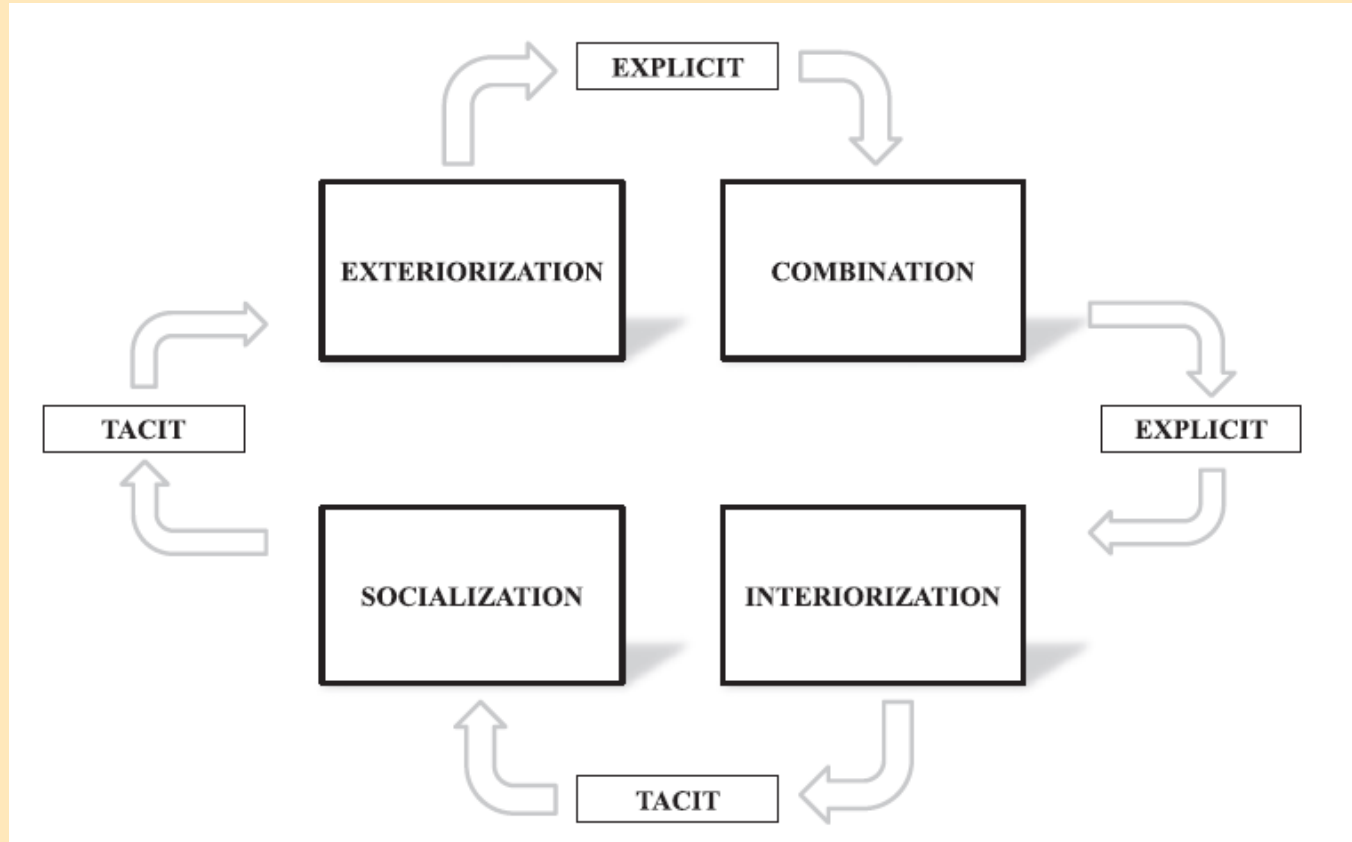
Combination and Socialisation - Knowledge Discovered

Externalization and Internalization - Knowledge Captured

Later, establish knowledge sharing and apply it



KM Processes Nonaka & Takeuchi (1995)



Literature about KM and ICTs

Buttler & Murphi (2007); Zhang et al (2013)

“ Organisation required **information** for **decision making**. **Several tools** that manage the **acquisition, distribution** and **use of information** stemming from relationship among organisation. ”

several tools - mostly ICTs

Literature about KM and ICTs

Organisations should have these technologies :

- to search for information
- to aid communication
- to filter and personalize information
- to develop integrated tools for KM
- to analyze data
- to develop information system
- to establish learning support

Methodology

The study was conducted in the following phases

- Definition of research objective
- Development of theoretical model and research question formulation
- Selection and identity of the unit of analysis
- Data collection and processing
- Case analysis

Research Objectives

To **analyze** the **influence of ICTs** on the **creation** of **different types of knowledge** in organizations and their **influence on innovation** (with regard to both **products** and **processes**).

Development of Theoretical Model

- Based on KM process by Nonaka & Takeuchi (1995)
- Focus to show **the effects of ICTs on KM and innovation.**
- 2 types of innovation (**product** innovation & **process** innovation).
- Establish which **technologies** and **KM processes** are **most beneficial** for the company.
- Develop **4 research questions** that relate **ICTs** to **KM**.
- Develop **2 research questions** that relate **ICTs of KM** to **innovation.**

Research Questions : ICTs to KM

1. The combined use of a series of **ICTs** has a positive impact on **knowledge socialization**. (rq1)
2. The combined use of a series of **ICTs** has a positive impact on **knowledge exteriorization**. (rq2)
3. The combined use of a series of **ICTs** has a positive impact on **knowledge combination**. (rq3)
4. The combined use of a series of **ICTs** has a positive impact on **knowledge interiorization**. (rq4)

Research Questions : ICTs of KM to innovation

1. The combined use of a series of **ICTs** in the **KM process** is a source of **product innovation**. (rq5)
2. The combined use of a series of **ICTs** in the **KM process** is a source of **process innovation**. (rq6)

ICTS AND KNOWLEDGE MANAGEMENT



	SOCIALIZATION	EXTERIORIZATION	COMBINATION	INTERIORIZATION
Information and Communication Technologies	<p>Tools aiding communication</p> <p>Information filters and personalization technologies</p> <p>Information systems</p>	<p>Information search tools</p> <p>Tools aiding communication</p> <p>Integrated technologies applicable specifically to KM</p>	<p>Information search tools</p> <p>Information filters and personalization technologies</p> <p>Integrated technologies applicable specifically to KM</p>	<p>Technologies for data analysis</p> <p>Learning support technologies</p> <p>Customer Relationship Management</p> <p>E-Commerce</p>
Effects of Information and Communication Technologies	<p>Information technologies allow us to obtain tacit knowledge from other tacit knowledge. This new knowledge is then added to the organization's collective data.</p>	<p>Information technologies allow tacit knowledge to be made explicit. It will be then integrated into the organizational culture.</p>	<p>Information technologies allow explicit knowledge to be created as the result of having explicit knowledge of various sources.</p>	<p>Information technologies allow the incorporation of explicit knowledge into tacit knowledge by means of reflection, simulation and implementation.</p>

RESEARCH QUESTION 1	RESEARCH QUESTION 2	RESEARCH QUESTION 3	RESEARCH QUESTION 4
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KNOWLEDGE IS MORE CODED AND TRANSMISSIBLE



RESEARCH QUESTION 5
RESEARCH QUESTION 6

**GREATER CAPACITY OF INNOVATION
(PRODUCT AND PROCESS)**

Unit of Analysis

The **Zara Group** was selected for its **importance in the textile industry**. Its first shop was opened in 1974, and today Zara has more than 1500 retail outlets throughout Europe, Asia and America, which makes it the **star brand** in the Inditex holding. In addition, the **intensive application of ICTs** at Zara has permitted the development of a **business model** that makes this company **stand out** among its main competitors. This business model is based on a complete channel, as it maintains **control** over both the **manufacturing** and **distribution** processes. Moreover, its **logistical processes** are considered to be among the **most effective in the world**. **Order and delivery control** is achieved through the application of the **just-in-time strategy** in all units and departments. **Speed** and the **control** over the **design-manufacturing-distribution process** is another key aspect of its success. This allows new garments to be placed in the retail outlets **twice a week**, with the aim of **adjusting to consumer tastes and preferences**.

Data Collection & Processing

1. Based on **internal** and **external document** evidence.
2. **Internal document evidence** - analysis of reports, internal studies, websites presentation files, corporate annual reports.
3. **External document evidence** - publications, databases, mass media.
4. All evidences were then **transcribed** with the aim of **categorizing** and **combining** them to be **aligned** to the proposed **theoretical model**.

Case Analysis

1. **Analyze** whether the formulated **research questions** are supported by the **available evidences**.
2. **Assess** whether the **research questions** should be **accepted, reformulated** or **rejected**.
3. Construct **analysis** on collected evidences and find out whether they converged towards **logical sequence** that may explain the **case result** - **explanation building technique**.

Findings - Research Question 1

The combined use of a series of ICTs has a positive effect on knowledge socialization.

	SOCIALIZATION	
ICTs used in ZARA	Tools aiding communication, Information filters and personalization technologies, Information systems	Theory
	Real-time information system, intranet, email, video conference	Finding
Effects of ICTs in ZARA	Information technologies allow us to obtain tacit knowledge from other tacit knowledge. This new knowledge is then added to the organization's collective data.	Theory
	Employees acquire new knowledge directly from their workmates. There is a transfer of tacit knowledge, where employees retain and assimilate such knowledge.	Finding

Findings - Research Question 2

The combined use of a series of ICTs has a positive effect on knowledge exteriorization.

	EXTERIORIZATION	
ICTs used in ZARA	Information search tools, Tools aiding communication, Integrated technologies applicable specifically to KM	Theory
	Management system based on electronic communication processed over Internet, Intranet, email, video conference	Finding
Effects of ICTs in ZARA	Information technologies allow tacit knowledge to be made explicit. It will be then integrated into the organizational culture.	Theory
	Transmitted-knowledge is encoded through the dialogue between employees and therefore, it is converted into explicit knowledge than can be shared.	Finding

Findings - Research Question 3

The combined use of a series of ICTs has a positive effect on knowledge combination.

	COMBINATION	
ICTs used in ZARA	Information search tools, Information filters and personalization technologies, Integrated technologies applicable specifically to KM	Theory
	Integrated technology applicable specifically to KM, Management system based on electronic communication processed over Internet.	Finding
Effects of ICTs in ZARA	Information technologies allow explicit knowledge to be created as the result of having explicit knowledge of various sources.	Theory
	Employees internalize the knowledge contained in the documents or software used in the management process and then convert it into their own knowledge.	Finding

Findings - Research Question 4

The combined use of a series of ICTs has a positive effect on knowledge Interiorization.

	INTERIORIZATION	
ICTs used in ZARA	Technologies for data analysis, Learning support technologies, Customer Relationship Management, E-Commerce	Theory
	Real-time information system, intranet, email, video conference	Finding
Effects of ICTs in ZARA	Information technologies allow the incorporation of explicit knowledge into tacit knowledge by means of reflection, simulation and implementation.	Theory
	Employees internalize the knowledge contained in the documents or software used in the management process and then convert it into their own knowledge.	Finding

Findings - Research Question 5

The combined use of a series of ICTs in the KM process is a source of product innovation.

Greater capacity of product innovation	Theory Goal
<p>Greater capacity of product innovation in ZARA</p> <ul style="list-style-type: none">- ICTs has enable a business model where fashion is perceived as a perishable output as the result of fast changes in consumer preferences.- “living fashion” in mind - adapting new consumer fast changing preferences.- design and sale of new outputs in the shop twice a week.- team learning, shared experiences.	<p>Effect (Finding)</p>

Findings - Research Question 6

The combined use of a series of ICTs in the KM process is a source of process innovation.

Greater capacity of process innovation	Theory Goal
<p>Greater capacity of process innovation in ZARA</p> <ul style="list-style-type: none">- short production line - efficiency and automation of production, logistic and distribution centres, zero stock policy.- integrated telecommunication systems, real-time information system.- cooperative working model.	<p>Effect (Finding)</p>

ICTS AND KNOWLEDGE MANAGEMENT



	SOCIALIZATION	EXTERIORIZATION	COMBINATION	INTERIORIZATION
ICTs used in Zara	Real-time information system. Intranet, e-mail, videoconferencing, ...	Management system based on electronic communication processed over Internet. Intranet, e-mail, videoconferencing, ...	I Integrated technology applicable specifically to KM. Management system based on electronic communication processed over Internet.	E-Commerce, Extranet (relation with suppliers). Creation of a foundation (that seeks the relation between the University and the enterprise)
Effects of Information and Communication Technologies in Zara	Employees acquire new knowledge directly from their workmates. There is a transfer of tacit knowledge, where employees retain and assimilate such knowledge.	Transmitted knowledge is encoded through the dialogue between employees and, therefore, it is converted into explicit knowledge that can be shared.	Employees internalize the knowledge contained in the documents or software used in the management process and then convert it into their own knowledge	Employees internalize the knowledge contained in the documents or software used in the enterprise management and then convert it into their own knowledge.

RESEARCH QUESTION 1 <input checked="" type="checkbox"/>	RESEARCH QUESTION 2 <input checked="" type="checkbox"/>	RESEARCH QUESTION 3 <input checked="" type="checkbox"/>	RESEARCH QUESTION 4 <input checked="" type="checkbox"/>
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GREATER CAPACITY OF PRODUCT INNOVATION IN ZARA
(design and sale of new outputs in the shops twice a week)

GREATER CAPACITY OF PROCESS INNOVATION IN ZARA
(short production line –efficiency and automation of production, logistic and distribution centres, zero stock policy)

RESEARCH QUESTION 5 ☒

RESEARCH QUESTION 6 ☒

Conclusion

- The study aims to analyze the effects of ICTs on KM process and its influences towards product and process innovation in ZARA.
- The author proposed a theoretical model of ICT-KM-Innovation based on KM process by Nonaka & Takeuchi (1995) which categorized KM to 4 processes (socialization, exteriorization, combination & interiorization)
- The author also introduced 6 research questions to be justified.
- The result showed that ZARA case study is in agreement with the research questions established in the theoretical model.
- It has been proved that the use of ICTs had helped ZARA in its knowledge management process and contribute towards its product and process innovation, making it the top brand in textile industry.



THANK YOU