

BRAC BUSINESS SCHOOL

BRAC UNIVERSITY-BANGLADESH

INTERNSHIP AFFILIATION REPORT ON

"Evaluation of consumer good product through analysis of quality function deployment and quality factors: A study of Horlicks Bangladesh."

An Internship Report Presented to the BRAC School of Business in

Partial Fulfilment of the Requirements for the Degree of

Bachelor of Business Administration (BBA)

Supervised By

DR MD. MAMUN HABIB

Associate Professor

Submitted By

Debendra Lama

ID: 14304076

Major in Operations supply chain management & Finance

Date of Submission December 17, 2018

Letter of Submission

13th December, 2018

Dr. Md Mamun Habib

Associate Professor,

BRAC Business School

BRAC University

Subject: Submission of Internship Report on "Evaluation of consumer good product through

application of quality function deployment and quality factors analysis".

Dear Sir,

This is my great honor to submit the internship report which I have been preparing for the last 3

months working at GlaxoSmithKline Limited Bangladesh, under finance department which is a

part of Finance and Accounts department. The title of the report is "Evaluation of consumer good

product through usage of quality function deployment and quality factor analysis". This report

has been prepared with the intention of fulfilling the course requirement of BUS 400, internship

program which is the final step before graduating from the university. The report is the final

outcome of successful completion of my internship program at the GlaxoSmithKline

Bangladesh. In my report I have tried to explore and define the importance of quality

management on Horlicks which is a consumer health drink of the company. This report tries to

emphasize impact of quality and tries to eradicate barriers between management and consumer

perspective.

I would like to express my gratitude for your humble opinionand guiding me patiently in

preparing the report. It would be a great success for me if you find this report informative and

innovative enough to fulfill the course requirements. I am really obliged to you.

Thanking you.

Sincerely Yours,

Debendra Lama

ID- 14304076

Acknowledgement

The achievement and concluding result of this project took me a lot of supervision and direct aid from many people and I find myself extremely privileged to have this immense support while writing this internship project. The fruitfulness of this report was possible only due to such direction and backing and I am very much appreciated to all the people who helped in completion of this report.

The internship chance I had with GlaxoSmithKline Bangladesh Limited was a great fortuitous experience for learning and professional development. I owe my heartiest gratitude to my internship supervisor Probal Raha deputy secretary of GlaxoSmithKline Bangladesh for enabling me this opportunity to work in his department. His involvement has made my internship period an enhanced learning experience. I choose this moment to acknowledge his contribution gratefully.

Also I would like to thank all the employees at secretarial department who took keen interest on my project work and helped to gathered necessary information and data which were used in this report.

I would like to use this opportunity to express my special thanks to associate professor Dr Md. Mamun Habib, my academic supervisor for enabling me to work under his valued supervision, giving me advices and guiding me to complete my internship report efficiently.

Finally I would like to express my deepest gratitude and special thanks to faculties of BRAC Business School and special thanks assistant professor Md. Hasan Maksud Chowdhury of supply chain course whose course teachings were directly used in this report.

Executive Summary

Inception of GlaxoSmithKline Bangladesh was in the year of 1949. The present day GlaxoSmithKline is the result of mergers, acquisitions and strategic alliance forged over the years. Therefore GlaxoSmithKline Bangladesh at present is an amalgamation of different companies each with unique trading method and industry value. GlaxoSmithKline started through their journey in Bangladesh as an importer of its own products in Chittagong. Currently GlaxoSmithKline has stopped their pharmaceutical operations in Bangladesh thus only consumer goods are in production. The consumer goods sector mainly focuses on the development, manufacturing and commercialization of consumer health good related products. From annual report of 2017 of GlaxoSmithKline Bangladesh Limited stated in the report that cost of sales across the businesses has increased significantly to support high standards of raw and packaging materials, as well as increased manufacturing expenses from past investments in up gradation of facilities. Operating expenses were maintained below inflationary rates through rationalization of discretionary expenses. Overall, profit after tax increased by 3.8% and stood at Taka 669 million. Correspondingly, EPS (Earnings per Share) increased from Tk 53.51 to Tk 55.56 for the reported year. Due to significance of Horlicks impact on GlaxoSmithKline Bangladesh Limitedthis report chose Horlicks as the main subject for the evaluation. The report intents to evaluate and analyze the total quality management of Horlicks and shed light on how Horlicks actual performance is according in terms of quality management and quality factors. This report has been distributed into 5 parts starting from introduction, literature review, methodology, findings/interpretation and recommendation. This report was written in perspective of Bangladesh and other developing countries. This report hopes to vanguard further research on quality management evaluation and measurement forconsumer products for better decision making in quality management. As there has been less report on quality management or quality related research about consumer good products. But quality is essential for a product to succeed. Often there is huge discrepancy between what management think and what consumers want in terms of quality. This report attempts to explores those discrepancies as well trying carve out whether Horlicks quality is up to mark or not. Finally this report endeavors with empirical observation to deduce any links between Horlicks current quality factors and its success as a consumer health drink as a whole. Finally few recommendations are provided on those empirical assumptions.

Table of contents	Page No.
1.Introduction	1
2.Literature review	2-3
3.Methodology	4
3.1Survey Instrument	4
3.2Scope	4
3.3Limitations	4
4.Results	5-6
4.1 Eight dimensions of quality	5
4.2 House of quality	5-6
4.3 Equations	6
5.Data/Information Analysis	7-9
6.Findings/Interpretation of data	10-12
6.1 Evaluation of management perception of quality	11
6.2 Evaluation of customer perception of quality	12
7.Recommendation	13
8.Conclusion	14
Reference	15-16

1. Introduction:

According to GlaxoSmithKline Bangladesh annual report 2017 Horlicks has been the top selling product of GlaxoSmithKline Bangladesh is one of the top Brands in Bangladesh across all categories. In this age of ecommerce and online retail shops quality maintenance has become own of emergent issues for consumer goods. Quality not only ensure profit for business but also solidifies the trust of buyers and helps to outcompete rivals in business. Quality management has been major topic of research recently among scholars and management.

Besterfield, D.H., Besterfield G.H., et al. (2004). Articulated that quality function deployment permits time savings due to design phase which enables concentration on the customer requirements, thus spending less time on redesign and modifications.

Main objectives of quality management includes increasing value, reducing waste, slashing cost time of various process intricate chain productions process. Quality management not only impacts supply chain department but also it influences marketing and financial performance of a company. Quality management can ensure total quality of a product and helps a company to maintain fluid performance of a company and customers satisfaction. Quality can be defined in many terms due to industry difference. Quality measurement or definition of a service industry is totally different than consumer product industry.

Garvin, D. (1987). Proposed quality as one of those slippery concepts, easy to visualize and yet difficult to define. Quality management evaluation of a product can increase potential performance a product as well as can reveal many unnoticed gaps that can cause product value to increase.

According to Androniceanu, A., (2017). Data analysis results have shown that TQM contributes to strengthening the capacity of the organizations to be able to with the competition, while the impact on turnover and profit is positive in most companies.

Overall quality is an important tool defining success of a company or product. But in order to maintain proper quality or to sustain quality in long run strategy a proper evaluation of quality is needed. Furthermore in order for a proper evaluation, aspects or factors are needed which can emphasize the needs of the consumers. This report attempts to evaluate quality through application of quality function deployment and quality factors. For the analysis Horlicks was as it is the most top selling good of GlaxoSmithKline Bangladesh and in other Asian countries.

2. Literature review:

According to Sebastianelli,R. and Tamimi. N, (2004), understanding product can be a step towards formulating necessary measurements that could ensure firms success with TQM programs and ultimately ensure firms production of high quality products.

Another study by Sadikoglu, E. and Olay, H. (2014). Suggested that if a firm has an e□ective performance measurement system by monitoring data on quality and the process successfully along with current performance data, firms can aptly manage its inventory resulting improvement in turnover rate of purchased materials and inventory.

Studies of Sadikoglu, E. and Olcay, H. (2014). Has found that diperent TQM practices significantly apect diperent outcomes such as knowledge and process management practices which are positively related to inventory management performance, innovation performance, social responsibility, and market and financial performance.

Garvin (1987), proposed firms should carefully define the dimensions of quality on which they hope to compete, and should then focus their energies in that area identifying them as dimension of quality which are also known as eight dimensions of quality described as the followings,

- Performance (primary product characteristics)
- Features ("bells and whistles")
- Reliability (frequency of failure)
- Conformance (match with specifications)
- Durability (product life)
- Serviceability (speed of repair)
- Aesthetics ("fits and finishes")
- Perceived quality (reputation and intangibles)

Besterfield, D.H, Besterfield, G.H, et al,(2004), described TQM as a strategy derived from internal and external customer and supplier wants and needs which are determined through daily management and cross functional management.

Additionally Akgün A. E., (2014), proposed that TQM principles can enable firms to capture, interpret, translate and deploy the knowledge, skills and attitudes of people throughout the organization to establish a collective learning capability

Describing QFD as voice of customer Besterfield, D.H, Besterfield, G. H, et al, (2004), provided that customer expectation can be converted into specific requirements, directions and actions, through means of engineering or technical characteristics that can be deployed by the following:

- Product planning
- Part development
- Process planning
- Production planning
- Service industries

House of quality described by Besterfield, D.H, Besterfield, G.H, et al,(2004). As a primary planning tool used in QFD which interprets the opinion of the customer into design requirements which meet specific target values and contests those against how an organization will meet those requirements.

Many managers and engineers prefer the house of quality to be the crucial chart or blueprint in quality planning and were the basis of this report questionnaire and evaluation.

Besterfield, D.H, Besterfield, G. H, et al (2004). Justified that once house of quality and its basic structure are understood, any other QFD matrices are fairly straightforward and easy to understand.

Akgün A.E., et al, (2014), in their research have noted that TQM influences the development of OLC (organization learning culture). And suggested that OLC facilitates the bridging link between TQM and firm's financial performance along with customer focus and process management, create a mutual trust and a knowledge-sharing culture among organizational members and leverage the impact of OLC on a firm's financial performance.

3. Methodology:

This report uses both primary and secondary data to evaluate the total quality management of Horlicks and tries to find empirical relation between quality management and financial performance. In this report the house of quality method is used along with David A Garvins proposed eight dimensions of quality as factors. Microsoft excel has been for used for this reports. Consumer questionnaires consisted of twelve questions, of which six were design to estimate customer service level (CSL) and the rest of the six were designed to assess the importance of customer requirement (ICR). CSL were rated Between 1 to 5, 1 expressed extreme dissatisfaction and 5 expressed extreme satisfaction. ICR were valued on rate of 1 to 10, the higher the number the satisfaction lower the number lower the satisfaction. All the number were then averaged. For the ease of calculation round figures were used. During survey from employees three employees of GlaxoSmithKline answered the questionnaires consisting 18 questions. The employees answers were used to evaluated consequently technical assessment, target service level, target value. The sum average were taken for evaluation.

3.1Survey instrument:

For this survey responses in terms of score in average were taken from ten consumer of regular consumer Horlicks and three marketing employees of GlaxoSmithKline Bangladesh.

3.2Scope:

This report provides quality management of Horlicks. The production process of Horlicks is almost similar in all countries. So in this report quality management procedures can be applied in case of other consumer goods and products.

3.3 Limitations:

In this report there were few limitations, one of the limitations were small number of survey samples. Second in this exploratory report conditions and scenarios relating to particular factor were assumed in order to come up with judgmental decisions.

4. Results:

4.1 Eight dimensions of quality:

Garvin, D. (1987), proposed eight critical dimensions or categories of quality that can serve as a framework for strategic analysis: Performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality. It is not necessary that all eight factors are important some may be excluded. As Horlicks is a consumer health drink product six factors among the eight factors were chosen for better analysis. These six factors were used to create questionnaire to measure what employees thought and what the customer perceived from Horlicks which are given in the following:

- 1. Performance: Performance generally means primary operating characteristics.
- 2. Reliability: This dimension reflects the probability of a product malfunctioning or failing within a specified time period.
- 3. Conformance: Conformance is the level product meets its characteristics meets established standards. Conformance means whether the price or expenses of meet what it promises to deliver.
- 4. Features: Is the supporting characteristics of a product that complements its basic functioning.
- 5. Durability: Generally implies product useful life, preservation and time duration before deterioration.
- 6. Aesthetics: Means products beauty, color, smell and tastes things which makes a product enchanting or desirable from outlooks.

4.2 House of Quality:

From total quality of management by 3rd edition Besterfield D. H, Besterfield G. H, et al (2004), provided explanation for house of quality. In house of quality walls of the house are the customer requirements. On the left side there is a listing of the voice of the customer or what the customer anticipation of the product. On the right side there are selected customer requirements or planning matrix. The ceiling, or second floor, of the house contains the technical descriptors. Stability of the product is provided through engineering characteristics, design constrains and parameters. The interior walls of the house are the relationships between customer requirements and technical descriptors. Customer expectations (customer requirements) are translated into engineering characteristics (technical descriptors). The roof of the house is the interrelationship between technical descriptors. Tradeoff between similar and/or conflicting technical descriptors

are identified. The foundation of the house is the prioritized technical descriptors. Items such as the technical benchmarking, degree of technical difficulty and target value are listed.

4.3 Equations:

Chowdhury, M.H.M, (2017). House of quality following equations were used to find out relative weight, RW.

Relative weight of Target Demand, RW_{TD} = (Relationship value x Importance of customer response) x (Total value/ Technical Assessment)

Relative weight of Customer Response, $RW_{CR} = (Total\ value/Customer\ Satisfaction\ Level)\ x$ Importance of Customer Response.

5. Data/ Information analysis:

	Performance	Reliability	Conformance	Features	Durability	Aesthetics
Customer	2.8	2.4	2.4	2.6	2.7	2.5
Service Level						
(CSL)						
Important	6.1	6.4	6.5	6	6.25	6
Customer						
Requirements						
(ICR)						
Target	4	4	3.7	4	4.3	4.3
service level						
(TSL)						

Table 1: Customer Service Level,Importance of Customer Requirement and Target Service Level

.

	Quality	Health	Price	Physical	Preserve/	Flavor/smell/
	ingredients	standard		benefits	durability	Taste/color
Technical	4.3	4.3	3. 7	3.7	3.7	4
assessment(TA)						
Target Value	4	4.3	4	4.3	4	4.3
(TV)						

Table 2: Technical Assessment and Target Value

The house of quality: For house of quality interrelation matrix were put after discussion with the employees who filled out the questionnaire and from personal work experience.

	Quality	Health	Price	Phys	Pres	Flavor				
	ingredi	standa		ical	erve	/				
	ents	rd		bene	/	smell /				
				fits	dura	taste/				
					bilit	color				
					у					
Performance	8	7	7	7	10	9	2.8	6.1	4	8.71
Reliability	8	6	8	6	9	5	2.4	6.4	4	10.67
Conformance	7	6	9	7	9	8	2.4	6.5	3.7	10.02
Features	8	7	9	7	6	8	2.6	6	4	9.23
Durability	7	6	8	7	8	8	2.7	6.2	4.3	9.95
								5		
Aesthetics	5	5	8	5	7	10	2.5	6	4.3	10.32
Technical	4.3	4.3	3.7	3.7	3.7	4				
Assessment										
Target Value	4	4.3	4	4.3	4	4.3				
Relative	248.60	229.60	329.	281.	329.	319.17	CSL	IC	TSL	Relative
Weight (RW)			08	65	84			R		Weight
OF Total										OF
Demand										Custome
(TD)										r
										Respons
										e
										(CR)

Table 3: Interrelation matrix for House of quality.

From the survey above following relative weights are found.

Target demand by	Total score	Customer requirement	Total score
Management			
Relative weight of	248.60	Relative weight of	8.71
performance		Quality Ingredients	
Relative weight of	229.60	Relative weight of	10.67
reliability		Health Standard	
Relative weight of	329.08	Relative weight of Price	10.02
conformance			
Relative weight of	281.65	Relative weight of	9.23
features		Physical benefits	
Relative weight of	329.84	Relative weight of	9.95
Durability		Preserve/durability	
Relative weight of	319.17	Relative weight of	10.32
Aesthetics		Taste/Smell/Color/Flavor	

Table 4: Total score list of target demand and customer requirement.

6. Findings/ interpretation of the data:

From the results following assessments were made on Horlicks quality management, which are very essential for success in the long run. All the analysis were made in order compare each other to perceive if all the quality factors have the same quality level or not. From the mathematical results following interpretations can be deduced.

6.1 Evaluation of management perception of quality.

This analysis checks whether management is properly balancing the quality of all factors in a product. Too much focus on one or few factors while neglecting others can create turbulence in quality management. From the relative weight calculation following evaluations management perception on target demands are made:

- 1. Performance: From the calculation performance had a score of 248.60. This factor was one of the second lowest factor in terms of relative weight. This might happen due to arrogantmarketing of Horlicks claims of making taller, stronger, sharper and other claims which had weak scientific explanation. Due to blatant claims from Horlicks the management may have failed to meet the performance factor. Horlicks one of the main priority should be increasing performance through research and development or at least aiming for feasible performance goals.
- 2. Reliability: Reliability has been the lowest of the quality factors scoring 229.60. This can be attributed to the performance factor. Reliability comes from customer faith, probability of a product malfunctioning or failing within a specified time period. Horlicks has failed to meet the claims what it promises in their advertisement and marketing promotion. From newspaper article (GSK faces lawsuit for flouting food safety rules,2018) cited that GlaxoSmithKline face legal action due to adoption ill tactics by promoting false and misleading advertisement and advertising activities to its 'Horlicks' products. None the less lawsuit against Horlicks made it server in terms of gaining reliability from customers. Thus causing discrepancy among the factors. Reliability needs strong attention from the management. If not corrected reliability might cause consumers declination.
- 3. Conformance: The level product meets its characteristics meets established standards. Surprisingly 329.08 which is the 2nd highest score among the relative weights. Surprisingly the performance and reliability didn't have much effect on conformance. Conformance means whether the price or expenses of Horlicks meet what it promises to deliver. So in that comparison it can be inferred that although Horlicks claims are farfetched consumers are

somewhat satisfied with the outcomes in terms of Horlicks price. Furthermore it can also be comprehended that people may have accepted or at least have forgiven Horlicks false promotional claims considering it as a conventional survival tactics in the market. Overall conformance weight is very high. The management of Horlicks at present should focus less on conformance.

- 4. Features: Are the supporting characteristics to complement basic functioning of the product. Relative weight in this factor was low along with performance and conformance. Its relative weight was 281.65. Possibilities for this lower performance can be traced back at lower performance and reliability rate. As features compliments basic functions which was performance it can be assumed that due to failure of basic or core functions to meet consumer requirement the features couldn't support enough to lift up customer expectations thus lowering the weights. Management needs to focus on features to further improve Horlicks.
- 5. Durability: Indicates product useful life, preservation and time duration before deterioration. Overall weight in this factor was 329.84. The highest weight among all the other factors. This result indicates that Horlicks quality management was more concerned with durability such as longevity or preserve age etc. The highest weight in durability can be attributed to inventory. As goods are stock piled in inventories for sales it not a wonder why Horlicks has a high weight rate in durability. Because preserve is necessary for products from deteriorating of age or time. Management should prioritize less on durability as durability is already had too much focus.
- 6. Aesthetics: Relates to smell, color, taste or flavor. The weight in this factor was 319.17, 3rd highest among the quality factors. This may have happen as Horlicks is a health drink and in order to make it appealing flavor, smell, taste and color are necessary. So it is usual for producers to focus on aesthetics factor more than other factors. Along with durability aesthetics needs less attention but management can add few extra color or flavor to increase the range of products.

6.2 Evaluation of customer perception of quality:

This part tries to attempt to make empirical deduction about the customer perception on quality through the relative weights on customer requirements. The purpose is to see whether customer perceptions are aligned with management perception. The followings are the consumer perception on factors of quality:

- 1. Quality Ingredients: Derived score was 8.71 which was lowest among all customer requirement for quality factors. Showing that consumers are not that satisfied what Horlicks contains or serves in in terms of ingredients thus creating a gap. Recent newspaper article sites "Warrant issued for arrest of GlaxoSmithKline, Bangladesh chairman, GM" may have added to poor consumer perception that Horlicks. Largely quality ingredients is the top most priority of consumers and Horlicks management should prioritize quality ingredients more than other quality factors. Finally management emphasis on performance weight carried 248.60 meaning management didn't focus on performance and customer realized it. This lower ratings in quality ingredients
- 2. Health Standard: Scored 10.67 highest among customer requirement weight for quality factors. High performance rate for health standard can be traced back to company reputation of GlaxoSmithKline. Management perspective reliability factor had 229.60 the lowest yet consumer rating were high. So management made the right move to put less emphasis on
- 3. Price: Scored 10.02 which is high among customer requirement. For a mass consumer drink like Horlicks price plays a crucial factor for attracting consumers. So consumers aren't concerned with price of Horlicks.
- 4. Physical benefits: Was below 10 which is 9.23 creating a gap. Physical benefits was less due to superefficient claims that customer didn't get the results what was promised. Thus consumers believe that management Horlicks should focus on physical benefit factor.
- 5. Preserve/durability: Was 9.95 almost close to 10. In case of durability customer maybe expecting little higher. This indicates that consumerswant preserve and durability increase little bit more and management should put some focus on preserve/durability.
- 6. Taste/Smell/Color/Flavor: With a score 10.32, shows it is up to mark comparable with other customer requirements. So this part needs less focus according to customers.

7. Recommendation:

From the interpretation above this report discovered major gaps between consumers and management perspective. Not all quality factors need, the one with the major problems or lacking should be prioritized first. In this case major problem is in performance of Horlicks. The best way to resolve Horlicks problem through aligning consumer perception with management's goal. Following steps can be made to correct performance of Horlicks.

- 1. Performance and quality ingredients: Due to lack of quality ingredients consumers felt that performance wasn't right. So Horlicks should put focus on performance through increasing quality ingredients. This part needs urgent attention and should be top priority of Horlicks management.
- 2. Reliability and health standards: In this case Horlicks management had less emphasis on reliability. Management in this part was correct as consumer were satisfied with Horlicks health standard more than other factors. So maintenance should be below priority list of Horlicks as it doesn't need urgent correction.
- 3. Conformance and price: From analysis it can be observed that Horlicks management put a lot of emphasis on conformance and people are satisfied paying for it. Meaning Horlicks is meeting needs according to price. So this part also should have less priority by management.
- 4. Features and physical benefits: This factors had less attention from management although according consumers the emphasis still needed. Although the consumer ratings were close to other factors slight improvement is required. Thus should be place in mid priority level.
- 5. Durability and preserve: Somewhat satisfactory from both management and consumer view still improvements should made for future strategy. Durability and preserve should be in lower most priority by management.
- 6. Aesthetics and Taste/Smell/Color/Flavor: Had good attention from management and consumer scores were good. So this factors should have less focused by management and should be in lower priority list.

Overall form this analysis it can be derived that all the quality factors in Horlicks weren't stable and some factors were emphasized more than other factors by the management. Proper quality control ensures that all quality aspects are emphasized equally and which are aligned with consumer needs. By following the recommendations above Horlicks will be able to decrease the quality discrepancies and will be able to deploy total quality functions properly.

8. Conclusion:

Horlicks has been one of the favorite health drinks for along tome. But recently Horlicks has been marred by lawsuit and allegation for exaggerating its results. Horlicks has been banned in many countries although production remains in some of Asian and African countries with good amount sales and return on profit. Overall this evaluation of was based on qualitative perspective. Despite all the lawsuits against Horlicks this study has revealed if majors gaps in different aspects of quality is resolved reputation of Horlicks can uplift its reputation and profit in the market. In terms evaluation this report mainly focuses on supply chain side or production side of Horlicks. None the less quality impacts both finance and marketing approach. Although this study is mainly focused on Horlicks similar consumer products can apply quality function approach to find out quality gaps among their products and work on to resolve those issues by following recommendations and research method of this report. This report is a basic attempt at deciphering quality management issues. There are few limitations such as small sample survey and recommendations were based on personal experience and assumption. In conclusionthis report hopes to encourage and espouse further studies on consumer products gaps through quality function deployment and quality dimensions in order to identify and locate gaps through supply chain perspective.

Reference:

GlaxoSmithKline Bangladesh Limited (2018). 2017 annual report. Retrieved from https://www.gsk.com/en-gb/contact-us/worldwide/bangladesh/

Sebastianelli, R., Tamimi, N., 2002. How product quality dimensions relate to defining quality. The International Journal of Quality and Reliability Management 19 (4), 442–454.

Androniceanu, A., 2017. The Three-Dimensional Approach of Total Quality Management, an Essential Strategic Option for Business Excellence. Amfiteatru Economic, 19(44), pp 61-78.

Sadikoglu E, Olcay H. The effects of total quality management practices on performance and the reasons of and the barriers to TQM practices in Turkey. AdvDecisSci 2014; 2014: 17.

Ali E. Akgün, HuseyinInce, Salih Z. Imamoglu, HalitKeskin&İpekKocoglu (2014) The mediator role of learning capability and business innovativeness between total quality management and financial performance, International Journal of Production Research, 52:3,888-901.

Garvin, D.A.(1987),"Competing on the eight dimensions of quality", Harvard Business Review, Vol. 65 No. 6,pp.101-9.

Besterfield, D.H., Besterfield-Michna, C., Besterfield, G.H. and Besterfield-Sacro, M. (2004), Total quality management. New Jersey: Pearson Prentice Hall.

Chowdhury M.H.M, (2017). MSC422: Total Quality Management [Class handout]. BRAC Business School, BRAC University, Dhaka, Bangladesh.

GSK faces lawsuit for flouting food safety rules (17th September 2018). Daily Sun. Retrieved from https://www.daily-sun.com/printversion/details/336625/2018/09/17/GSK-faces-lawsuit-for-flouting-food-safety-rules