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THE USE OF BENCHMARKING PRACTICES IN ACHIEVING COMPETITIVE ADVANTAGE IN OMAN MEDICAL COLLEGE- SURVEY BASED STUDY

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Abstract:

GFP & Pharmacy in Oman Medical College have applied benchmarking practices to achieve competitive advantage though the private universities to a greater extent. Based on the present study, Significant or marginally significant differences were found between the pharmacy and GFP faculty as seen below from the mean differences scores:

- Pharmacy faculty give more importance to benchmarking with other institutions as compared to GFP faculty (4.33 vs. 3.57, *P*-value =0.056)
- GFP faculty give more importance to in-house benchmarking as compared to Pharmacy faculty (4.71 vs. 4.17, *P*-value =0.051)
- GFP faculty give more importance to linking with quality management practices as compared to Pharmacy faculty (4.71 vs. 4.00, *P*-value =0.07)
- GFP faculty appear more convinced that success of benchmarking to a large extent improves people administration as compared to Pharmacy faculty (4.17 vs. 3.75, *P*-value =0.08)
- GFP faculty are not convinced that the college has been successful in producing low student faculty ratio as compared to Pharmacy faculty who feel the college has been quite successful in this (3.14 vs. 4.17, *P*-value=0.03)

INTRODUCTION:

Benchmarking is a continuous analysis of strategies, functions, processes, products or services and performances with the intention of assessing an organization's current standards and thereby carrying out self-improvement by implementing changes to scale or exceeding those standards.⁽¹⁾

Benchmarking is the process of identifying, understanding, and adapting outstanding practices from organizations anywhere in the world to help an organization improve its performance ⁽²⁾. There are four different types of benchmarking which consist of: internal benchmarking, competitive benchmarking, functional or industry benchmarking, and process or generic benchmarking. Before deciding to benchmark, a Institution needs to determine what it is they want to benchmark ⁽¹⁾.

Benchmarking has been used occasionally in the construction industry for many years, the recent surge of interest has been encouraged by the publication of sets of national Key Performance Indicators that allow companies to measure their performance simply and to set targets based on national performance data.⁽³⁾

Benchmarking is also beneficial as a strategic tool and it is possible to get a jump on competitors by using new-found strategies which opens up opportunities for growth that the competitors may not be aware of. Benchmark also enhances learning when the organization hears about another's processes and how they are working which help employees to believe that there may be a better way to compete ⁽⁴⁾.

Benchmarking highlights problem areas and the potential for improvement, providing an incentive to change, and assists in setting and formulating plans and strategies ⁽⁵⁾.

Types of benchmarking

1. Functional or industry benchmarking:

Functional or industry benchmarking is performed externally against industry leaders or the best functional operations of certain organizations. The benchmarking partners are usually those who share some common technological and market characteristics. They also seem to concentrate on specific functions. Because there are no direct competitors involved, the benchmarking partner is more willing to contribute and

share. A disadvantage can be the cost and scheduling of the already overwhelmed benchmarked companies. ⁽¹⁾

2. International benchmarking:

Internal benchmarking is a comparison among similar operations within one's own organization. Within the university this would involve comparisons of departments, campuses or sites in order to identify best practices in the institution without having an external standard against which to compare results and is ideal where constituent colleges exist ⁽⁶⁾. This is a starting point for organizations, since organizations must understand their own services or processes before they can be compared to others. Internal benchmarking activity establishes operating standards within organizations ⁽⁷⁾.

3. External competitive benchmarking:

External competitive benchmarking involves comparison of performance in key area based on information from institutions seen as direct competitors. This activity follows an internal benchmarking activity, since the internal information must be gathered and analyzed before it can be compared to external data ^(8,9,10).

4. Process or generic benchmarking:

Process or generic benchmarking focuses on the best work processes where the similar procedures and functions are emphasized. It involves a comparison of work processes with others who have innovative, exemplar work processes and can be used across dissimilar organizations. It requires a broad conceptualizing of the entire process and careful understanding of the procedures^{(11),(12)} add metric benchmarking which is based upon comparisons of certain performance data which are perceived to be important and relevant. Individual organizations can evaluate their performance in relation to that of the leading performers. This however is more concerned with what constitutes good performance rather than how it is achieved, it may help organizations pinpoint certain aspects of performance to improve but gives little guidance in the process of learning to improve⁽¹⁾.

Benchmarking in Higher education

Benchmarking, as a process for self-evaluation, was adapted to higher education in North America in the early 1990s ^(6, 13, 14, 15, 16, and 17). In the UK benchmarking in higher education began in the early to mid-1990s. The method was initially applied to the

management of services like library, facilities, estates, energy and treasury ⁽¹⁵⁾, but interest in the technique has grown rapidly over the last two years to the point where it is likely to become a significant tool for the management and improvement of quality and standards in most areas of higher education. Benneworth noted that benchmarking has emerged as a complementary approach to contribute to making sense of how European universities are progressing towards being autonomous and competitive institutions which use public funds effectively and efficiently and optimize their wider societal contributions economically, socially, politically and culturally ⁽¹⁸⁾.

HEI benchmarking involves providing the institution with an ambition for improvement, to look at a set of comparators and acknowledge that they could be managed more effectively. The HEI must also understand why the benchmark works better by comparing the processes by which the various organizations deliver particular outcomes. This is followed by a response to the diagnosis of the problem and developing a strategy for organizational development ⁽¹⁸⁾.

Johnston and Media and Vlasceanu *et.al* Identified types of benchmarking in European universities which include internal benchmarking between different departments, campuses or sites within a university in order to identify best practice in the institution, without necessarily having an external standard against which to compare the results. External competitive benchmarking involves comparison of performance in key areas based upon information from institutions which are seen as competitors and those who are not immediate competitors.^(19,20)

According to Garlick and Pryor ⁽²¹⁾ benchmarking in Australian Universities has been largely restricted to an assessment of administrative function rather than focusing on teaching and research, and has not been used for organizational improvement. One of the main problems with benchmarking between universities has been a lack of consistency in the benchmarks used and the method of measurement, rendering comparison very difficult.

Hong Kong universities have tried to benchmark with top universities in the world, though they are struggling to compete for limited resources ⁽²²⁾, in order to gain international ranking. Mugenda ⁽²³⁾ in her presentation at a UNESCO Global forum suggested that benchmarking is inevitable as it helps universities stay competitive by transforming organizations processes into strategic tools, helps higher education

institutions to compare systematically their practice and performance with peer institutions. Magutu *et al.* ⁽²⁴⁾ in their study of benchmarking in Kenya's public universities found that public universities use action research and performance indicators as the sources of referencing information on benchmarks but success has been minimal. Critical factors that have influenced the success of benchmarking practices are time and resource availability, limited duration, and compatibility, which explain why the institutions don't practice international benchmarking.

McKinnon *et al.* ⁽²⁵⁾ suggest its use to provide senior staff with tools to ascertain performance trends in the university and to initiate continuous self-improvement activities.

Universities and Higher education institutions have an increasing need to benchmark their performance against their peers and benefit in form of development of the institution's strategy and identify new trends early and gain advantage over others.

Statement of the problem

In the global market of higher education there are clearly competitive advantages in establishing and maintaining a reputation for providing good quality education, high academic standards and World-class research output. Universities are under increasing pressure to show how they perform relative to universities in the global community and there is growing interest in transnational benchmarking to make reliable international comparisons and learn from other higher education systems ^(26,27,28).

Oman medical College (Bowsher Campus) carry out benchmarking with other departments, a practice which would help them identify and adopt good practices from 2016 onwards.

A competitive university is beneficial to the social and economic development of the country towards realization of Oman's vision 2030. Parents spend money to provide higher education for their children.

Oman Medical College engages local, regional and international partners in research, innovation, capacity building and staff and student exchange. All these stakeholders would benefit from the Oman medical college that has an effective benchmarking system that enhances its competitive advantage.

Specific Objectives

1. To identify reasons for initiating benchmarking in Oman medical college.
3. To assess the level of success in benchmarking at Oman medical College.
4. To assess the effect of benchmarking in achieving competitive advantage in Oman Medical College.

Benchmarking highlights problem areas and the potential for improvement, providing an incentive to change, and assists in setting and formulating plans and strategies ⁽⁵⁾.

Challenges to benchmarking Challenges to benchmarking established include the fact that benchmarking requires a significant commitment of resources such as people, time, and money, without any guarantee that there will be any positive results. Henczel ⁽²⁹⁾ and Cassell *et al.* ⁽³⁰⁾ organizations chose not to benchmark due to the lack of time and resources. Other limitations were difficulty in finding a suitable partner ⁽³¹⁾ while Brah *et al.* ⁽³²⁾ indicated misperception of the need to benchmark, failure to link benchmarking to strategic priorities; lack of understanding the benchmarking concept in Singapore. Another limitation to benchmarking is that universities traditionally do not think in process terms but rather in terms of the task they deliver such as teaching, research, development of higher level skills or simulation and innovation.

Methodology

The research design adopted by the researcher for this study was descriptive. This design was adopted because it involves extensively observing and describing performance appraisal systems. Descriptive studies report summary data such as measures of central tendency including the mean, median, and mode, deviance from the mean, variation, percentage, and correlation between variables.

The target population was 12 Pharmacy faculty and 7 General foundation faculty of full time academic staff from General foundation department and Pharmacy department within the Oman Medical College.

A questionnaire was designed and administered to the full time academic staff. It was chosen as it provides a more comprehensive view than any other research tool and is able to collect data from respondents.

Questionnaires are also easy to analyze and most statistical analysis software such as SPSS can be used to process them. The researcher with the help of assistants delivered the questionnaires to the sampled departments and issued to the respondents.

Data was cleaned and edited to eliminate errors and omissions then coded in to numerical representations so that a series of statistical analysis could be performed using the software application package SPSS version 20. The researcher used descriptive statistics to summarize the data generated by the survey in terms of the distribution of responses for each variable and the relationships between variables. The researcher calculated frequencies to establish how many people answered each question with each particular response.

The distribution of responses for the independent variables, and the dependent variable were summarized using frequency tables.

Results and discussion

Study findings based on each objective are presented below.

Types of Benchmarking

Respondents from both General foundation (GFP) and Pharmacy department were asked to indicate the types of benchmarking carried out in Oman Medical College.

BENCHMARKING –Responses from GFP

Table 1: Type of Benchmarking	Total =n	MI	I	N	U	HU	Total	Mean Score
In-house	7	71%	29%	0%	0%	0%	100%	4.71
External Competitive	7	14%	86%	0%	0%	0%	100%	4.14
Industry	7	0%	43%	43%	0%	14%	100%	3.14
Other Institutions	7	0%	71%	14%	14%	0%	100%	3.57
Hospitals	6	0%	33%	67%	0%	0%	100%	3.33
Table 2: Reasons for benchmarking	Total =n	MI	I	N	U	HU	Total	Mean Score
Maintain competitive advantage	7	71%	29%	0%	0%	0%	100%	4.71
Public concerns for academic standards	7	29%	57%	14%	0%	0%	100%	4.14
Achieve continuous improvement	7	71%	29%	0%	0%	0%	100%	4.71
Learn other processes	7	43%	57%	0%	0%	0%	100%	4.43
Achieve Uniformity	7	29%	43%	29%	0%	0%	100%	4.00
To set internal standards	7	57%	43%	0%	0%	0%	100%	4.57
Enhanced learning	7	43%	43%	14%	0%	0%	100%	4.29
Table 3: Elements of Benchmarking	Total =n	GE	SE	M	SE	VSE	Total	Mean Score
Continuous practice	7	57%	43%	0%	0%	0%	100%	4.57
Systematic/consistent methodology	6	33%	67%	0%	0%	0%	100%	4.33
Actions are implemented	7	57%	29%	14%	0%	0%	100%	4.43
Best practices are identified	7	57%	43%	0%	0%	0%	100%	4.57
Teamwork is adopted	7	43%	43%	14%	0%	0%	100%	4.29
Linked with quality management practices	7	71%	29%	0%	0%	0%	100%	4.71
Table 4: Success of Benchmarking	Total =n	GE	SE	M	SE	VSE	Total	Mean Score
Strategic tool	7	14%	57%	29%	0%	0%	100%	3.86
Growth prospective	5	20%	40%	40%	0%	0%	100%	3.80
Tool for assessment and improvement of performance	7	57%	14%	29%	0%	0%	100%	4.29
Tool for continuous improvement	7	43%	29%	29%	0%	0%	100%	4.14
Improved customer satisfaction	7	43%	57%	0%	0%	0%	100%	4.43
Process improvement	6	33%	33%	33%	0%	0%	100%	4.00
Quality improvement	7	43%	57%	0%	0%	0%	100%	4.43
Setting of internal standards	7	43%	57%	0%	0%	0%	100%	4.43
Innovative approaches	7	43%	57%	0%	0%	0%	100%	4.43
Improvement of people administration	6	17%	83%	0%	0%	0%	100%	4.17
Table 5: Competitive advantage	Total =n	HS	S	N	U	HU	Total	Mean Score
Low student faculty ratio	7	0%	43%	29%	29%	0%	100%	3.14
Large number of competitive programs	6	17%	67%	17%	0%	0%	100%	8.14
Excellent research institution	7	14%	71%	14%	0%	0%	100%	4.00
Attracts best academicians and undergrads	7	29%	57%	14%	0%	0%	100%	4.14
Enjoys substantial funding/linkages	6	17%	17%	67%	0%	0%	100%	3.50
produces well qualified graduates	7	43%	57%	0%	0%	0%	100%	4.43

Benchmarking - Responses from Pharmacy Department

Table 1: Type of Benchmarking	Total n	MI	I	N	U	HU	Total %	Mean Score
In-house	12	25%	67%	8%	0%	0%	100%	4.17
External Competitive	12	58%	33%	8%	0%	0%	100%	4.50
Industry	12	0%	33%	50%	0%	17%	100%	3.00
Other Institutions	12	50%	33%	17%	0%	0%	100%	4.33
Hospitals	12	25%	25%	33%	17%	0%	100%	3.58
Table 2: Reasons for benchmarking	Total =n	MI	I	N	U	HU	Total	Mean Score
Maintain competitive advantage	12	58%	42%	0%	0%	0%	100%	4.58
Public concerns for academic standards	12	50%	42%	8%	0%	0%	100%	4.42
Achieve continuous improvement	12	67%	33%	0%	0%	0%	100%	4.67
Learn other processes	12	42%	50%	8%	0%	0%	100%	4.33
Achieve Uniformity	12	50%	42%	0%	8%	0%	100%	4.33
To set internal standards	10	70%	30%	0%	0%	0%	100%	4.70
Enhanced learning	9	78%	11%	11%	0%	0%	100%	4.67
Table 3: Elements of Benchmarking	Total =n	GE	SE	M	SE	VSE	Total	Mean Score
Continuous practice	12	58%	42%	0%	0%	0%	100%	4.58
Systematic/consistent methodology	12	67%	17%	17%	0%	0%	100%	4.50
Actions are implemented	12	50%	33%	8%	8%	0%	100%	4.25
Best practices are identified	12	67%	25%	0%	8%	0%	100%	4.50
Teamwork is adopted	12	42%	42%	17%	0%	0%	100%	4.25
Linked with quality management practices	11	27%	55%	9%	9%	0%	100%	4.00
Table 4: Success of Benchmarking	Total =n	GE	SE	M	SE	VSE	Total	Mean Score
Strategic tool	12	33%	50%	17%	0%	0%	100%	4.17
Growth prospective	12	50%	42%	8%	0%	0%	100%	4.42
Tool for assessment and improvement of performance	12	58%	25%	8%	8%	0%	100%	4.33
Tool for continuous improvement	12	58%	33%	8%	0%	0%	100%	4.50
Improved customer satisfaction	12	33%	67%	0%	0%	0%	100%	4.33
Process improvement	12	42%	42%	17%	0%	0%	100%	4.25
Quality improvement	12	42%	42%	8%	8%	0%	100%	4.17
Setting of internal standards	12	67%	25%	8%	0%	0%	100%	4.58
Innovative approaches	12	58%	33%	8%	0%	0%	100%	4.50
Improvement of people administration	12	0%	75%	25%	0%	0%	100%	3.75

Table 5: Competitive advantage	Total =n	HS	S	N	U	HU	Total	Mean Score
Low student faculty ratio	12	42%	42%	8%	8%	0%	100%	4.17
Large number of competitive programs	12	33%	50%	0%	17%	0%	100%	4.00
Excellent research institution	12	42%	42%	8%	8%	0%	100%	4.17
Attracts best academicians and undergrads	11	45%	45%	0%	9%	0%	100%	4.27
Enjoys substantial funding/linkages	12	42%	25%	17%	8%	8%	100%	3.83
produces well qualified graduates	12	75%	25%	0%	0%	0%	100%	4.75

The Quality Assurance Cell of the Oman Medical College, Bowshar Campus, conducted a survey on Faculty Feedback on Benchmarking. Each faculty had to give their feedback on various aspects of benchmarking viz., Type of Benchmarking, Reasons for Benchmarking, Elements of Benchmarking, and Success of Benchmarking and Competitive advantage. The results are as follows:

A. Similarity between GFP & Pharmacy

1. Majority faculty in both programs ($\geq 70\%$) feel that the following types of benchmarking are important or very important; In-house, external competitive and other institutions, whereas fewer than 50% in both faculty feel similarly about industry & hospitals.
2. Majority ($\geq 80\%$) in both GFP and Pharmacy faculty agree that the following are important or very important reasons for benchmarking; maintain competitive advantage, public concerns for academic standards, achieve continuous improvement, learn other processes, achieve uniformity, set internal standards and enhanced learning
3. being achieved to some extent or a great extent, viz., continuous practice, systematic/consistent methodology, action implementation, best practices identification, teamwork and linkage with quality management practices
4. Majority ($\geq 70\%$) of both faculty agree to a large extent the following are successes of benchmarking; strategic tool, tool for assessment and im-

provement of performance, tool for continuous improvement, improved customer satisfaction, quality improvement, setting of internal standards, innovative approaches and improvement of people administration.

5. With regards to Competitive advantage both faculty agree in 4 out of 6 areas. Majority ($\geq 80\%$) in both faculty feel that the college has been successful or highly successful in the following areas; large number of competitive programs, excellent research institution, attracts best academician and undergrads and produces well qualified graduates.

B. Dissimilarity between GFP & Pharmacy

1. Higher proportion of pharmacy faculty (92% and 84%) feel that Growth prospective and Process improvement are being achieved to some extent or a great extent as compared to only 60% and 66% of the GFP faculty who feel the same.
2. Higher proportions of pharmacy faculty feel that the college has been successful in achieving low student-faculty ratio(84%)and in attracting substantial funding and linkages(67%) as compared to only 43% and 34% respectively of the GFP faculty who feel similarly.

Conclusion

The conclusion is that both GFP & Pharmacy in Oman Medical College have applied benchmarking practices to achieve competitive advantage though the private universities to a greater extent. Based on the present study, Significant or marginally significant differences were found between the pharmacy and GFP faculty as seen below from the mean differences scores:

- Pharmacy faculty give more importance to benchmarking with other institutions as compared to GFP faculty (4.33 vs. 3.57, P -value =0.056)
- GFP faculty give more importance to in-house benchmarking as compared to Pharmacy faculty (4.71 vs. 4.17, P -value =0.051)
- GFP faculty give more importance to linking with quality management practices as compared to Pharmacy faculty (4.71 vs. 4.00, P -value =0.07)

- GFP faculty appear more convinced that success of benchmarking to a large extent improves people administration as compared to Pharmacy faculty (4.17 vs. 3.75, P -value =0.08)
- GFP faculty are not convinced that the college has been successful in producing low student faculty ratio as compared to Pharmacy faculty who feel the college has been quite successful in this (3.14 vs. 4.17, P -value=0.03)

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