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اعتماد NCAAE

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2011-1432

Prince Musaid Bin Abdulrahman University

College of Computing and Informatics

Key Performance Indicators for Bachelor of Information Technology

Submitted to the:

National Center for Academic Accreditation and evaluation (NCAAA)

Table of Contents

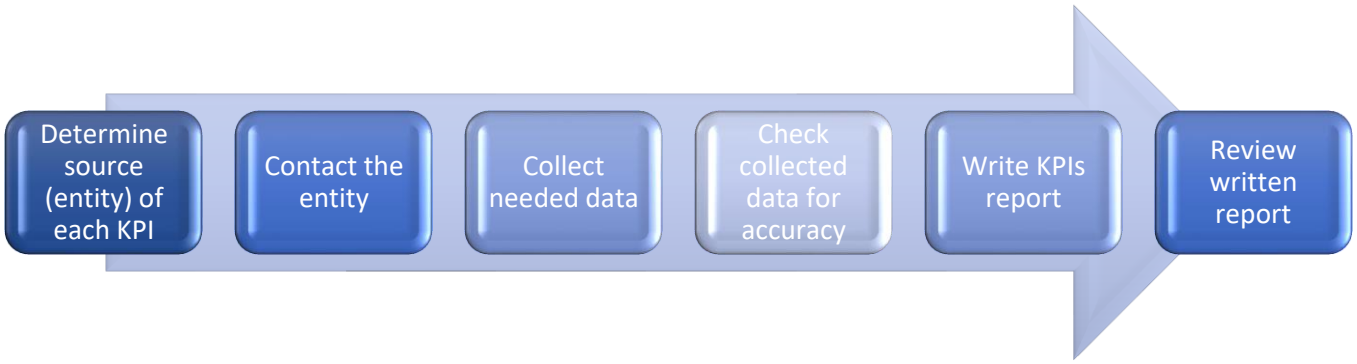
1. Introduction 1
2. Methodology used to Identify the Internal and External Benchmarking 1
A) KPIs' internal benchmarking: 1
B) KPI's external benchmarking: 1
3. Setting up the new KPIs' target values 2
4 Key Performance Indicators (KPIs) and Benchmarking 3
A. KPI 1 Table: Percentage of achieved indicators of the program operational plan objectives. 3
B. KPI *2 Table:* **Students' Evaluation of quality of learning experience in the program**. 5
C. KPI *3 Table:* **Students' evaluation of the quality of the courses**. 7
D. *KPI 4 Table: Completion rate.* 9
E. *KPI 5 Table: First-year students retention rate.* 11
F. *KPI 6 Table: Students' performance in the professional and/or national examinations.* 13
G. *KPI 7 Table: Graduates' employability and enrolment in postgraduate programs.* 14
H. ***KPI 8. Average number of students in the class*** 16
I. ***KPI 9. Employers' evaluation of the program graduates proficiency*** 18
J. ***KPI 10. Students' satisfaction with the offered services*** 20
K. *KPI 11 Table: Ratio of students to teaching staff.* 22
L. ***KPI 12 Table: Percentage of teaching staff distribution.*** 24
M. ***KPI 13 Table: Proportion of teaching staff leaving the program.*** 26
N. ***KPI 14 Table: Percentage of publications of faculty members.*** 28
O. ***KPI 15 Table: Rate of published research per faculty member.*** 30
P. ***KPI 16. Citations rate in refereed journals per faculty member*** 32
Q. ***KPI 17. Satisfaction of beneficiaries with the learning resources*** 34

1. Introduction

The Bachelor of Information Technology program (IT) has developed, based on its mission "Prepare qualified and skilled students to meet the needs of the labor market in the field of Information Technology", an ambitious and well-established strategic plan to achieve the mission and the strategic goals of the program, given a full consideration to the Saudi Vision 2030, the societal perspectives, and the accreditation requirements. For the success of the strategic plan, the performance of IT program is assessed based on the trend of its KPIs values as they progress over the years to develop actions for continuous improvement and enhance productivity. In IT program 17 KPIs are measured which identified by the NCAAA, based on the collected statistics, to present an evidence that program meets the expected quality assurance level. The KPIs tables includes a description and analysis of the results of each indicator with identification of strengths and aspects that need improvement. This PKIs report presents the results of measuring IT program performance according to the collecting numbers and evidence.

To measure the performance of IT program, a committee of seven experienced faculty members was formed, to collect the relevant data from different sources and write the KPIs report. The aim of this committee was first to determine the data source of each KPI then contact the entity of the data source to collect the needed data for the KPIs' report. The committee met together and put a working plan. The methodology that the committee followed was as below:

2. Methodology used to Identify the Internal and External Benchmarking



A) KPIs' internal benchmarking:

For the internal benchmarks, different PMAU entities were contacted and requested to provide data for respective KPIs. The entity was chosen based on the data and statistics it maintains and updates. These comparable benchmarks represent the data results from previous years. For the KPIs related to the academic performance, the internal benchmarks used are the KPIs' values for the academic years 2019-2020 and 2020-2021.

B) KPI's external benchmarking:

For the KPIs' external benchmark, bachelor of information technology program in King Saud University was selected to be used as sources for the external benchmarks.

The external benchmark is selected according to the following criteria:

1. The mode of study.

2. The accreditation and reputation of the benchmark for program.
3. The benchmark for similar specialization for our program (IT program).
4. The availability of benchmarking data.

According to the output of the above criteria, King Saud University was selected as a benchmark university.

3. Setting up the new KPIs' target values

The new target has been set for each KPI based on the following criteria:

- The analysis of the historical data and statistics collected from the college and PMAU entities.
- The collected data from King Saud University.

4. Key Performance Indicators (KPIs) and Benchmarking

A. KPI 1 Table: Percentage of achieved indicators of the program operational plan objectives.

KPI Information			
NCAAA KPI Reference Number	KPI-P- 01	Program KPI Reference Number	KPI-P- 01
KPI Name and Definition	**Percentage of achieved indicators of the institution strategic plan objectives:** Percentage of performance indicators of the strategic plan objectives of the institution that achieved the targeted annual level to the total number of indicators targeted for these objectives in the same year.		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
83.3%	**100%**	**100%**	**86%%**	**100%**

Analysis (list strengths and recommendations):

Analysis:

The mission of the BSc of IT program is to prepare qualified and skilled students to meet the needs of the labor market in the field of Information Technology and to pursue advanced degrees; by providing outstanding education with the latest and most sufficient knowledge, best practices, and skills in Information Technology. The BSc of IT program mission is also about to create high quality education and research environments providing competencies in information technology fields competitive nationally with international impact. Based on the achievement of operational plan for the year 2019-2020, it was 100%. All suggested improvement plans for academic year 2018-2019 were achieved with 100%. In 2020-2021, 83.3% of improvement plan was achieved. Our target is to reach 100% in 2021-2022 and achieve all suggested improvement plan in 2020-2021 annual report. The Figure4.1 shows the percentage of achieved indicators of the program operational plan objectives for two years 2019-2020 and 2020-2022 as a column chart. By comparing the value of our IT program with external benchmark values, our program achieves lower value. Our IT program should increase the concern in improvement action plan and increase the value of achievement.

* Explain:

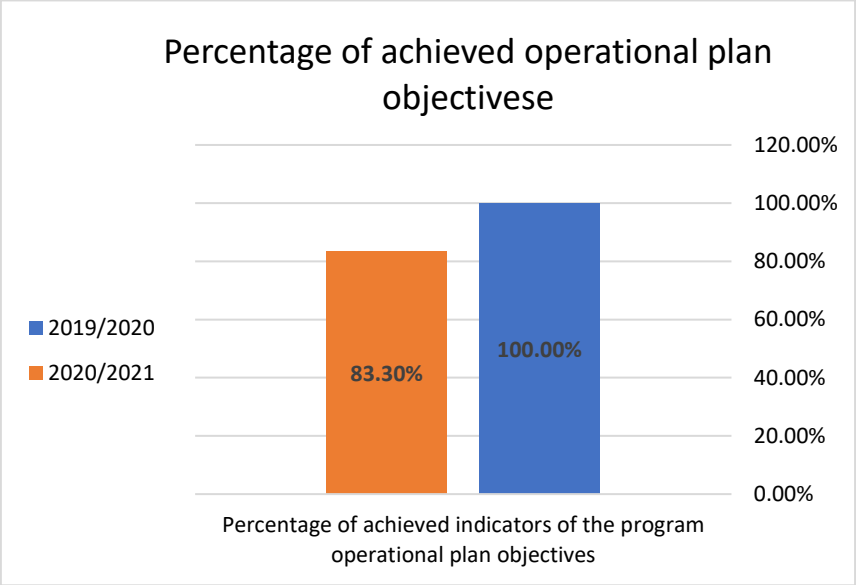


Figure 4.1: Percentage of achieved indicators of the program operational plan objectives

1. Why this internal benchmark provider was chosen?

The source of data for this KPI was the college of computing and informatics, which is responsible for providing the operational plan of programs and measuring the achievement rate for suggested improvement plans. In addition to that, the evaluation of improvement plan for IT program can be measured by using this KPI.

2. How was the benchmark calculated?

The percentage of each achieved indicators of the program operational plan objectives were summed then divided over the number of objectives.

3. Name of the internal benchmark provider.

Operational plan for MCS program from The College of Computing and Informatics.

** Explain:

1. Names of external benchmark providers and the reasons for choosing each provider.

King Saud University

The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.

2. How was the benchmark calculated?

The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

B. KPI 2 Table: Students' Evaluation of quality of learning experience in the program.

KPI Information			
NCAAA KPI Reference Number	KPI-P-02	Program KPI Reference Number	KPI-P-02
KPI Name and Definition	**Students' Evaluation of quality of learning experience in the program:** Average of overall rating of final year students for the quality of learning experience in the program on a five-point scale in an annual survey		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
3.8	4	3.8	4.1	4

Analysis (list strengths and recommendations):

Analysis:

IT program offers an equal quality level of education and support to all students, and therefore each student has the opportunity to succeed. In addition, IT program is striving to promote excellence in offering the services and resources to all students in all branches. It also adopts a flexible model of blended learning that meets the needs of learners in a knowledge age in a technological environment that utilizes ICTs, supports self and collaborative learning. The Figure 4.2 shows the average students' evaluation about the quality of learning experience for the last two years. IT program covers a male and female student, and both male and female students receive equal educational opportunities and support. The above numbers (KPI Benchmarking) and Figure:4.2 shows the Average of overall rating of final year students for the quality of learning experience in the program on a five-point scale in an annual survey. By comparing the value of our IT program with external benchmark values, our program achieves lower value than KSU university. Our IT program should increase the concern in quality of learning experience by adding improvement plan leads to increase the quality of learning experience by improving the learning aspects that received low satisfaction rate from students.

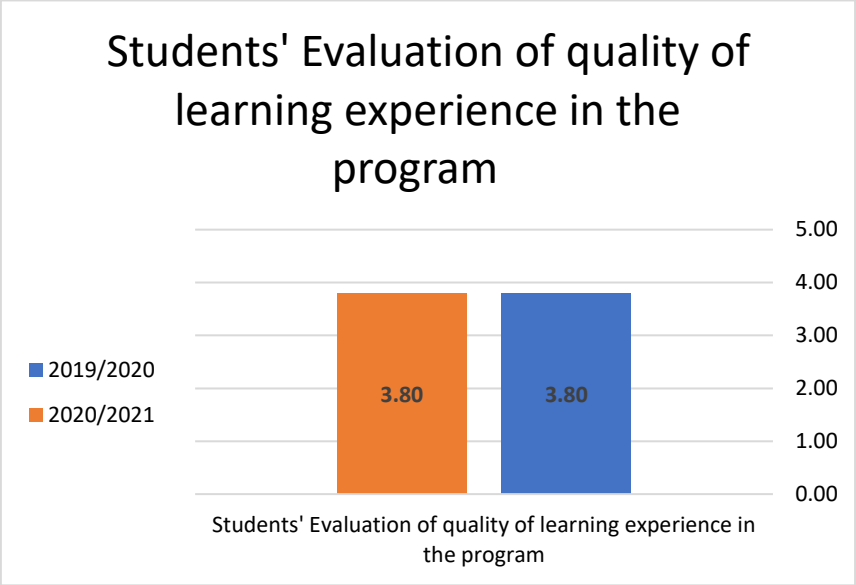


Figure 4.2: Average students' evaluation about the quality of learning experience

* Explain:
1. Why this internal benchmark provider was chosen?
The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was the Vice Presidency for Planning, Development and Quality, which maintains and release surveys for measuring the quality of program.
2. How was the benchmark calculated?
An evaluation survey on a five-point scale was conducted to gather the average of students' evaluation about the quality of learning experience. The evaluations of the final year students who filled the survey were collected and summed then divided over the number of participants to gain the satisfaction rate.
3. Name of the internal benchmark provider.
Vice Presidency for Planning, Development and Quality
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**
2. How was the benchmark calculated?
The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

C. KPI 3 Table: Students' evaluation of the quality of the courses.

KPI Information			
NCAAA KPI Reference Number	KPI-P-03	Program KPI Reference Number	KPI-P-03
KPI Name and Definition	**Students' evaluation of the quality of the courses:** Average students overall rating for the quality of courses on a five-point scale in an annual survey		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
3.9	**3.9**	**3.8**	**3.99**	**4**

Analysis (list strengths and recommendations):

Analysis:

To gather the average of students' evaluation about the quality of courses available in the program, an evaluation survey on a five-point scale was conducted across all courses in all semesters. It was reported that the actual average of students' evaluation about the quality of courses was 3.9 in 2020-2021, while the average students' evaluation was 3.8 in 2019-2020. There is increment in 2020-2021. Figure 4.3 shows the Average students overall rating for the quality of courses on a five-point scale for two years 2019-2020 and 2020-2022 as a column chart. Despite the increment of the average of students' evaluation, there is still room for improvement. The CCI department should conduct attempts to increase the average of students' evaluation and identify the reasons of the current evaluation rates. In addition to that , the BSIT program should improve the courses contents, assessment methods, and teaching strategies according to students evaluation. By comparing the value of our IT program with external benchmark values, our program achieves slightly lower than value of KSU university

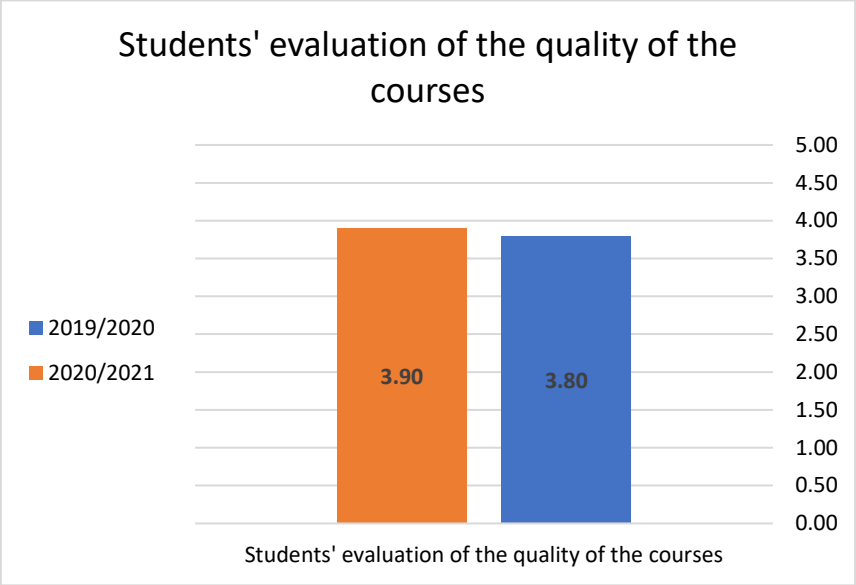


Figure4.3: Average Students' evaluation of the quality of the courses

* Explain:

1. Why this internal benchmark provider was chosen?

The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was the Vice Presidency for Planning, Development and Quality, which maintains and release surveys for measuring the quality of courses.

2. How was the benchmark calculated?

An evaluation survey on a five-point scale was conducted to gather the average of students' evaluation about the quality of the courses. The evaluations of program students who filled the survey were collected and summed then divided over the number of participants to gain the satisfaction rate.

3. Name of the internal benchmark provider.

Vice Presidency for Planning, Development and Quality.

** Explain:

1. Names of external benchmark providers and the reasons for choosing each provider.

King Saud University

The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.

2. How was the benchmark calculated?

The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

D. KPI 4 Table: Completion rate.

KPI Information			
NCAAA KPI Reference Number	**KPI-P-04**	Program KPI Reference Number	**KPI-P-04**
KPI Name and Definition	**Completion rate: Proportion of undergraduate students who completed the program in minimum time in each cohort.**		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
Male: 1.7% **Female:2%** **Total:1.8%**	**5%**	**Male: 1.5%** **Female:2.9%** **Total:1.9%**	**32.2%**	**5%**

Analysis (list strengths and recommendations):

Analysis:

As PMAU students are majority studying while working and our program is design for full time students, majority of students have underestimated the workload of full-time students and overrated their ability to balance the load between studying and working full time. Thus, many students cannot complete study in minimum time (4 years). By comparing the value of our IT program with external benchmark values, our program achieves lower value than value of KSU university. Doing extra workshops about time management between work and study because most students in the program studying while working might solve this issue. In addition to that, Giving English tutorials to the failed students because it's the main factor that decrease completion rate The Figure4.4 shows the Proportion of undergraduate students who completed the program in minimum time for 2019-2020 and 2020-2021.

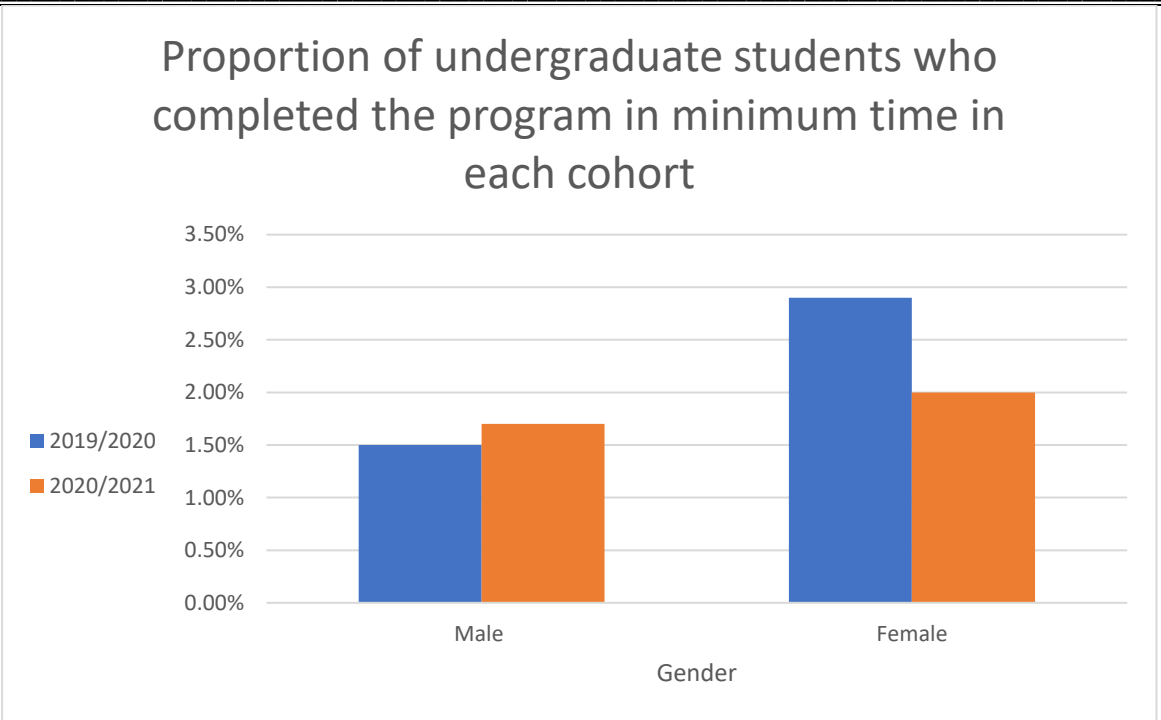


Figure4.4 : Proportion of undergraduate students who completed the program in minimum time for 2019-2020 and 2020-2021.

* Explain:

1. Why this internal benchmark provider was chosen?

The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was CCI college by taking the statistic from banner system. The cohort table is provided by the college from banner system and add it in the program's annual report.

2. How was the benchmark calculated?

Based on statistical data received from the college annual report, the program completion rate is calculated as the following: The total number of undergraduate students who completed the program in minimum time in each cohort is divided by the total number of undergraduates in the same year. The result is multiplied by 100

3. Name of the internal benchmark provider.

The cohort table is provided by CCI college from banner system and add it in the program's annual report.

** Explain:

1. Names of external benchmark providers and the reasons for choosing each provider.

King Saud University

The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.

2. How was the benchmark calculated?
The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

E. KPI 5 Table: First-year students retention rate.

KPI Information			
NCAAA KPI Reference Number	**KPI-P-05**	Program KPI Reference Number	**KPI-P-05**
KPI Name and Definition	**First-year students retention rate: Percentage of first-year undergraduate students who continue at the program the next year to the total number of first-year students in the same year.**		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
Male: 37.3% **Female:52.9%** **Total:42.9%**	**42%**	**Male: 35.1%** **Female:49.3%** **Total:39.5%**	**49.71%**	**45%**

Analysis (list strengths and recommendations):

Analysis:

As PMAU students are majority studying while working and our program is design for full time students, in the first academic year (University unified common year), majority of students have underestimated the workload of full-time students and overrated their ability to balance the load between studying and working full time. Thus, many students drop during the first year of the program. Similar situation is reoccurring when student get to the second year of the program where they will start taking higher number of courses per semester and more advance courses. For the first academic year for student (Common First year), there are some requirements to pass in this year. The students should pass in STEP exam to continue in the program, because of that, the retention rate is low. The Figure 4.5 shows the First-year students retention rate for 2019-2020 and 2020-2021. By comparing the value of our IT program with external benchmark values, our program achieves lower value than value of KSU university. Doing extra workshops about time management between work and study because most students in the program studying while working might solve this issue.

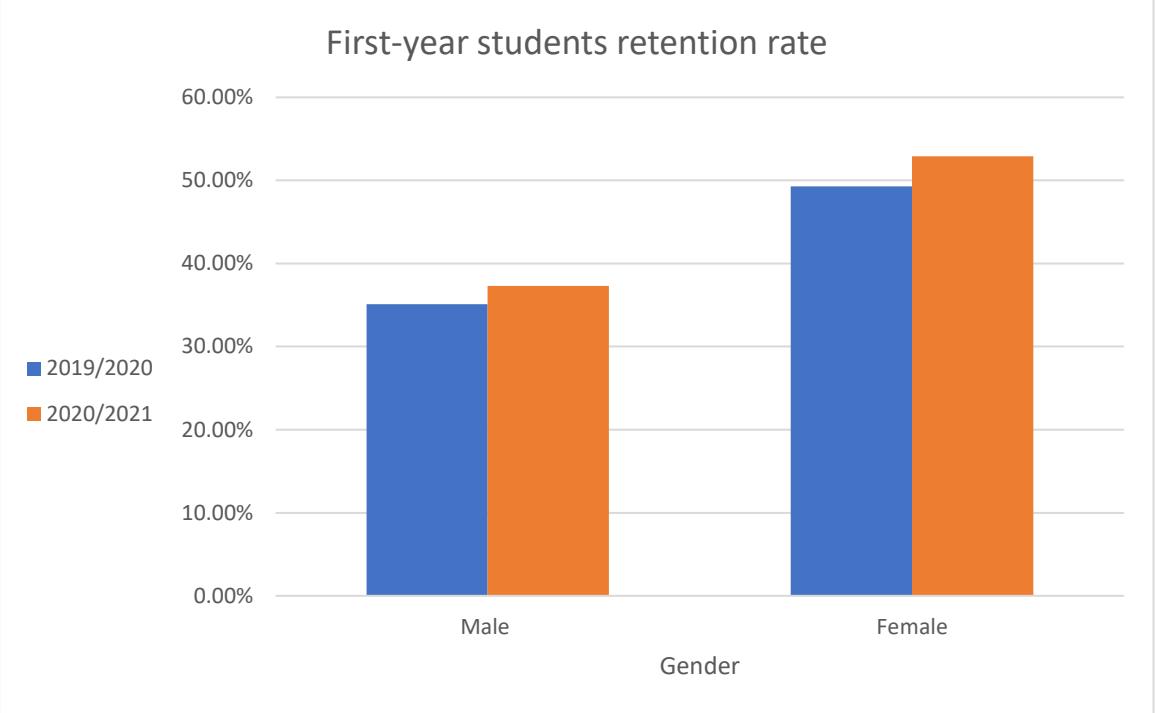


Figure 4.5: First-year students retention rate for 2019-2020 and 2020-2021.

* Explain:

1. Why this internal benchmark provider was chosen?

The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was CCI college by taking the statistic from banner system. The cohort table is provided by the college from banner system and add it in the program's annual report.

2. How was the benchmark calculated?

Based on the statistical data received from the registration department using the banner system, the first-year retention rate is calculated as the following: The total number of first-year undergraduate students who continue at the program the next year is divided by the total number of first-year students in the same year the result is multiplied by 100

3. Name of the internal benchmark provider.

The cohort table is provided by CCI college from banner system and add it in the program's annual report.

** Explain:

1. Names of external benchmark providers and the reasons for choosing each provider.

King Saud University

The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.

2. How was the benchmark calculated?
The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

F. KPI 6 Table: Students' performance in the professional and/or national examinations.

KPI Information			
NCAAA KPI Reference Number	KPI-P-06	Program KPI Reference Number	KPI-P-06
KPI Name and Definition	**Students' performance in the professional and/or national examinations** Percentage of students or graduates who were successful in the professional and / or national examinations, or their score average and median (if any)		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
N/A	**N/A**	**N/A**	**N/A**	**N/A**

Analysis (list strengths and recommendations):
Analysis: **This KPI not applicable for our student in IT, there is no national examination held for IT students**
* Explain:
1. Why this internal benchmark provider was chosen?
N/A
2. How was the benchmark calculated?
N/A
3. Name of the internal benchmark provider.
N/A
** Explain:

1. Names of external benchmark providers and the reasons for choosing each provider.
N/A
2. How was the benchmark calculated?
N/A

G. KPI 7 Table: Graduates' employability and enrolment in postgraduate programs.

KPI Information			
NCAAA KPI Reference Number	**KPI-P-07**	Program KPI Reference Number	**KPI-P-07**
KPI Name and Definition	**Graduates' employability and enrolment in postgraduate programs** Percentage of graduates from the program who within a year of graduation were: Employed enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the same year.		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
Number of graduates who are employed = **59%** Number of graduates who are enrolled in postgraduate = **0%**	Number of graduates who are employed = **60%** Number of graduates who are enrolled in postgraduate = **5%**	Number of graduates who are employed = **45%** Number of graduates who are enrolled in postgraduate = **0%**	**N/A by KSU university**	Number of graduates who are employed = **60%** Number of graduates who are enrolled in postgraduate = **5%**

Analysis (list strengths and recommendations):

Analysis:

The percentage of graduates who are employed is high, when taking about more than 45% of our student which are employed during one year from graduated date. That's good indicator for IT program. The values of both years 2019-2020 and 2020-2021 are high. Figure 4.6 shows the Graduates' employability for two years 2019-2020 and 2020-2022. The CCI college need to work more for creating partnerships with new private companies. Therefore, the percentage will increase. The value for KSU was not available.

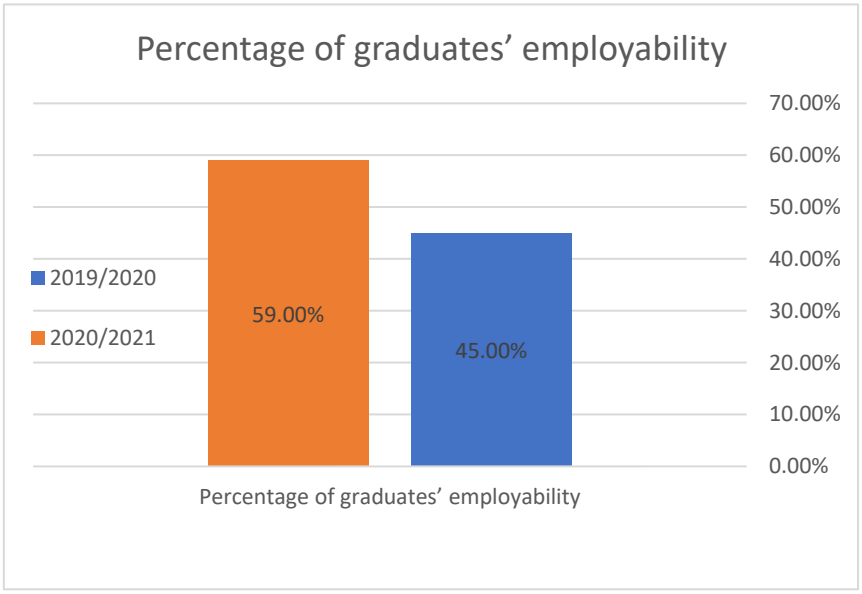


Figure 4.6: Graduates' employability

* Explain:

1. Why this internal benchmark provider was chosen?

The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was university Alumni unit

2. How was the benchmark calculated?

Based on statistical data received from alumni unit, the following calculations are done:

a. The total number of employed graduates within a year from graduation is divided by the total number of graduate students multiplied by 100.

b. The total number of graduates who enrolled in postgraduate within a year from graduation is divided by the total number of graduate students. The result is multiplied by100.

3. Name of the internal benchmark provider.

Alumni unit

** Explain:

1. Names of external benchmark providers and the reasons for choosing each provider.

King Saud University

The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.

2. How was the benchmark calculated?

The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

H. KPI 8. Average number of students in the class

KPI Information			
NCAAA KPI Reference Number	**KPI-P-08**	Program KPI Reference Number	**KPI-P-08**
KPI Name and Definition	***Average number of students in the class*:** Average number of students per class (in each teaching session/activity: lecture, small group, tutorial, laboratory or clinical session)		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
Male:16.7 **Female: 19.4**	**Male: less than 25 student per class** **Female: less than 25 student per class**	**Male:14.8** **Female:17.4**	**Male:25** **Female:25**	**Male: less than 25 student per class** **Female: less than 25 student per class**

Analysis (list strengths and recommendations):

Analysis:

The average number in the class is acceptable for both years 2019-2020 and 2020-2022, because it is less than 25. The IT program try to be less than 25 student per class for both male and female. The Figure 4.7 shows Average number of students in the class for two years 2019-2020 and 2020-2022. By comparing the value of our IT program with external benchmark values, our program achieves lower value of KSU university. It is good for our program.

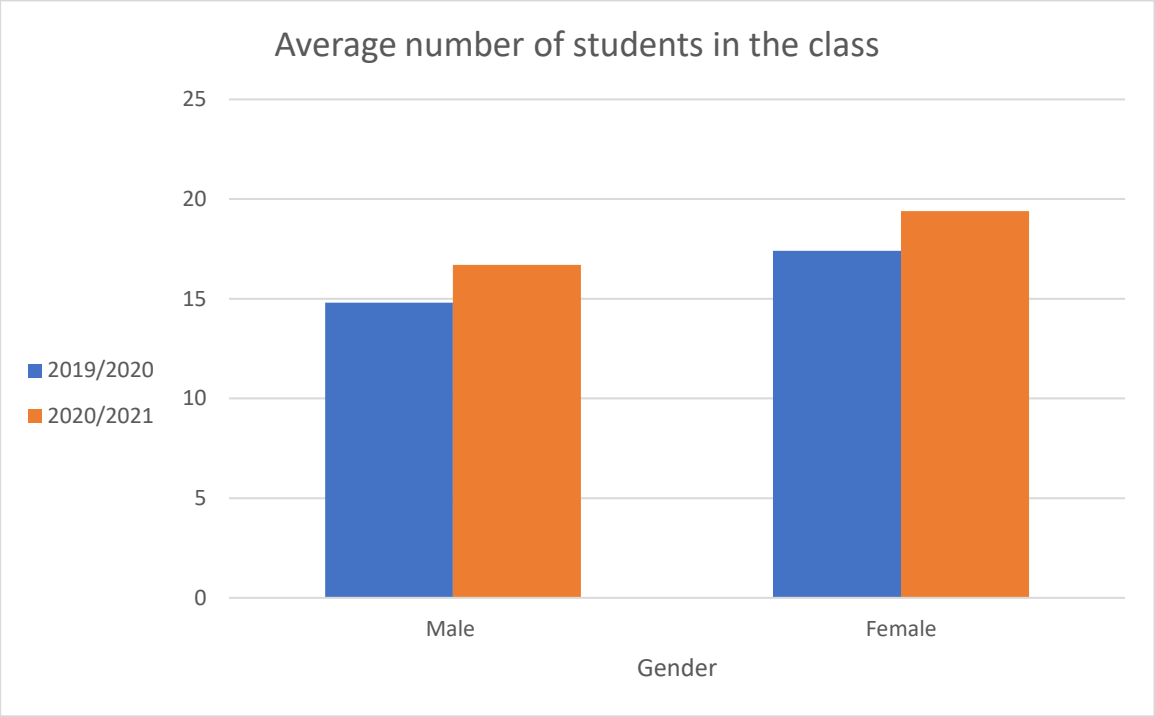


Figure 4.7 Average number of students in the class

* Explain:
1. Why this internal benchmark provider was chosen?
The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was CCI college by taking the statistic from banner system. The average number of students in class is provided by the college from banner system and add it in the program's annual report.
2. How was the benchmark calculated?
Based on the statistical data received from the registration department using the banner system, the average number of students in class is calculated as the following: The total number of students in all classes divided by the number of classes in the program.
3. Name of the internal benchmark provider.
The average number of students in class is provided by CCI college from banner system and add it in the program's annual report.
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**
2. How was the benchmark calculated?

The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

I. KPI 9. Employers' evaluation of the program graduate's proficiency

KPI Information			
NCAAA KPI Reference Number	KPI-P-09	Program KPI Reference Number	KPI-P-09
KPI Name and Definition	**Employers' evaluation of the program graduate's proficiency** Average of overall rating of employers for the proficiency of the program graduates on a five-point scale in an annual survey		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
4.68	**4.25**	**4.07**	**3.93**	**4.75**

Analysis (list strengths and recommendations):

Analysis:

IT program offers an educational system that qualifies graduates and provides them with cognitive skills to achieve competitiveness in the labor market. Therefore, the IT department assesses its performance to develop actions for continuous improvement and enhance productivity. To gather the average of employers' evaluation of the IT program graduates' proficiency, an evaluation survey on a five-point scale was conducted. It was reported that the average of employers' evaluation was 4.07 in 2019-2020 while the value increased in 2020-2021. It becomes 4.68. Figure 4.8 shows the average of the employers' evaluation of the IT program graduates' proficiency for 2019 -2020 and 2020-2021. The value in 2020-2021 achieved the target and the new target is set to be 4.75 for 2021-2022.

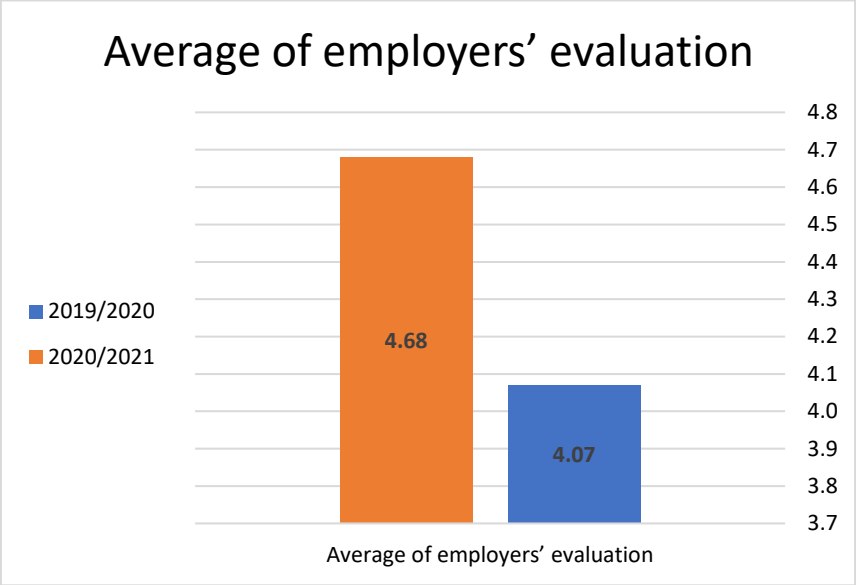


Figure 4.8: Average of the employers' evaluation of the institution graduate's proficiency

* Explain:
1. Why this internal benchmark provider was chosen?
The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was the Vice Presidency for Planning, Development and Quality, which maintains and release the survey to employers.
2. How was the benchmark calculated?
An evaluation survey on a five-point scale was conducted to gather the employers' evaluation of the IT program graduates' proficiency. The evaluations of all employers who filled the evaluation survey were collected and summed then divided over the number of participants to gain the average of the evaluation.
3. Name of the internal benchmark provider.
Survey released by the Vice Presidency for Planning, Development and Quality.
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**
2. How was the benchmark calculated?

The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

J. KPI 10. Students' satisfaction with the offered services

KPI Information			
NCAAA KPI Reference Number	**KPI- P-10**	**Program KPI Reference Number**	**KPI- P-10**
KPI Name and Definition	**Students' satisfaction with the offered services** Average of students' satisfaction rate with the various services offered by the program (admission and registration, academic, psychological and career advising, medical services, etc...) on a five-point scale in an annual survey		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
2.9	**3.5**	**2.6**	**3.92**	**3.5**

Analysis (list strengths and recommendations):

Analysis:

This reflect the wisdom "First impression is the Last impression". The program arranged for many alternative connections between the advisor and the students. The Chair office and the dean office are always opened for the students. The university established a very effective system to serve the students based on offline and online services. Almost all services are automated. Also, most of the students try to be neutral in their responses for such questions. The Figure4.9 shows Students' satisfaction with the offered services for 2019-2020 and 2020-2021 academic year. The result shows that in 2020-2021 increased to 2.9, while in 2019-2020 was 2.6. By comparing the value of our IT program with external benchmark values, our program achieves lower value than KSU university. The BSIT program need to concern more on offered service for student by Increasing students' awareness about the offered services. The BSIT program must promote information about its offered services using digital channels, such as its website, email, announcements, and social media.

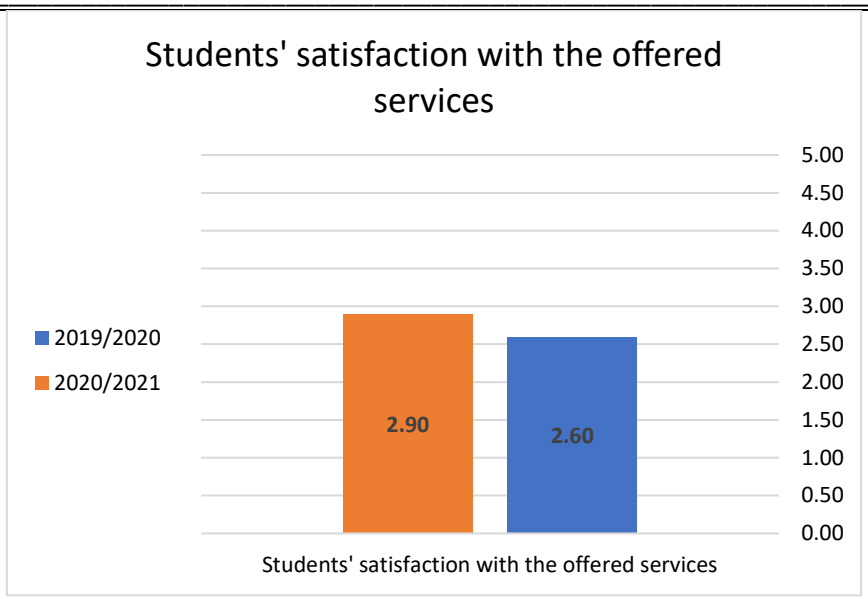


Figure4.9: Students' satisfaction with the offered services

* Explain:
1. Why this internal benchmark provider was chosen?
The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was the Vice Presidency for Planning, Development and Quality, which maintains and release surveys for measuring the Students' satisfaction with the offered services.
2. How was the benchmark calculated?
An evaluation survey on a five-point scale was conducted to gather the average of students' evaluation about the quality of the courses. The evaluations of program students who filled the survey were collected and summed then divided over the number of participants to gain the satisfaction rate. The sum of rate of all provided services divided by number of services with rate of each service = number of satisfied students / number of all students.
3. Name of the internal benchmark provider.
Vice Presidency for Planning, Development and Quality
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**
2. How was the benchmark calculated?

The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

K. KPI 11 Table: Ratio of students to teaching staff.

KPI Information			
NCAAA KPI Reference Number	**KPI-P-11**	**Program KPI Reference Number**	**KPI-P-11**
KPI Name and Definition	**Ratio of students to teaching staff** Ratio of the total number of students to the total number of full-time and full-time equivalent teaching staff in the program.		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
Male: 23.4:1 Female: 21.4:1	Male: less than 25 Female: less than 25	Male :20.2:1 Female:17.5:1	Male: 13:1 Female: 13:1	Male: less than 25 Female: less than 25

Analysis (list strengths and recommendations):

Analysis:

The ration number is acceptable for both years 2019-2020 and 2020-2022, because it is less than 25. The IT program try to be less than 25 students per each faculty member for both male and female. The Figure 4.10 shows Ratio of students to teaching staff for two years. By comparing the value of our IT program with external benchmark values, both values are acceptable because they are less than 25.

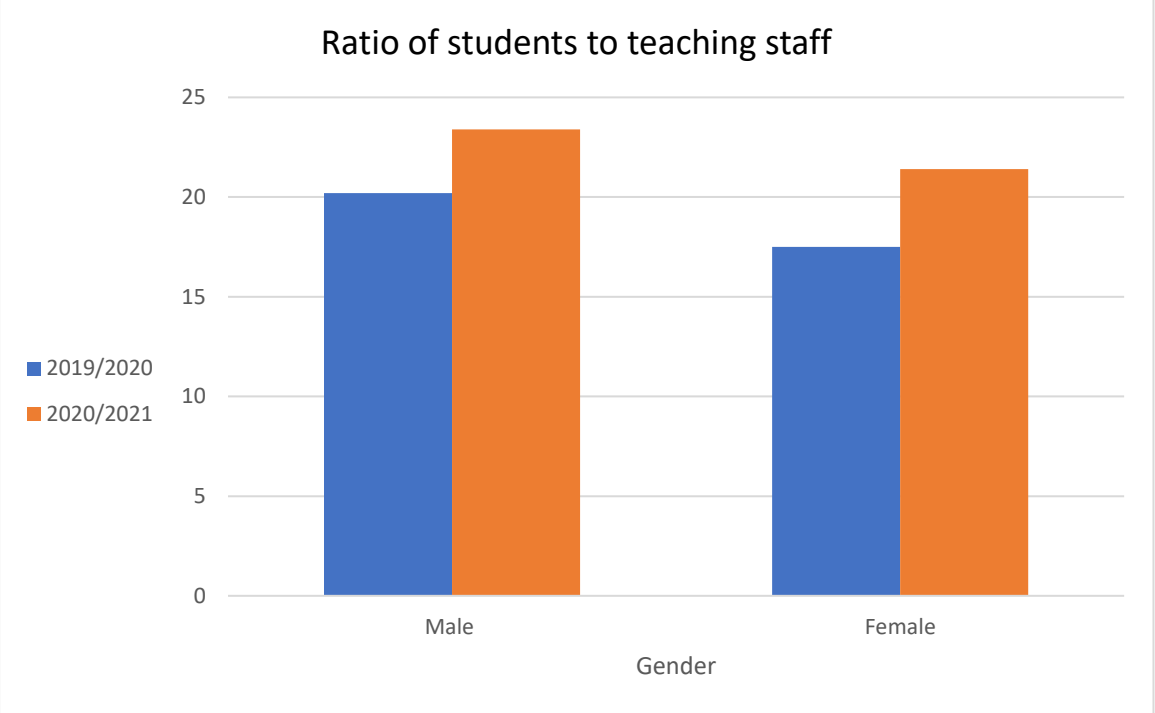


Figure 4.10: Ratio of students to teaching staff

* Explain:
1. Why this internal benchmark provider was chosen?
The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was CCI college by taking the statistic from banner system. The ratio number of students to teaching staff is provided by the college from banner system and add it in the program's annual report.
2. How was the benchmark calculated?
Based on statistical data received from the college, Ratio of students to teaching staff is the total number of students divided by the total number of full-time and full- time equivalent teaching staff in the program.
3. Name of the internal benchmark provider.
Ratio of students to teaching staff is provided by CCI college from banner system and add it in the program's annual report.
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**

2. How was the benchmark calculated?
The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

L. KPI 12 Table: Percentage of teaching staff distribution.

KPI Information			
NCAAA KPI Reference Number	**KPI-P-12**	Program KPI Reference Number	**KPI-P-12**
KPI Name and Definition	**Percentage of teaching staffdistribution** Percentage of teaching staff distribution based on: Gender, Academic Ranking		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
Gender: 64.91% male 35.09 % female **Branches:** 28.07 % Riyadh 18.42% Dammam 15.78 % Jeddah 14.91% Medina 13.15 % Abha 1.75% Jazan 2.63%Tabuk 5.26%Qasim **Ranking:** Professor : 0.87% Associate Professor :5.26% Assistant Professor:69.29% Lecturer : 23.68%	Assoc. Pro. = 10% Assist. Pro. =70% Lecturer = 20%	**Gender:** 63.46% male 36.54 female **Branches:** 27.88 % Riyadh 22.11 % Dammam 16.34 % Jeddah 12.5% Medina 12.5 % Abha 1.9% Jazan 2.8 %Tabuk 3.8%Qasim **Ranking:** Professor : 0 % Associate Professor : 4.23% Assistant Professor :74.03% Lecturer : 21.47%	**Ranking:** Professor : 2% Associate Professor :12% Assistant Professor:53% Lecturer : 20% Teacher Assistant :9% Research Assistant :2%	Assoc. Pro. = 10% Assist. Pro. =70% Lecturer = 20%

Analysis (list strengths and recommendations):

Analysis:

The percentage of faculty members distribution was calculated based on gender branch and academic ranking for both years 2019-2020 and 2020-2021. In 2020-2021, there is increase in the academic ranking. The number of full professor and associate professor increased, many faculty members apply to their promotion. Figure 4.11 shows the distribution of faculty members based on academic ranking. The distribution of teaching staff is well distributed and is expected to increase with joining assistant professors. By comparing the values of our IT program with external benchmark values, both values are acceptable because both are distributed well.

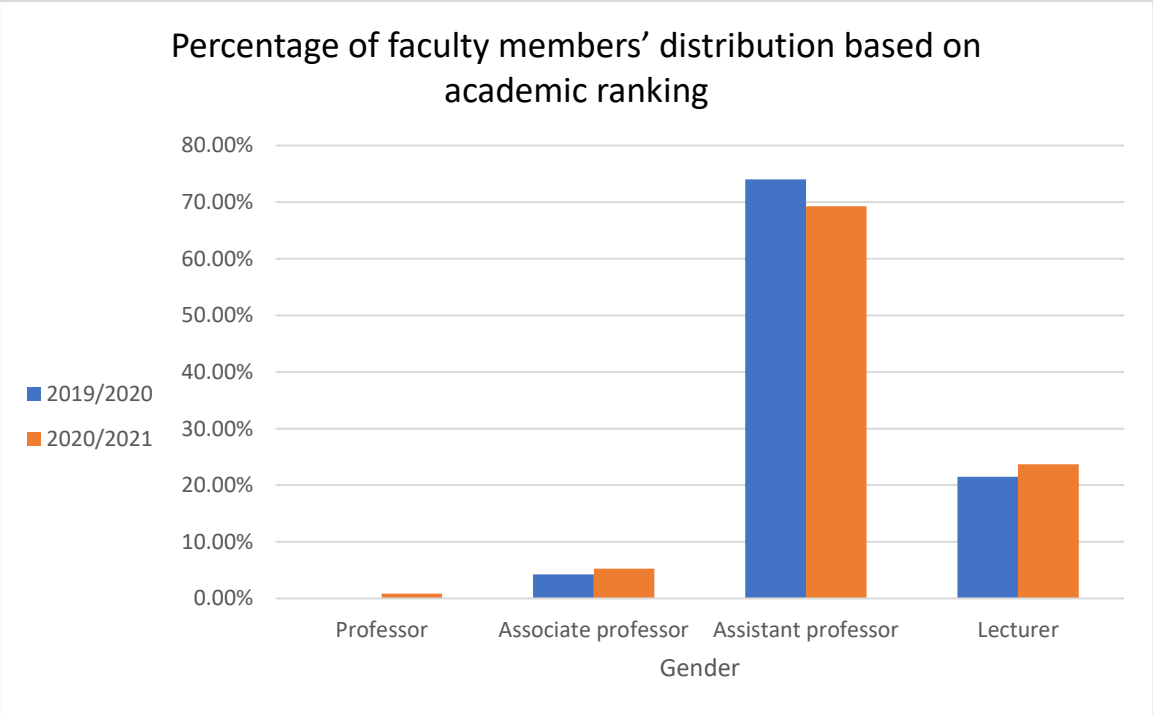


Figure 4.11: Distribution of faculty members based on academic ranking

* Explain:

1. Why this internal benchmark provider was chosen?

The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was the Vice Presidency for Academic Affairs, which maintains and updates the data and statistics related to all teaching staff at the institutional level.

2. How was the benchmark calculated?

- The percentage of male teaching staff is the number of male teachers divided by the total number of teaching staff.

- The Percentage of female teaching staff is the number of women teachers divided by the total number of teaching staff. -The Percentage of full professor teaching staff is the total number of full professors divided by the total number of teaching staff. -The Percentage of associate professor teaching staff is the total number of full professors divided by the total number of teaching staff. -The Percentage of assistant professor is the number of assistant professors divided by the total number of teaching staff. -The Percentage of lecture is the number of lecture teachers divided by the total number of teaching staff.
3. Name of the internal benchmark provider.
The source of data for this KPI was the Vice Presidency for Academic Affairs, which maintains and updates the data and statistics related to all teaching staff at the institutional level.
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**
2. How was the benchmark calculated?
The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

M. KPI 13 Table: Proportion of teaching staff leaving the program.

KPI Information			
NCAAA KPI Reference Number	**KPI-P-13**	**Program KPI Reference Number**	**KPI-P-13**
KPI Name and Definition	**Proportion of teaching staff leaving the program.** Proportion of teaching staff leaving the program annually for reasons other than age retirement to the total number of teaching staff.		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
5.26%	**1%**	**0.96%**	**1%**	**1%**

Analysis (list strengths and recommendations):

Analysis:

Some faculties find better job offers in private sectors and foreign faculties decided to return to their country. For more enhancement the BSIT should encourage teaching staff and provide attractive research opportunities, in addition to that, Increasing the salary for faculty members and annual increment will contribute to decrease this percentage. Figure 4.12 shows the proportion of teaching staff leaving the program. By comparing the values of our IT program with external benchmark values, both values are acceptable because both values are low.

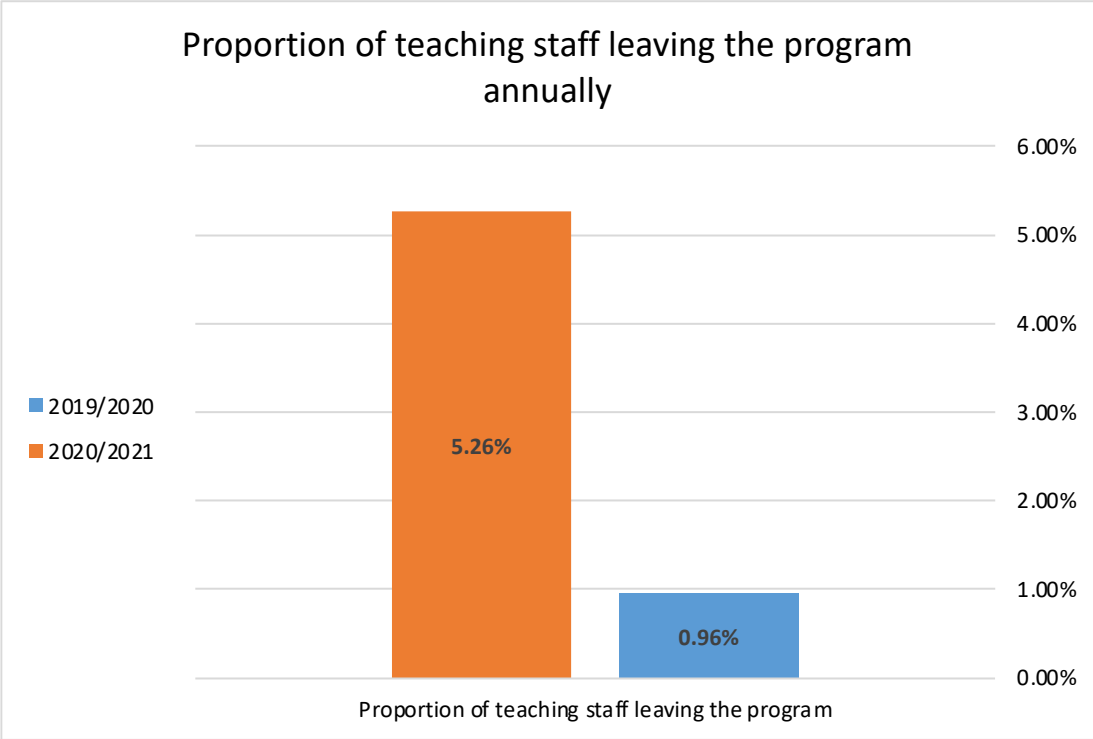


Figure 4.12 shows the proportion of teaching staff leaving the program

* Explain:

1. Why this internal benchmark provider was chosen?

The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was the Vice Presidency for Academic Affairs, which maintains and updates the data and statistics related to all teaching staff at the institutional level.

2. How was the benchmark calculated?

Based on statistical data received from the Vice Presidency for Academic Affairs, the proportion of teaching staff leaving the program is calculated as the following: the total number of teaching staff leaving the program annually for reasons other than age retirement is divided by the total number of teaching staff then multiplied by 100.

3. Name of the internal benchmark provider.
The source of data for this KPI was the Vice Presidency for Academic Affairs, which maintains and updates the data and statistics related to all teaching staff at the institutional level.
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**
2. How was the benchmark calculated?
The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

N. KPI 14 Table: Percentage of publications of faculty members.

KPI Information			
NCAAA KPI Reference Number	**KPI-P-14**	**Program KPI Reference Number**	**KPI-P-14**
KPI Name and Definition	**Percentage of publications of faculty members:** Percentage of full-time faculty members who published at least one research during the year to total faculty members in the program.		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
47.80%	**70%**	**59.40%**	**30%**	**70%**

Analysis (list strengths and recommendations):

The result shows promising result about the publications for faculty members, this is due to the University and the college strategies in encouraging and enabling research and publications. The result decrease in the 2020-2021 because new faculty members join us in this year 2020-2021, therefore the percentage is decreased. But both percentages for 2019-2020 and 2020-2021 considered good values. For more enhancement, the BSIT program should continuous encouragement and reducing the academic load of the faculty members and, in return, engaging them in research projects. Figure 4.13 shows the Percentage of publications of faculty members.. By comparing the value of our IT program with external benchmark values, our program achieves higher value than KSU university. It is good for our program.

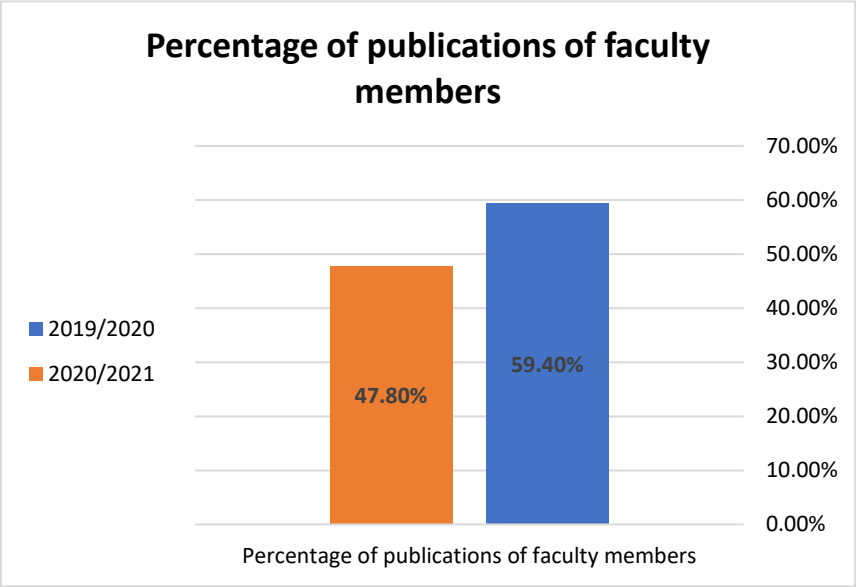


Figure 4.13: Percentage of publications of faculty members.

* Explain:
1. Why this internal benchmark provider was chosen?
Deanship of scientific research is responsible for keeping the tracks of all the publications for the university faculties
2. How was the benchmark calculated?
Based on statistical data received from the deanship of scientific research. The percentage is calculated as the following: Number of full-time faculty members who published at least one research during the year is divided by the total faculty members in the program multiplied by 100
3. Name of the internal benchmark provider.
Deanship of scientific research
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**
2. How was the benchmark calculated?
The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

O. KPI 15 Table: Rate of published research per faculty member.

KPI Information			
NCAAA KPI Reference Number	**KPI- P-15**	**Program KPI Reference Number**	**KPI- P-15**
KPI Name and Definition	**Rate of published research per faculty member:** The average number of refereed and/or published research per each faculty member during the year (total number of refereed and/or published research to the total number of full time or equivalent faculty members during the year)		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
1.82:1	**2:1**	**1.5:1**	**0.6:1**	**2:1**

Analysis (list strengths and recommendations):

The rate is increasing and is expected to increase every year. The university and the college research and publication strategies seem to encourage and motivate facility members in collaborating in research and publication. For more enhancement, the BSIT program should continuous encouragement and reducing the academic load of the faculty members and, in return, engaging them in research projects. The Figure 4.14 shows the rate of publication for two years 2019-2020 and 2020-202. By comparing the value of our IT program with external benchmark values, our program achieves higher value than KSU university. It is good for our program.

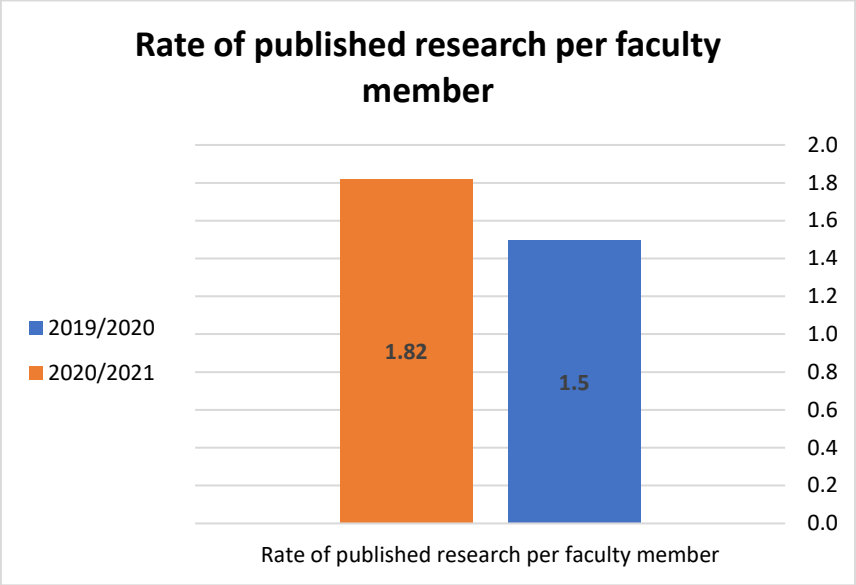


Figure 4.14: Rate of publication for two years

* Explain:
1. Why this internal benchmark provider was chosen?
Deanship of scientific research is responsible for keeping the tracks of all the publications for the university faculties
2. How was the benchmark calculated?
Based on statistical data received from the deanship of scientific research, the rate of published research per faculty member is calculated as the following: The total number of refereed and/or published research is divided by the total number of full time or equivalent faculty members during the year.
3. Name of the internal benchmark provider.
Deanship of scientific research
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**
2. How was the benchmark calculated?
The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

P. KPI 16. Citations rate in refereed journals per faculty member

KPI Information			
NCAAA KPI Reference Number	KPI- P-16	**Program KPI Reference Number**	KPI- P-16
KPI Name and Definition	**Citations rate in refereed journals per faculty member**: The average number of citations in refereed journals from published research per faculty member in the program (total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total research published).		

KPI Benchmarking				
Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
9.93:1	**12:1**	**9.11:1**	**N/A**	**12:1**

Analysis (list strengths and recommendations):

Analysis:

The rate is increasing and is expected to increase every year. The university and the college research and publication strategies seem to encourage and motivate facility members in collaborating in research and publication. Most of the professors tried to publish in an ISI or SCOUPS journals with free access. This caused a high rate of citation. The Figure 4.15 shows citations rate in refereed journals per faculty member for two years 2019-2020 and 2020-2021. The external benchmark for this KPI is not available by KSU university.

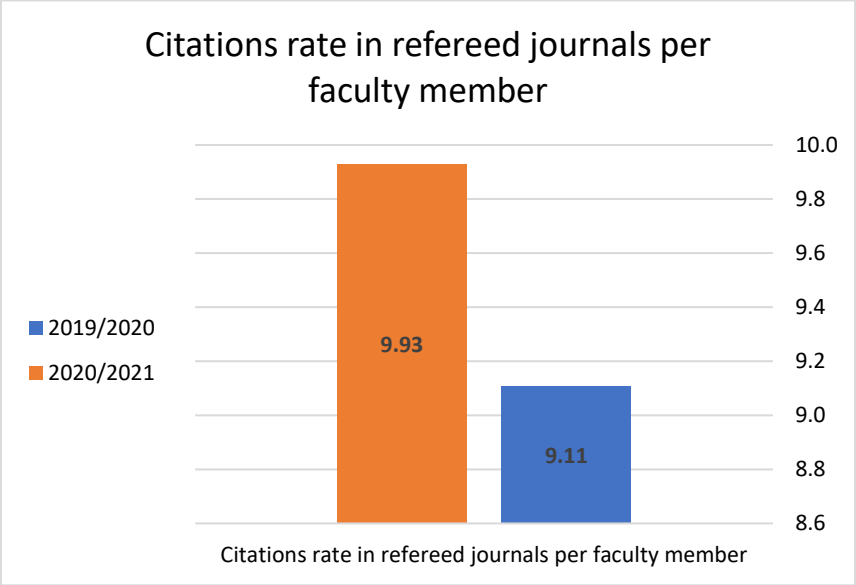


Figure 4.15: Citations rate in refereed journals per faculty member for two years

* Explain:
1. Why this internal benchmark provider was chosen?
Deanship of scientific research is responsible for keeping the tracks of all the publications for the university faculties
2. How was the benchmark calculated?
Based on statistical data received from the deanship of scientific research, the citations rate in refereed journals per faculty member is calculated as the following: total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total research published
3. Name of the internal benchmark provider.
Deanship of scientific research
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**
2. How was the benchmark calculated?
The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.

Q. KPI 17. Satisfaction of beneficiaries with the learning resources

KPI Information			
NCAAA KPI Reference Number	KPI- P-17	**Program KPI Reference Number**	KPI- P-17
KPI Name and Definition	**Satisfaction of beneficiaries with the learning resources:** Average of beneficiaries' satisfaction rate with the adequacy and diversity of learning resources (references, journals, databases… etc.) on a five- point scale in an annual survey.		

KPI Benchmarking

Actual Benchmark	Target Benchmark	Internal Benchmark*	External Benchmark**	New Target Benchmark
2020-2021	2020-2021	2019-2020	2020-2021	2021-2022
3.9	**4**	**3.9**	**3.65**	**4**

Analysis (list strengths and recommendations):

Analysis:

The above numbers (KPI Benchmarking) and next Figure shows the Average of beneficiaries' satisfaction rate with the adequacy and diversity of learning resources of courses on a five-point scale in an annual survey. The Figure 4.16 shows Satisfaction of beneficiaries with the learning resources as a column chart for two years 2019-2020 and 2020-2021. Both years have the same values, no increment in 2020-2021. The college should concern more on learning resources by providing tutorials for beneficiaries about the learning resources. When comparing the value of our IT program with external benchmark values, our program achieves higher value of KSU university. It is good for our program.

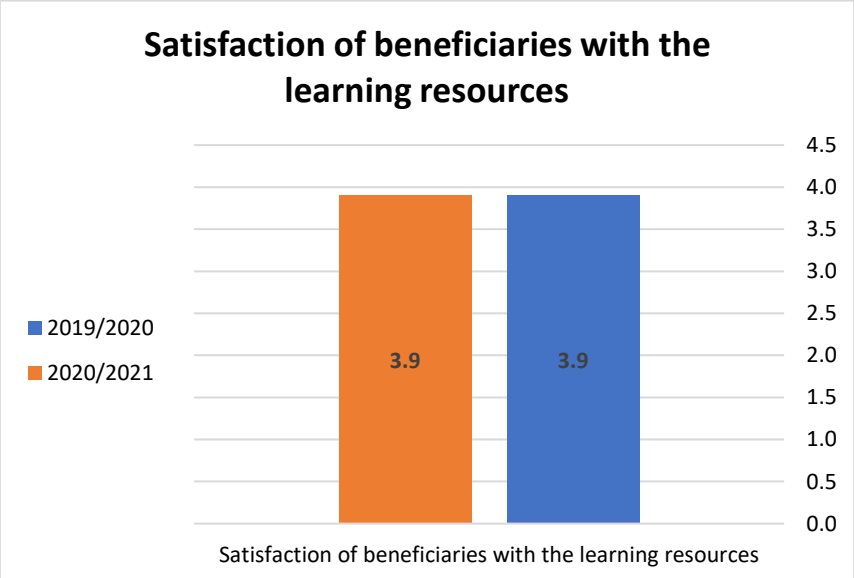


Figure 4.16: Satisfaction of beneficiaries with the learning resources
* Explain:
1. Why this internal benchmark provider was chosen?
The university assesses its performance based on the trend of its KPIs values as they progress over the years in order to develop actions for continuous improvement and enhance productivity. The source of data for this KPI was the Vice Presidency for Planning, Development and Quality, which maintains and release surveys for measuring the quality of program.
2. How was the benchmark calculated?
An evaluation survey on a five-point scale was conducted to gather the average of students' and faculty members evaluation about the satisfaction on learning resources. The evaluations of beneficiaries who filled the survey were collected and summed then divided over the number of participants to gain the satisfaction rate.
3. Name of the internal benchmark provider.
Vice Presidency for Planning, Development and Quality.
** Explain:
1. Names of external benchmark providers and the reasons for choosing each provider.
King Saud University **The IT department console has selected IT program in King Saud University as an external benchmark according to the criteria given in the Introduction of this report.**
2. How was the benchmark calculated?
The IT program in KSU university is used NCAAA KPI's, Therefore the data is used directly. The achievement of this KPI by IT program was compared with the same factor of the external benchmark of KSU.