

Research Papers/Extended Abstracts

Temporal analysis of student satisfaction on degree programmes conducted by the Faculty of Fisheries and Marine Sciences & Technology in the University of Ruhuna, Sri Lanka

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Abstract

Student-centered teaching and learning are one of the key concepts of the undergraduate degree program at present, and thus, ‘student satisfaction’ is a prime factor behind the success of academic programmes and curriculum development. Student feedbacks on academic programmes through student satisfaction surveys using questionnaires are the best way to collect the information and analyzing responses over the years is necessary to have a holistic view of the student satisfaction perception of the degree program. Although the faculty of Fisheries and Marine Sciences & Technology (FMST) has conducted annual student satisfaction surveys since 2019, no attempt has been taken to temporal analysis. Therefore, the present study was designed to analyse the trends of responses in annual student satisfaction surveys over years and understand student satisfaction perception of the FMST degree programs. A Google form consisting of 13 different statements was circulated among students of the FMST. Student satisfaction levels were statistically compared using a chi-square test, while a SWOT analysis was also employed. Student dissatisfaction on services and information availability of the faculty has gradually declined, while their level of satisfaction with course selection based on their interest and future prospects increased over time. Compared to 2019, student satisfaction on the role of FMST in strengthening and gaining knowledge during their undergraduate programs was significantly higher in 2022. SWOT analysis highlighted the strengths of the FMST degree programs giving insights on the success of orientation programs, website development, course structure and progression, the role of academic staff and alumni and facilities available at the faculty. Continuous monitoring of responses and trends in student satisfaction surveys and SWOT analyses are needed and helpful to maintain the overall quality of the academic program allowing us to think of future developments to satisfy the core of the university education.

Keywords: *Academic programme, FMST, SWOT, Services, Student satisfaction*

Introduction

Globally, feedback and suggestions of students on all aspects of academic programs are being considered as one of the major concerns behind the improvement of the quality of degree programs conducted by educational institutes. This information is mainly collected either by using an open or a close-ended questionnaire. In student satisfaction surveys, the questionnaire is prepared to measure the ability of students to make their student life comfortable, competence, confidence, and professionalism conveyed by the ambience through their self-satisfaction (Arthur, 2020). Therefore, the evaluation of student satisfaction is mainly focused on how far teaching and learning have met student expectations rather than how teaching could be enhanced (Arthur, 2020).

The Faculty of Fisheries and Marine Sciences & Technology (FMST) was established in 2005 and the first batch of graduates in Bachelor of Science Honours in Fisheries and Marine Sciences passed out in 2011. Since then, student intake has increased while introducing the second-degree programme in 2017 in par with the recommendations of relevant stakeholders. The faculty started to conduct a student satisfaction survey with the approval of the Faculty Board in 2019 and this survey was annually conducted since then. Even though the annual summary report was presented at each year to the Faculty Board, there is no any attempt made to the temporal analysis of the results of student satisfaction surveys to identify the trend in those responses over time.

Therefore, the objective of the present study was to analyze the annual student satisfaction survey reports to taking an idea of the student's satisfaction perception on the degree programmes of FMST to improve the overall quality of the academic program.

Methodology

The student satisfaction survey was conducted by using hard copies of an objectively formulated questionnaire in the years of 2019 and 2020. Then the same questionnaire was developed into an online Google form and its link was published on LMS. The online data collection was conducted in 2021 and 2022. The sample size for the whole period of study was 403 represented 50% of the total student population of the faculty. The questionnaire was formulated under thirteen statements (S1-S13). Those thirteen main questions are given below and students were asked to provide an overall score on a scale of 1 to 5. The score of 1, 2, 3, 4, and 5 stands for very unsatisfied, unsatisfied, neutral, satisfied, and very satisfied respectively. Students were advised to submit the completed questionnaire anonymously within two weeks of time after receiving the questionnaire.

S1: I was provided with the information when I contacted the faculty office and that helped me to select this degree before I enrolled to the degree programme.

- S2:** Information on faculty website including the curriculum was useful to get an idea about the degree program I follow.
- S3:** I am well aware of that I have been selected for a degree in the field, which is internationally well recognized.
- S4:** I am capable for completing the degree program within stipulated time.
- S5:** I can select the courses according to my interest and my future prospects.
- S6:** My senior colleagues advised me to select my optional courses.
- S7:** I was guided by academic staff of the faculty/my mentor when selecting optional course modules.
- S8:** I was able to strengthen my knowledge and skills after completing each course unit.
- S9:** All courses that I have followed were well organized.
- S10:** I will be able to apply the knowledge gained through the whole courses.
- S11:** Students are free to comment and question about the content and structure of course they follow.
- S12:** I am aware of the rules and regulations of the university and rules that applicable to students including for examinations.
- S13:** I am confident that my English language competency is good enough for me to continue my degree and perform well in the degree programme.

In addition, students were asked to provide their comments and suggestions as those are very essential for curriculum revision and development. The statistical comparison was done by employing the χ -square test (Pearson's test) at the 0.05 significant level in IBM SPSS (25 version) while graphical illustrations were done in MS Excel. The SWOT analysis was done for the overall summary of responses for each statement considering the whole period of study.

Results

Student's satisfaction before enrollment on services and information available

The level of dissatisfaction of students with the service provided by the office of FMST gradually declined during this four-year period (Fig. 1, S1). The percentage of students who were unsatisfied with the services and availability of information in the year 2022 was significantly lower ($\chi^2 = 85.05$, $df = 6$, $p < 0.05$) than that of 2019. A similar trend was also observed for the availability of information on the website (Fig.1, S2) which support for them to get enrolled in the degree programs ($\chi^2 = 33.08$, $df = 6$, $p < 0.05$).

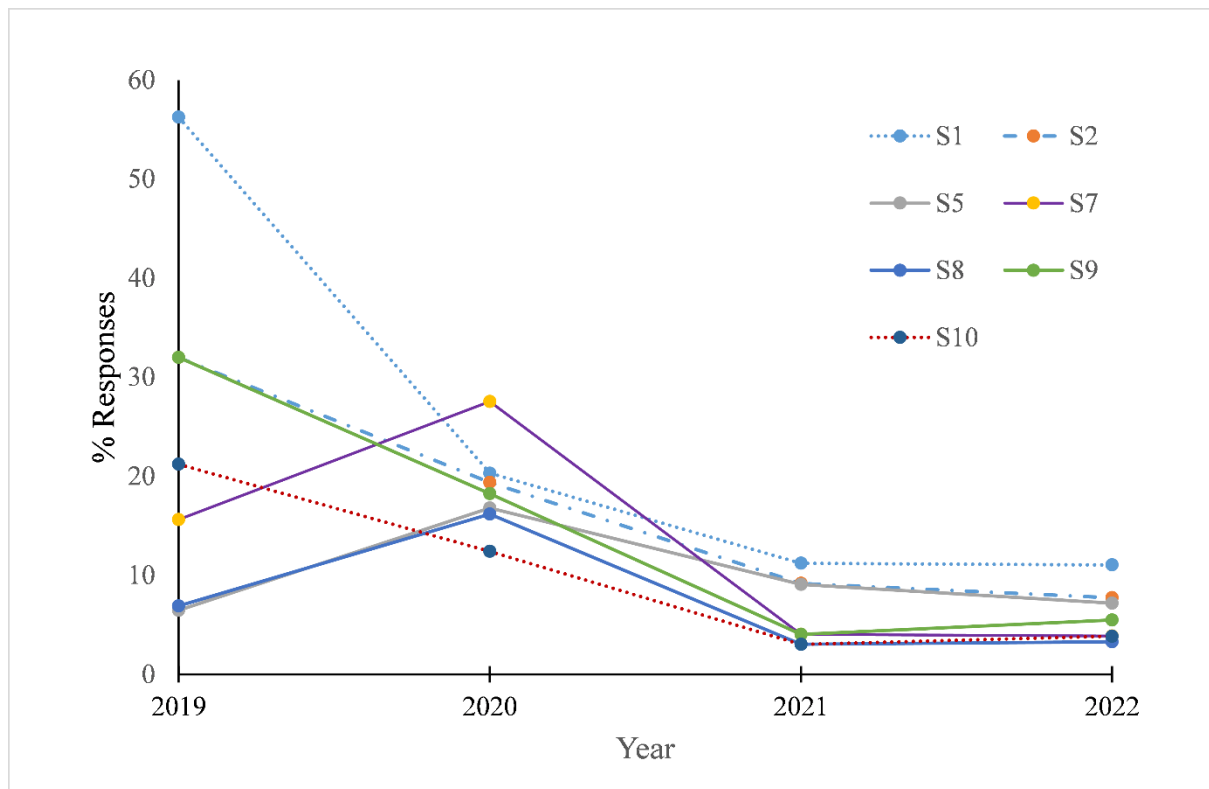


Figure 1: Level of dissatisfaction of students for service quality (S1, S2), course selection and preparation of future career (S5), academics guidance (S7), course structure, knowledge gain, and experience (S8, S9, S10).

Course selection and preparation of future career

Students' satisfaction with their course selection based on their interests and future prospects comparatively increased over time. The average satisfaction level in this regard (S5) during these four years was $71 \pm 6\%$. Students were supported by the mentoring service for them to select their courses, and this was clearly indicated by the reduction of the dissatisfaction level of student responses given for the S7 (Fig. 1), in which students were tested for the support given by the academic staff of the faculty when selecting optional course units. Student satisfaction with the support given by academic staff for selecting optional courses gradually increased over time, where this level in 2022 (65%) was significantly higher ($\chi^2 = 39.90$, $df = 6$, $p < 0.05$) than that of 2019 (63%). However, approximately 30% of students' responses fell into the neutral category for this statement.

Structure of course, knowledge gain, and experience

The satisfaction level of students of the faculty of FMST on strengthening and gaining knowledge (S8) during their undergraduate program was significantly higher ($\chi^2 = 69.60$, $df = 6$, $p < 0.05$) in 2022 (90%), than that in 2019 (55%). In parallel an increase in satisfaction with their knowledge gain (S8), the dissatisfaction level gradually decreased (Fig. 1). In terms of the organization of courses (S9), students were happy and the level of satisfaction in this regard was significantly ($\chi^2 = 81.30$, $df = 6$, $p < 0.05$) higher in 2022 (80%) than in 2019 (32%).

The Implication of their knowledge and experience

Students of the faculty of FMST are confident enough to apply the knowledge and experience gained (S10) during their undergraduate studies. The satisfaction level of students on their confidence in applying their knowledge and experience comparatively increased from 45% to 85% during this four years' time gap. In parallel an increase in their satisfaction level, the unsatisfied responses in this regard gradually declined (Fig. 1), where the lowest dissatisfaction was found in 2022 ($\chi^2 = 81.30$, $df = 6$, $p < 0.05$).

SWOT Analysis

The SWOT analysis for the 403 responses representing nearly 50% of the total student population in each thirteen statements is described in Table 1.

Table 1: SWOT Analysis

Statement No.	Strength	Weaknesses	Opportunities	Threats
1	Awareness of necessary information of the degree programs before the student's enrollment was satisfactory.	Nearly 17% of students were unsatisfied with the information provided by the faculty office before enrollment.	The contact detail is made available for taking information.	Competitiveness in advertising degree programmes by private universities.
2	Information given in the faculty website was satisfactory for new students.	Nearly 12% of students were unsatisfied with the information given in the faculty website.	The well-constructed website is available for easy search of information.	Competitiveness in publishing attractive websites by private universities.
3	The selection of the field of the degree was satisfactory due to its international recognition.	Nearly 8% of students were unsatisfied with the international recognition of the field of study.	The 'Alumni' of FMST is well established to support by sharing their own experiences.	Less awareness of the international recognition of the fields of degree.
4	The self-judgment on completing the degree within the stipulated time was satisfactory.	Nearly 15% of students has made the judgment on unsatisfactory for completing the degree within the stipulated time.	Grace attempts are considered upon request.	No fallback option was established in the faculty for dropdown students.
5	Students have the opportunity of selecting courses based on students' interest.	Nearly 10% of students didn't select courses based on their interest.	Optional courses are indicated in the curriculum for easy search.	External factors change the student's interest.

Statement No.	Strength	Weaknesses	Opportunities	Threats
6	The advices taken for selecting optional courses from senior colleague was satisfactory.	Nearly 15% of the students did not take advices from senior colleagues at satisfactory level.	Considerable time duration is provided for the registration of courses through MIS.	Unavoidable external factors reduce the time for selecting optional courses.
7	The academic staff member/ mentor guides students for selecting optional courses at the level of satisfactory.	Nearly 11% of students did not take guidance from academic staff for selecting optional courses at the level of satisfactory.	Maintaining academic records in the student portfolio for easy observation of mentors.	Unavoidable reasons fall students into rapid track for completion of the degree.
8	The students were satisfied with the ability to strengthen the knowledge and skills after completing each course unit.	Nearly 6% of the students did not satisfy with the knowledge and skills they have strengthen after completing each course unit.	OBE practices at each course unit.	The skills are narrowing mostly into IT by the society.
9	The students were satisfied with the organization of all the courses.	Nearly 9% of the students did not satisfy with the organization the courses.	Students can compare the course structure with other higher universities searching websites.	The new generation expects more IT related courses.
10	Students were satisfied with the ability to apply the knowledge gained through the all courses.	Nearly 7% of the students did not satisfy with their ability to apply the knowledge gained through the all courses.	Research and industrial training provide opportunity to apply the knowledge.	The Service Operation Records (SOR) of some authorities and agencies has not include the degree programme.
11	Students were satisfied with they are free to comment and question about the content and structure of course.	Nearly 7% of the students did not satisfy with their freedom to comment and question about the content and structure of course.	Students' evaluation forms on teaching and Student Satisfaction survey are used for taking comments.	External factors reduce the freedom of students.
12	Students were satisfied with the awareness of the rules and regulations of the	Nearly 4% of the students did not satisfy with the awareness of the	Examination criteria, rules, and regulations are available in student	Some of the confidential documents are not made

Statement No.	Strength	Weaknesses	Opportunities	Threats
	university and rules that applicable to students including for examinations.	rules and regulations of the university and rules that applicable to students including for examinations.	Handbook and on the website.	available in open sources.
13	Students were satisfied with the English language competency is good enough to continue the degree and perform well in the degree programme.	Nearly 7% of the students did not satisfy with the English language competency.	English course is conducted up to level III and university has several clubs and societies to develop English language competency.	High cost of internationally recognized English examinations such as IELTS.

Discussion

The assessment of the students' satisfaction on the quality of contact personnel in administrative sections has been identified as a survey instrument in educational service quality named as the SERVQUAL framework (Gibson, 2010). The present study also evaluated the service quality as a pre-enrollment factor that showed a significant reduction of level of dissatisfaction of students on the services provided by the faculty office and availability of information on the website over time

Gibson (2010) reported that the preparation of future career expecting a good job and a quality life is one of the important variables needed to be included in student satisfaction survey. The present study shows an average satisfaction level on the preparation of future career as 71 ± 6 % and it was identified as a strength in the degree programmes. Weerasinghe et al. (2017), emphasized the importance of assessing the quality of service providers in student satisfaction survey. The present study considered a factor of the guidance of academic staff/mentors for selecting optional courses in the survey and the student responses in terms of dissatisfaction level declined over time. Thus, our findings agree with Weerasinghe et al. (2017) as they stated that the importance of students' satisfaction is determining through cooperation, kindness of administrative staff, and their responsiveness in the educational system.

The significant higher level of satisfaction in 2022 on strengthening and gaining knowledge during the undergraduate program is one of the clearest pieces of evidence of considering the historical data for making a benchmark level of student satisfaction. Kane et al. (2008) stated that reassurance of the feedback and action cycle could be gained through benchmarking student satisfaction over the years. Martirosyan (2014) check has suggested that the questionnaire should be student-driven and then it would be reflected the concerns of the students rather than the administration.

One of the positive contributing factors in the present student satisfaction survey was the confidence of students in applying their knowledge and experience of the degree programs and the comments and suggestions given by students could be related to the current curriculum reform being implemented in the future.

Conclusion

Temporal analysis of the level of dissatisfaction for the tested variables in the questionnaire gradually declined over the years while satisfying the students of FMST in terms of the overall quality of the degree programs. However, there are still some unsatisfactory levels in certain aspects while SWOT analysis observed certain weaknesses and therefore, it is essential to make necessary arrangements to address those issues in order to improve the quality of degree programs to support prospective students. This study recommended reformulating the questionnaire used for the survey including some newly identified aspects.

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