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Subjective outcome evaluation of a university subject on service leadership

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Abstract: University students (n=58) responded to a 45-item subjective outcome evaluation scale after taking a credit-bearing elective subject titled “Service Leadership” at The Hong Kong Polytechnic University in the first semester of the 2013–14 academic year. Results showed that the students generally displayed positive perceptions of the program content and the instructors, and most of them perceived the subject to be beneficial to different aspects of their development. As predicted, three subscales of the scale (Program Content, Program Implementer, and Program Benefits) were significantly correlated. Similar to the previous studies, perceived quality of the program but not quality of instructors and program benefits predicted the students’ overall satisfaction with the program.

Keywords: Chinese; client satisfaction; service leadership education; subjective outcome evaluation; university students.

Introduction

In the post-industrial service age, the concept of “service management” is not uncommon. The service industry does not only require professional knowledge and skills of young people but also expect the new entrants to have

intrapersonal competencies (i.e. emotional management skills) and interpersonal competencies (i.e. communication and conflict management skills) which are not entirely congruent with the attributes of the new generation [1]. Unfortunately, while there is some discussion on service “management”, leadership in the service context is still relatively unexplored [2]. Hence, there is a need to rethink about the nature of service leadership. The literature related to the study of service leadership highlights the concept of “servant leader”, “ethical leader”, and “spiritual leader” [3]. According to the Hong Kong Institute of Service Leadership and Management, there are three basic attributes of an effective leader: generic leadership competencies (such as problem solving skills and cognitive competence), moral character, and caring disposition.

In Hong Kong, service sectors gain prominence in the economy. In 2012, 93% of the GDP was generated from the service industries, which constituted a share of 88.3% of total employment [4]. However, there are some characteristic barriers for the current young generation in Hong Kong to adapt in service economy, such as being egocentric [5], materialistic [6], and lack of proactive and prosocial attitude [7]. Research studies also revealed that adolescents in Hong Kong faced many developmental issues [8, 9], such as depression, anxiety, and Internet addiction. Hence, it is a wake-up call for young people to develop service leadership qualities through credit bearing subjects in the school context.

To promote service leadership education for university students, Po Chung established an institute named the Hong Kong Institute of Service Leadership and Management (HKI-SLAM) and developed the Service Leadership and Management (SLAM) framework [10, 11]. With the support of the Victor and William Fung Foundation Limited, eight universities funded by the University Grants Committee joined the Fung Service Leadership Initiative (SLI) in 2012. To connect the SLAM model to academic learning, Shek and his colleagues [12] designed a credit-bearing subject “Service Leadership” at the Hong Kong Polytechnic University. The subject integrates theories of service leadership and core concepts of positive youth development. In the 2013–2014 academic year, students taking the subject were full-time students enrolled

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in the 3-year bachelor's degree program who came from different faculties, departments, and programs. The details of the subject can be seen in Shek and his colleagues' paper [12].

The course has a clear focus on using evaluation research to support its curriculum development and refinement. The evaluation includes objective outcome evaluation, subjective outcome evaluation, process evaluation, and qualitative evaluation (such as focus groups and student reflections). Results from the previous studies showed that students had positive changes in service leadership competencies after taking the subject, and they had very positive perceptions of the subject [13–17].

With particular reference to subjective outcome evaluation which is based on the client satisfaction approach, a Subjective Outcome Evaluation Form was developed [13, 18] which attempted to measure students' perceptions of program outcomes and effectiveness of the program on their holistic development. Results from the subjective outcome evaluation of the pilot course [13] showed that the students were satisfied with the qualities of the subject and the instructors, and they felt that the subject promoted their intrapersonal and interpersonal competencies. As replication is an important hallmark of science, this paper aims to further examine students' satisfaction as well as perceived program effectiveness of the course using a new set of data collected from a different student cohort. Based on the existing literature, several research questions were addressed in this study as follows:

1. Is the Subjective Outcome Evaluation Form reliable in this new sample of students?
2. How do the students perceive the subject, instructors and benefits of the subject?
3. What are the inter-relationships between perceived program quality, instructor quality and program benefits? Based on previous studies [13, 18], it was hypothesized that the three major aspects of subjective outcomes (i.e. program quality, instructor quality, and program effectiveness) would be inter-related (Hypotheses 1a, 1b, and 1c).
 - Hypothesis 1a: Program quality and instructor quality would be positively correlated.
 - Hypothesis 1b: Program quality and program effectiveness would be positively correlated.
 - Hypothesis 1c: Instructor quality and program effectiveness would be positively correlated.
4. Do perceived program and instructor qualities predict perceived benefits of the subject? Based on past studies [13, 18], students' perceived program and instructor qualities would predict the perceived benefits of the subject (Hypotheses 2a and 2b).

- Hypothesis 2a: Program quality would positively predict program effectiveness.
 - Hypothesis 2b: Instructor quality would positively predict program effectiveness.
5. How would perceived satisfaction with the program, instructors, and benefits explain overall satisfaction with the subject? Based on previous research findings [13, 18], it was hypothesized that these three aspects of subjective outcome evaluation would predict students' overall satisfaction with the subject (Hypothesis 3).
 - Hypothesis 3: Program quality, instructor quality and program effectiveness would positively predict overall satisfaction with the subject.

Methods

The participants ($n=58$) were students who took "Service Leadership" in semester 1 of the 2013–2014 academic year. In the last lecture, the lecturer distributed the Subjective Outcome Evaluation Form and invited all students to complete it in a voluntary manner. Enough time was given to the students to fill-in this form in self-administration manner. The collected questionnaires were entered and cleaned by a team of well-trained research assistants.

Instruments

A modified Subjective Outcome Evaluation Form was used in the evaluation. Previous studies showed that this scale possessed adequate psychometric properties [13, 18]. There are five main parts of the form:

1. Program Content (PC) includes 10 items, which assess students' perceptions of the curriculum design, learning activities, in-class interaction, active participation, and encouragement, as well as their overall evaluation on the course content (a1–a10 in Table 2).
2. Program Implementer (PI) includes 10 items, which cover how students perceive the attitude, preparation, teaching skills, engagement, interaction, and caring of the instructors (b1–b10 in Table 3).
3. Program Benefits (PB) includes 18 items (c1–c18 in Table 4), which include students' perceptions on their development of intrapersonal and interpersonal competencies after taking the course.
4. Overall Satisfaction (OS) with the program, includes 3 items ("friends", "again", and "overall satisfaction", d1–d3 in Table 5) with a 5-point Likert-type scale. "Friends" is the question assessing the extent to which the students would recommend the course to their friends. "Again" is the item about the extent to which the students would join similar courses in the future.
5. Four open-ended questions (e1–e4 in Table 6) are designed for the students to share their written comments on: (a) the important things they learned from the course; (b) things that they appreciated most; (c) comments on the lecturers; and (d) suggestions for the improvement of the course.

To get a valid picture of the students' subjective feelings and perceptions on the subject, all quantitative and qualitative data were analyzed and discussed in this paper.

Data analyses

All data analyses were performed by the statistical package of SPSS 20 (IBM Corp., Armonk, NY, USA). Descriptive statistics of each closed question (frequencies and percentage values) were calculated by categorizing the "positive" and "negative" responses. A composite measure of each subscale (Program Content, Program Implementer, Program Benefits, and Overall Satisfaction) was created based on the total scores of each subscale divided by the number of items. Total Effectiveness (TE) was created as a new variable, which is the mean score of the 38 items (PC, PI, and PB). To further explore the relationship and prediction of each subscale, Pearson's correlation was conducted to examine the inter-correlations among PC, PI, PB, and TE. Multiple regression analyses were conducted twice: the first time was to analyze

whether PC and PI could predict PB; the second one was to analyze how PC, PI, and PB as three independent variables predict the dependent variable of overall satisfaction. To enrich the above quantitative analyses of the students' subjective ratings on the 41 closed questions, coding (valid responses were marked as "positive", "neutral", or "negative"); counting frequency; and thematic analysis (mainly focused on the positive nature of the written comments) were applied in the four open-ended questions.

Results

Concerning Research Question 1, reliability analyses demonstrated that the Subjective Outcome Evaluation Form showed adequate reliability (see Table 1). Reliability analyses indicated the scale had good internal consistency: (a) Program Content, with Cronbach's alpha=0.95, mean of inter-item correlation=0.64; (b) Program Implementer, Cronbach's alpha=0.92, mean of inter-item correlation=0.53; (c) Program Benefits, Cronbach's

Table 1: Means, standard deviations, Cronbach's alphas, and mean inter-item correlations among the variables.

	Mean	Standard deviation	Cronbach's alpha	Mean inter-item correlations
1. Program Content (PC: 10 items)	3.94	0.60	0.95	0.64
2. Program Implementer (PI: 10 items)	4.26	0.49	0.92	0.53
3. Program Benefits (PB: 18 items)	3.97	0.55	0.96	0.55
4. Total Effectiveness (TE: 38 items)	4.06	0.50	0.97	0.50
5. Overall Satisfaction (OS: 3 items)	3.83	0.87	0.93	0.81

Table 2: Summary of the evaluation of the subject (n=58).

	1 Strongly disagree		2 Disagree		3 Neutral		4 Agree		5 Strongly agree		Positive response (options 4-5)	
	n	%	n	%	n	%	n	%	n	%	n	%
a1 The objectives of the curriculum are very clear.	0	0	2	3.5	7	12.3	40	70.2	8	14.0	48	83
a2 The content design of the curriculum is very good.	0	0	1	1.8	13	22.8	34	59.6	9	15.8	43	74
a3 The activities were carefully arranged.	0	0	1	1.8	10	17.5	35	61.4	11	19.3	46	79
a4 The classroom atmosphere was very pleasant.	1	1.8	1	1.8	13	22.8	28	49.1	14	24.6	42	72
a5 There was much peer interaction amongst the students.	0	0	1	1.8	11	19.3	32	56.1	13	22.8	45	78
a6 I participated in the class activities actively (including discussions, sharing, games, etc.).	0	0	2	3.5	12	21.1	35	61.4	8	14.0	43	74
a7 I was encouraged to do my best.	0	0	2	3.5	7	12.3	37	64.9	11	19.3	48	83
a8 The learning experience enhanced my interests towards the course.	1	1.8	1	1.8	19	33.3	28	49.1	8	14.0	36	62
a9 Overall speaking, I have a very positive evaluation on the course.	1	1.8	1	1.8	7	12.3	35	61.4	13	22.8	48	83
a10 On the whole, I like this course very much.	1	1.8	1	1.8	9	15.8	31	54.4	15	26.3	46	79

Table 3: Summary of the evaluation of the instructors (n=58).

	1 Strongly disagree		2 Disagree		3 Neutral		4 Agree		5 Strongly agree		Positive response (options 4–5)	
	n	%	n	%	n	%	n	%	n	%	n	%
b1 The instructor(s) had a good mastery of the course.	0	0	0	0	7	12.3	35	61.4	15	26.3	50	86
b2 The instructor(s) was (were) well prepared for the lessons.	0	0	0	0	4	7.0	24	42.1	29	50.9	53	91
b3 The teaching skills of the instructor(s) were good.	0	0	1	1.8	10	17.5	32	56.1	14	24.6	46	79
b4 The instructor(s) showed good professional attitudes.	0	0	0	0	6	10.3	30	51.7	22	37.9	52	90
b5 The instructor(s) was (were) very involved.	0	0	0	0	3	5.2	29	50.0	26	44.8	55	95
b6 The instructor(s) encouraged students to participate in the activities.	0	0	0	0	3	5.2	31	53.4	24	41.4	55	95
b7 The instructor(s) cared for the students.	0	0	0	0	11	19.0	27	46.6	20	34.5	47	81
b8 The instructor(s) was (were) ready to offer help to students when needed.	0	0	0	0	5	8.6	30	51.7	23	39.7	53	91
b9 The instructor(s) had much interaction with the students.	0	0	0	0	8	13.8	30	51.7	20	34.5	50	86
b10 Overall speaking, I have a very positive evaluation on the instructor(s).	0	0	1	1.7	3	5.2	33	56.9	21	36.2	54	93

Table 4: Summary of the evaluation of the perceived benefits (n=58).

	1 Strongly disagree		2 Disagree		3 Neutral		4 Agree		5 Strongly agree		Positive response (options 4–5)	
	n	%	n	%	n	%	n	%	n	%	n	%
c1 It has enhanced my social competence.	0	0	1	1.7	10	17.2	37	63.8	10	17.2	47	81
c2 It has improved my ability in expressing and handling my emotions.	0	0	2	3.4	7	12.1	41	70.7	8	13.8	49	84
c3 It has enhanced my critical thinking.	0	0	3	5.2	7	12.1	36	62.1	12	20.7	48	83
c4 It has increased my competence in making sensible and wise choices.	0	0	1	1.7	14	24.1	33	56.9	10	17.2	43	74
c5 It has helped me make ethical decisions.	1	1.7	1	1.7	14	24.1	32	55.2	10	17.2	42	72
c6 It has strengthened my resilience in adverse conditions.	0	0	2	3.4	9	15.5	33	56.9	14	24.1	47	81
c7 It has strengthened my self-confidence.	1	1.8	2	3.5	8	14.0	34	59.6	12	21.1	46	79
c8 It has helped me face the future with a positive attitude.	1	1.7	2	3.4	8	13.8	31	53.4	16	27.6	47	81
c9 It has enhanced my love for life.	0	0	2	3.4	14	24.1	34	58.6	8	13.8	42	72
c10 It has helped me explore the meaning of life.	1	1.7	3	5.2	10	17.2	36	62.1	8	13.8	44	76
c11 It has enhanced my ability of self-leadership.	0	0	1	1.7	7	12.1	36	62.1	14	24.1	50	86
c12 It has helped me cultivate compassion and care for others.	1	1.7	1	1.7	8	13.8	33	56.9	15	25.9	48	83
c13 It has helped me enhance my character strengths comprehensively.	0	0	2	3.4	9	15.5	35	60.3	12	20.7	47	81
c14 It has enabled me to understand the importance of situational task competencies, character strength and caring disposition in successful leadership.	0	0	2	3.4	4	6.9	38	65.5	14	24.1	52	90
c15 It has promoted my sense of responsibility in serving the society.	1	1.7	2	3.4	11	19.0	34	58.6	10	17.2	44	76
c16 It has promoted my overall development.	0	0	3	5.3	9	15.8	32	56.1	13	22.8	45	78
c17 The theories, research and concepts covered in the course have enabled me to understand the characteristics of successful service leaders.	0	0	2	3.4	5	8.6	37	63.8	14	24.1	51	88
c18 The theories, research and concepts covered in the course have helped me synthesize the characteristics of successful service leaders.	0	0	3	5.2	2	3.4	38	65.5	15	25.9	53	91

alpha=0.96, mean of inter-item correlation=0.55; (d) Total Effectiveness, Cronbach's alpha=0.97, mean of inter-item correlation=0.50; (e) Overall Satisfaction, Cronbach's alpha=0.93, mean of inter-item correlation=0.81.

Descriptive statistical analyses were carried out to address Research Question 2. Frequency and percentages of responses to the close-ended items (PC, PI, PB, and OS) showed some interesting results. First, regarding the students' perceptions of the lecture, 83% of the students found the subject had clear objectives, 79% of them agreed that in-class activities were well-arranged, 83% of them felt that they were encouraged by the lecturer to do their best, 83% of the students had very positive evaluation on the course, and 79% of them found the course very enjoyable (see Table 2). Second, regarding the students' perceptions of the instructor, 95% agreed that the instructors encouraged them to participate in the activities, 95% felt that the instructors were very involved, and 93% were satisfied with the instructors' overall performance (see Table 3). Third, regarding the students' perceived benefits of the subject, 90% of the students agreed that the course helped them develop a better understanding of the three core elements of service leadership, 91% of them perceived that the theories, research, and concepts enabled them to learn the characteristics of service leaders, 86% of them found their self-leadership qualities were enhanced, and 78% of them agreed that the course promoted their holistic development (see Table 4). Last, in terms of overall satisfaction, 79% of the students would recommend their friends to take this course, 66% would or definitely would register in similar courses again, and 76% were satisfied with the course (see Table 5). In short, the findings generally suggested that different domains of the subject were appreciated by the students.

Qualitative data (i.e. the students' written comments in the last part of the Subjective Outcome Evaluation Form) were also analyzed to understand their feedback on the subject (see Table 6). Results showed that the feedback

was generally positive ("e1" with 100% positive responses, "e2" with 100% positive responses, "e3" with 91% positive responses, and "e4" with 40% positive responses which asked students about the areas for improvement). Overall, students showed their appreciation of the changes to take this course as well as the excellent teaching of the instructors.

Regarding Research Question 3 (i.e. inter-relationships amongst the different domains of student satisfaction), findings in Table 7 showed that the four subscales (Program Content, Program Implementer, Program Benefits, and Total Effectiveness) were significantly associated: PC and PI ($r=0.77$, $p<0.01$); PC and PB ($r=0.81$, $p<0.01$); PC and TE ($r=0.95$, $p<0.01$); PI and PB ($r=0.69$, $p<0.01$); PI and TE ($r=0.89$, $p<0.01$); PB and TE ($r=0.91$, $p<0.01$).

For Research Question 4, because the sample size was small ($n=58$), Adjust R^2 was used to evaluate the total variance in Program Benefit (PB) explained by Program Content (PC) and Program Implementer (PI). Table 8 shows that PC and PI could explain 65% of the total variance of the students' perceived program benefits. PC ($\beta=0.67$, $p<0.001$) but not PI ($\beta=0.18$, $p=0.152$) had significant prediction on PB.

For the contribution of different domains of the scale on overall satisfaction with the program (Research Question 5), Table 9 shows the result of multiple regression analyses on the predictive ability of PC, PI, and PB on the total variance in Overall Satisfaction (OS) as the dependent variable. It revealed that 62% of the total variance in OS could be explained by PC, PI, and PB. However, only Program Content (PC) had a significant prediction on OS ($\beta=0.52$, $p<0.01$).

Discussion

This study evaluated the perceptions of students who took the service leadership course in the area of the subject, instructors, benefits as well as their overall satisfaction.

Table 5: Students' overall satisfactions with the course ($n=58$).

	Positive response (options 4–5)	
	n	%
d1. Will you suggest your friends to take this course? ^a	46	79
d2. Will you participate in similar courses again in the future? ^a	38	66
d3. On the whole, are you satisfied with this course? ^b	44	76

^a1=Definitely will not, 2=Will not, 3=Not sure, 4=Will, 5=Definitely will; ^b1=Very dissatisfied, 2=Moderately dissatisfied, 3=Neutral, 4=Satisfied, 5=Very satisfied.

Table 6: Summary of students' written comments on the course (n=58).

	Positive responses	Total responses (with written comments)	Percentage	Highlights
e1. The most important thing(s) learned in the course	49	49	100%	<ul style="list-style-type: none"> – “The course gives me a new framework to analyze leadership and to have self-evaluation” – “Leadership effectiveness can be enhanced through three dimensions, which are moral character, leadership competence and caring” – “How to build up intrapersonal competence (IQ,SQ,EQ,AQ)” – “Leadership skills”
e2. The things that appreciated most in the course	49	49	100%	<ul style="list-style-type: none"> – “Guest lecturer is great. Lots of class activities. Helpful and fun at the same time” – “Many chances to participate in the discussion or performance” – “I appreciate that we can have lots of self-reflection papers to know more about our strengths and weaknesses concerning the elements of service leadership” – “I appreciate the lecturers have a good preparation before the class. I can feel that they put a lot of efforts on it”
e3. Comments on the lecturer(s)	32	35	91%	<ul style="list-style-type: none"> – “Very professional, well-prepared” – “Well elaboration of the concept” – “The lecturers are well-prepared for the entire course, and the experience shared is inspiring” – “The lecturer is very supportive to encourage people to speak”
e4. Areas for improvement	7	18	40%	<ul style="list-style-type: none"> – “Can provide more real life examples instead of mentioning theories sometimes” – “Would like to have more in-depth knowledge about concept” – “More interesting activities should be included, such as outing activities to learn the concept” – “Maybe this course can provide some field trip to well-known company with good leadership management”

Table 7: Correlation coefficients among the variables.

1. Program Content (10 items)	–			
2. Program Implementer (10 items)	0.77 ^a	–		
3. Program Benefits (18 items)	0.81 ^a	0.69 ^a	–	
4. Total Effectiveness (38 items)	0.95 ^a	0.89 ^a	0.91 ^a	–

^ap<0.01.

Several observations can be highlighted from the above findings. First, consistent with the previous study [13, 18], the modified Subjective Outcome Evaluation Form had good internal consistency. As there are few validated measures of evaluation in different Chinese contexts, the findings can help to enrich the Chinese literature in this area.

Second, descriptive analyses of the positive percentages of the 41 closed question items showed that most students had very positive learning experience. Echoing with

Table 8: Multiple regression analyses predicting program effectiveness.

	Predictors		Model	
	Program content	Program implementer	R	R ²
	β ^a	β ^a		
Program benefits	0.67 ^b	0.16 ^c	0.81	0.65

^aStandardized coefficients. ^bp<0.001, ^cp=0.152.

the quantitative ratings, written comments of the students revealed that a majority of the students had very positive perceptions on the subject and instructors. They learnt the importance of becoming an ethical and capable service leader who could serve others with intrapersonal competencies, morality, and caring. This observation is consistent with the previous studies of students' written and oral

Table 9: Multiple regression analyses predicting overall satisfaction.

	Predictors			Model	
	Program content	Program implementer	Program benefits	R	R ²
	β^a	β^a	β^a		
Overall satisfaction	0.52 ^b	0.11	0.21	0.80	0.62

^aStandardized coefficients, ^b $p < 0.01$.

feedback on this subject [16, 17]—it helped them change their mindset such as caring of others and collaboration with each other in serving the community. The findings that the subject was well-received by university students also suggests that students welcomed subjects relevant to their own development.

Third, the hypotheses of the study were generally supported. Similar to previous studies, Program Content, Program Implementer, and Program Benefits were significantly correlated. The findings suggest that the course characteristics (curriculum design, activities, and teaching approach), instructor characteristics and perceived benefits are a “holy trinity” in subjective outcome evaluation. The findings echo the findings on objective outcome evaluation [14] which showed that students had positive changes after taking this subject in terms of their interpersonal competencies and overall service leadership qualities. However, from the multiple regression analyses, it is noteworthy that only program quality had significant prediction on program benefit, while the quality of the instructors did not. It may be partly because the course is person-oriented and student-oriented so that the students might find it more meaningful to do the reflection and to digest the knowledge on their own. In addition, quality of the program also significantly predicted the students’ overall satisfaction, which showed that the well structuring and coherence of the course [15] can provide a good platform for the students for experiential learning. Another possibility is that findings are statistical artifacts. As the ratings for the teacher were very positive, the little variance involved may not be discriminating enough when predicting perceived benefits and overall satisfaction. Besides, the small sample may account for the non-significant influence of instructors on perceived benefits and overall satisfaction.

There are several areas of improvement in this study. First, it is clear that the sample size is not large ($n=58$). As such, the use of multivariate statistical analyses may generate unstable findings. Hence, it is necessary to replicate the

findings with a larger sample involving different cohorts of students. Second, there is a need to further examine the psychometric properties of the three subscales (Program Content, Program Implementer, and Program Benefit) of the Subjective Outcome Evaluation Form. For example, given a larger sample, factor analysis can be carried out to validate the dimensions of the scale. Third, qualitative studies should be further carried out to understand the subjective experiences of the students so that a more triangulated picture can be derived.

There are several implications of this study. First, it is meaningful to promote the service leadership curriculum to nurture and prepare university students for the post-industrial service-oriented society. Besides developing credit-bearing service leadership subjects, non-credit-bearing service leadership programs should also be designed. Second, for sustainable development, more research is needed in evaluating the students’ perceptions, performance, and progress in the similar subject. For example, development of validated measures of service leadership knowledge, attitudes, values, and skills is important. Last, the study raise a call to build a service leadership education community both locally and internationally where entrepreneurs, educators, and community stakeholders should have more collaboration to provide chances for the students, our leaders of tomorrow, to develop better service leadership through learning and practicing.

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