

How the Role Behaviour in Value Co-creation influence on the Educational Experience of Undergraduates?

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ABSTRACT

The higher education sector needs to move from the traditional marketing concept of ‘student as a customer’ to ‘co-creator’ of value with the intention of maintaining the quality of education while facing high competition specially in the private education sector. The main purpose of this study is to examine the impact of role behaviour in value co-creation on the educational experience of undergraduates, referring to a well-established large-scale private higher educational institution in Sri Lanka. Key areas of the study are identifying the role of a student, level of co-creation behaviour and educational experiences. The study design is quantitative and used a self-administrative questionnaire with a sample of 370 students in the Business Management faculty and Faculty of Information Technology. Findings show that the majority (84.4%) of the students in the institution are playing a mixed role (irregular) rather than the role of “customer” or a “co-creator” which is 15.6%. Irrespective of the sex of the students, 83% of females and 86.5% of males are playing the mixed role. Compared to their irregular counterparts, co-creators are at a better level of educational experience. Hence, there is a significant positive relationship between role behaviour on co-creation and the educational experience. Feedback, helping, and responsible behaviour are having a significant positive impact on the educational experience. Role identification of the student significantly moderated the relationship of role behaviour to educational experience but sex, year of study, and study discipline were not significant moderators. The residual analysis ensured the accuracy of the final model and the adequacy of the model is 57% (R-squared=0.57).

Keywords: Educational Experience, Private Higher Education Institutions, Role-behaviour, Service Dominant logic, Value co-creation

INTRODUCTION

Experience is a common day-to-day practice and a concept of theoretical and existential^[1]. Learning is the outcome of a mental process that transforms experiences gained through engaging in various activities into information^[2]. In the business studies context, Gilbert^[3] emphasized the powerful learning experience is a result of the authenticity, concreteness and real-life process of developing a novel product and planning, prototyping, and experiencing the path an innovation. It highlights that when the learner connects with the past, present and future through important content it gives a good educational experience and leads the learner towards growth^[4]. Moreover, previous research states, active engagement helps students to drive their own way of learning^[4]. Around the world Higher education is experiencing huge changes in its sector and as a service; it consists of specific characteristics such as the high level of active involvement demanded of the individuals accessing the service; a long-lasting service relationship and a great variety in the nature of the service offered^[5].

Further, the commanding competition for higher education makes private higher education institutions carry

out their marketing campaigns at the enrolment of students, in a way to build the role of customer than the role that is essential to play as a student in the rigorous academic process [6].

In the Sri Lankan context, although students in private higher education institutions are paying huge course fees, there is a reasonable amount of students who fail their final examinations. This highlights the possibility of having a problem with their educational experience, which indicates a problem with students' engagement in the learning process. Since universities put pressure on students to graduate, it may appear that studying is more about ultimate achievement than learning^[7]. Here, support which is given by the university is essential rather than pressurised them to graduate. This highlights the fact that integration with lecturers is one of the most important ways to assist students who graduate from college^[8]. Another prominent point is that the students who are in their higher education seem like they do not identify their responsibilities and the role they do have. So, it is important and timely valuable to study how well the students identified their role in higher education.

Therefore, this study will explore the impact of Role Behaviour in value co-creation on Educational Experience in the perception of undergraduates, especially those paying attention to a Private Higher Educational Institution in Sri Lanka.

Research Questions and Objectives

- The identified gap in the relationship between the role behaviour in value co-creation and the educational experience raised a few questions:
- How do the role behaviour in value the co-creation and educational experience of undergraduates?
- Is there an influence of the level of Role Behaviour in value co-creation on the level of educational experience?
- Do the sex, age, year of study, and specialization of the degree of a student make any difference in the relationship between the level of Role Behaviour in value co-creation and the level of educational experience?
- To get reasonable answers to the raised questions, the following objectives were derived. The general objective is to find the impact of the level of Role Behaviour on the value co-creation of students on their educational experience in a Private Higher Education Institution in Sri Lanka. The specific objectives are as:
- To identify the level of the educational experience of students
- To identify the level of Role identification as an undergraduate
- To test the significance of the difference in Role Behaviour in value co-creation and Educational experience in the different levels of Role identification
- To test the significance and measure the strength of the relationship between the level of Role Behaviour in value co-creation and the educational experience.
- To test the significance of the moderating impacts of sex, age, year of study, and specialization of the degree of a student on the relationship of the level of Role Behaviour in value co-creation to the level of educational experience.

LITERATURE REVIEW

Experiential Learning Theory

Learning is a broad concept which comprises many components^[9]. Nowadays, youth is more into digital technology and lack real experience which can be gained from classroom teaching and learning^[10]. A quality Experiential based learning process is very important and it varies, some activities are not worthwhile without real reflection, personal change or increased public engagement^[11]. As not teaching is something designed to guide towards test performance^[12], experience need not be something designed only

for experience's sake; the essence of experiential learning is encouraging students to come up with new skills and apply them in the newest way [12]. In social constructivism learning experiential learning model is significant. Experiential learning favourably impacts groups, and communities and benefits individuals [13]. This is considered a participatory type of learning where learners engage in a variety of mental processes to synthesize knowledge in an active interactive setting [14].

Service-Dominant Logic

The service-dominant logic (S-D-logic) implies that value is often co-created in a continuous sequence of social and economic processes based on resources like skills and knowledge with which the company is continuously seeking to make better value proposals than its rivals [15]. This claims that the service is the centrepiece of business [16]. It identifies the core principles of service, collaboration, co-creation, and system thinking and presents the newest way of describing the value-in-use and value-creation process [17].

Therefore, companies used this service-dominant logic to compete in their respective sectors [18]. In Service-Dominant logic, value is co-generated with the engagement of each stakeholder rather than created only by the firm and then transmitted to customers, as in the traditional model of Good-Dominant logic [19].

Organizations are encouraged to collaborate with network partners in value co-creation and here, the value co-creator is the customer while users are considered as the active participant and resource investigators in the final decidedness of the value [20].

Customer value co-creation behaviour

Value co-creation is a process, where many actors are engaged and each of them reflects different attitudes and behaviours throughout the process. As an organization, it is important to recognize each of their behaviours and make decisions in future. The concept 'customer value co-creation behaviour' is used to characterize the actual engagement of the customer in the process of value creation, which requires active involvement in physical, digital and mental phases [21]. There are two types of co-creation behaviour, one is customer participation behaviour and customer citizenship behaviour. Further, can define as role behaviour and extra-role behaviour [22].

Customer participation behaviour

Performance can be split into two as task performance and contextual performance [23]. Behaviours that are required and anticipated for efficient completion of service delivery explain as task performance. Without those, service delivery would not be complete. Similarly, customers and staff who participate in the process of service delivery should take part in activities, such as information seeking, information findings, responsible behaviour and personal interaction that are defined under customer participation behaviour [22].

Customer Citizenship Behaviour

Customer citizenship behaviour is defined as "voluntary and discretionary behaviours that are not required for the successful production or delivery of the service but that, in the aggregate, help the service organization overall" [24(p11)]. The contextual performance consists of voluntary and arbitrary behaviours which are not necessary for good value co-creation. These behaviours are linked to extra-role behaviours that involve acts against other clients, workers or companies [24]. In this respect, consumers should not have to perform activities or show behaviours like, feedback, advocacy, help and tolerance [22]. While these behaviours enhance the success of the company through developing better interaction among the actors who experience the service it offers major advantages for actors who are in the value co-creation process as well [25].

Educational Experience

Customer experience is a vital aspect of the value assessment of customers^[26]. However, this concept is very complicated as it has many interpretations^[27]. Furthermore, when defining the service experience, it consists of several contact points that are diverse and relate to the overall customer experience, education is one such context ^[28]. According to Reference ^[29], higher education offers a wider range of educational experiences and it consists of several aspects the curriculum of the university is varying based on the aspect and who is assessing the educational experience.

The most important fact is that the total experience of students can be used to assess the quality of the education system of a particular higher education institution, and this total approach covers the entire educational experience gained by being in the university for a longer time period. When it assessing the total experience of a student, educational experiences gained by the particular student are also highly mattered and make an impact on evaluating the overall quality of the service provided by the educational institution. Many types of research have been carried out to evaluate the educational experience of students and the Reference ^[29] findings show several aspects of educational experience.

Validated Model of Higher Educational Experiences

Relative to Muncy Orientation Evaluation Matrix (OEM), a validated model of higher education experience was introduced ^[30]and it incorporates a variety of additional types of educational experience and thereby gives a more in-depth perspective on the topic of student–customer orientation at the higher education institution.

Two major levels can be identified in this validated model of higher education experience. Those are the Institutional network and the Learning situation network. Moreover, under those two major levels can be identified, 11 subcategories. At the Institutional network, educational experiences obtain via administrative processes (including student feedback, and graduation), curriculum design, communication with service staff, and institutional rigour. At the stage of the learning network, the student is the customer orientation is constructed of rigour (again categorized into grading, classroom behaviour), Formal learning (divided into classroom and individual studies), and Pedagogy (both teaching methods, course design)^[30].

METHODOLOGY

A case study approach was used to find answers to the research questions, addressed in this article. The research design of this study is consistent with the purpose, which is to explore the impact of role behaviour in value co-creation on educational experiences. This study is to test hypotheses from theories, collect data and use many statistical analysis methods to strengthen the theories. So this research is quantitative research which adopts a deductive approach. Where, it takes an epistemological objective and positivist stance in order to find objective reality in the results^[31].

Conceptual framework.

Educational Experience was measured with three indicators; rigour, formal learning, and pedagogy. Rigour defines the strictness with which students expect the teacher to approach the evaluation of various assignments and ways of approaching teachers for misbehaviours of students in classrooms; formal learning measures the convenience and ease of classroom studies and individual studies whether or not an HEI expects students to make academic efforts outside class; and pedagogy defines as the use of modern and traditional techniques in teaching at an HEI in course design and the nature of the course from the practical and theoretical aspects whereas stakeholders are responsible for designing the course^[32]. Co-creation

activities are measured by five subscales, which it used to determine, students' role behaviour in co-creation in the study. It views that as a result, successful involvement in assessment and feedback practice necessitates assessment literacy on the part of both students and faculty [33].

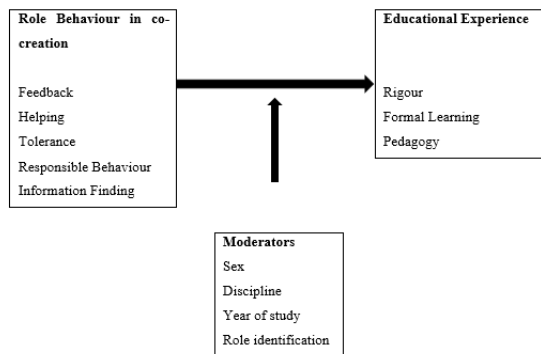


Figure 1: Conceptual Framework

Feedback which is a sub-scale in role behaviour in co-creation emphasized the significance of feedback in student education. Tolerance is an opinion that is significantly different from what we have on our own from the attitude that holds towards the same activity or thought of others [34] where helping refers to consumer actions directed at helping other consumers where it aids directly in the service co-creation process. It is essential, that an individual consciously and deliberately finds something that tells him or her of his or her unique needs at that time [35], to add more value to the co-creation process of learning.

Hypothesis

To address the research objectives, developed the following research hypothesis

- **H1:** Average level of Role Behaviour in value co-creation will different for the levels of Role Identification.
- **H2:** Average level of the educational experience of the student will different for the levels of Role Identification.
- **H3:** A change in the level of the student's Role Behaviour in value co-creation will change the educational experience of the student.
- **H4:** The Level of Role Behaviour in value co-creation will impact the educational experience
- **H4 (a):** Feedback in value co-creation will positively impact the educational experience.
- **H4 (b):** Helping in value co-creation will positively impact the educational experience.
- **H4 (c):** Tolerance of value co-creation will positively impact on educational experience.
- **H4 (d):** Responsible Behaviour in value co-creation will positively impact the educational experience.
- **H4 (e):** Information Findings in value co-creation will positively impact the educational experience.
- **H5-H9:** Sex, year of study, Discipline, and Role-identification of a student will moderate the relationship of level of Role Behaviour in value co-creation to the educational experience.

Sample and selecting procedure

Further, as this is a descriptive research study, using a self-administrative electronic questionnaire collected data from a well-established private higher education institution in Sri Lanka, where there are approximate, 9700 undergraduates.

Sample of the study

- The sample size of the study is 180 students and the selection of the sample consists of two stages.

- **Stage 01-** Selected study centres and study programmes selected two centres and the main campus as study centres and selected two-degree programmes are business management and information technology.
- **Stage 02-** Used stratified sampling technique to select students for the sample and considered the stratus as sex, study year, and the study program of the student in different stages.

Measurement instrument

A seven-point Likert scale questionnaire was sent among undergraduates of that particular institution with the following responses, 1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neutral, 5 = Somewhat Agree, 6 = Agree, 7 = Strongly Agree. The questionnaire consists of four separate parts. Section A addresses four demographic factors sex, age, discipline and year of studying of students, section B includes 14 questions to cover student’s educational experiences which is the dependent variable of the study, section C comprises 29 items to collect data relating to an independent variable which is role behaviour in co-creation and in the final section includes 10 separate questions to measure the role identification of students which is used to determine the role behaviour of the study.

Data analysis

Factor analysis, the data reduction technique has been used to reduce a large number of indicators to a smaller subset of measurement variables^[36]. As a multivariate analysis, confirmatory factor analysis is used to remove weaker items (questions) from the measurement and to ensure the construct validity of the constructs in the study. Reliability and the validity of the questionnaire are tested using Cronbach’s Alpha value and KMO and Bartlett’s test. According to the researchers, for the measuring instrument to be reliable, it should be a minimum internal consistency coefficient of 0.7. Data to be accepted KMO and Bartlett’s test value should be more than 0.5 ^[36,37].

Used several inferential analyses to derive a conclusion on the population which is not satisfied from the descriptive analysis ^[36]. The non-parametric Mann-Whitney U test is conducted to compare the level of role behaviour in co-creation and educational experience among different role identification. Furthermore, the association between the independent variables and the dependent variable was verified using the spearman rho correlation. Through multiple linear regression analysis, measured the indeed impact of role behaviour in co-creation on the educational experience of undergraduates in the study. In addition, With the intention of identifying the most significant variables, it applied the Stepwise method in regression analysis and the residual analysis was also done simultaneously.

RESULTS AND DISCUSSION

Table I shows the KMO, Bartlett’s test values, total variance and minimum factor loadings. Bartlett’s tests for both variables show a significant result at the 1% level. The KMO value of educational experience which is the dependent variable is 0.74 and the value of the independent variable, role behaviour in co-creation is 0.86. This indicates the adequacy of the sample is at the accepted level. Validity of the Factor Analysis is ensured by the KMO test values as greater than 0.6 and the significance of Bartlett’s values at 1% level.

Table I Validity of Measuring Instrument

Factors	KMO Value	Sig. of Bartlett’s Test	Tot. Var	Min factor Loading
Educational Experience (EE)				
EE	0.74	.000	62.70	.
Formal Learning				0.72

Rigour				0.85
Pedagogy				0.54
Role behaviour in Co-Creation (RBCC)				
RBCC	0.86	.000	71.57	
Feedback				0.68
Helping				0.78
Tolerance				0.61
Responsible Behaviour				0.55
Information Findings				0.60

Source: Survey data

Table II Reliability of Variables

	Indicators	Cronbach Alpha	No: of items
Educational experience			09
	Formal Learning	0.72	03
	Rigour	0.70	02
	Pedagogy	0.67	04
Role behaviour in co- creation			16
	Feedback	0.77	03
	Helping	0.87	03
	Tolerance	0.60	03
	Responsible behaviour	0.79	03
	Informational Findings	0.82	04

Source: Survey Data

Table II shows the Cronbach Alpha values of subscales of Educational experience and role behaviour in co-creation. As per the statistics in the table, the Cronbach Alpha values of Formal Learning and rigour are greater than 0.7 and within the acceptable level and the value of Pedagogy (0.67) is between 0.5 and 0.7 which is defined as sufficient. Considering the Cronbach alpha values of independent variable subscales, the minimum value is 0.60 (Tolerance) which is within the moderate level and all the other values are higher than 0.7 (Feedback 0.77, Helping 0.87, Responsible Behaviour 0.79, and Information Findings 0.82).

Table III shows the average values and standard deviation of each factor of the dependent and independent variables. Compared to the average values of formal learning and pedagogy, rigour shows the minimum average value of 4.83 following a 1.40 standard deviation. Among the five subscales of role behaviour in co-creation, responsible behaviour shows the highest mean value of 5.74 with a standard deviation of 0.99 compared to the mean values of the other four factors. Considering two minimum average values of Tolerance and Information Findings, Information Findings show the lowest average value of 4.98 following a 1.20 standard deviation. All the mean values mentioned in the above table are above the average since the scale is seven points. All predictors have variability levels as below 30%. It indicates the existence of moderate level consistency of the given answers.

Table III Descriptive analysis of variables

	Predictors	Mean	Std Devi.
Educational Experience			
	Formal Learning	5.53	1.04
	Rigour	4.83	1.40
	Pedagogy	5.52	0.92
Role behaviour in co-creation			
	Feedback	5.20	1.05
	Helping	5.74	1.08
	Tolerance	4.99	1.11
	Responsible Behaviour	5.74	0.99
	Information Findings	4.98	1.20

Source: Survey Data

As one of the primary objectives is to identify the role behaviour in co-creation, based on the previous literature identified three types of role categories a customer, irregular (mixed), or co-creator. The Seven Point Likert scale questionnaire included 10 separate sets of questions with the intention of identifying three role behaviours of students (Figure 2).

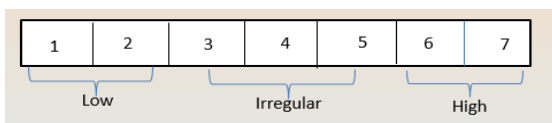


Figure 2: Level of role identification

Table IV Role identification

Role category	Percentage(%)
Mix role	84.4
Co-creator role	15.6

Source: Survey Data

As shown in Table IV, there are no students who graded themselves as a customer. That means no one is completely against the concept of co-creation activities. The majority of the students are not fully engaged in these co-creating activities and do not completely show attitude or behave like a customer. That is more than half of the population and as a percentage, it is 84.4%. In some cases, the lecturers also find it difficult to predict the behaviours of these types of students. Only 15.6 % of the students play the role of co-creator and they are the students who rate 6 and 7 on the scale and are categorized under higher level.

Since the non-normal behaviour of the independent variables, the non-parametric Mann-Whitney test is used to compare the level of role behaviour in co-creation and educational experience among the irregulars (mix-role) and co-creators. Mann-Whitney U test results in Table V show that a higher median value always comes with the co-creators. This is true for all five subscales and the difference is statistically significant at the 1% level. It clearly indicates that for all the subscales the co-creators tend to get significantly higher satisfaction ratings than the mix-roles.

Mean Comparison Analysis

According to the theory behind the development of the scale in the questionnaire which is used to measure

the level of role behaviour in co-creation, it expects a co-creator should give a higher rating to the items in the questionnaire. It is already being proved by the results of the Mann-Whitney U test. Therefore, from the results of the Mann-Whitney U test, it can be concluded that satisfaction or the positive attitudes towards Feedback, Helping, Tolerance, Responsible behaviour, and Information Findings of the co-creators are significantly higher than the students in the category of mix-role.

Table V Mean comparison of Independent Variable

Role Identification	Mix Role (Mean)	Co-Creator Role (Mean)	Sig. of Mann-Whitney U
Feedback	5.07	5.87	1128*
Helping	5.65	6.24	1486*
Tolerance	4.88	5.6	1330.5*
Responsible Behaviour	5.62	6.44	1080.5*
Information Finding	4.87	5.63	1278.5*

*- significant at 1% level

Source: Survey data

Table VI shows, the median values of the co-creator category in each subscale of the dependent variables are significantly higher (1% level) than the median values of the mix-role category. These statistics show that when considering the educational experience of students, co-creators have more satisfactory experience than the mix-role students.

Table VI Mean comparison of Dependent Variable

Role Identification	Formal Learning	Rigour	Pedagogy
Mix Role (Mean)	5.40	4.65	5.37
Co-Creator Role (Mean)	6.24	5.80	6.31
Mann-Whitney U	1040.50	987.00	847.00
Asymp. Sig. (2-tailed)	0.000	0.000	0.000

Source: Survey data

Initially, the researcher identified three levels of co-creation as low, irregular and high (there are no low-level students in this sample) and students who are in the higher level are classified as co-creators. The theoretical expectation is the co-creators should give higher ratings than the irregular or low-level students when it comes to the educational experience and the co-creation. This is the expected scenario by the researcher to ensure and validate the positive relationship between the independent and dependent variables. The results of table V and table VI, confirm the behaviour of co-creators is significantly different and higher than the students who are in the irregular level or mix-role.

These results confirm, H1-H2 which regards the average level of role behaviour in value co-creation will be different for the levels of role identification and the average level of the educational experience of the student will be different for the levels of Role Identification.

Relationship Analysis

Table VII illustrates the results of the correlation analysis done to test the relationships between independent and dependent variables. All bivariate relationships are significant at the 1% level but show some moderate-

level relationships (0.3-.07) for all subscales. This confirms the fact that when students have co-creation behaviour (higher rating on the scales), their educational experience is also at a high/good level. This confirms hypothesis H3: Changing the Level of student’s role behaviour in value Co-creation, will change the educational experience of the students.

Table VII Spearman rho Correlation Analysis

Independent Variables	Dependent Variable
	Educational Experience
Feedback	0.452**
Helping	0.456**
Tolerance	0.368**
Responsible Behaviour	0.480**
Information Findings	0.382**

Source: Survey data

** Correlation is significant at the 0.01 level (2-tailed).

Table VIII illustrates, the results of the regression analysis after removing influential points and the outliers. The Stepwise method was used to fit the best model to the data. Out of the five independent variables, only three were significantly impacted on the educational experience at a 5% level. Tolerance and Information finding were not showed significant impacts on the educational experience.

Three independent subscales, Feedback, Helping, and Responsible Behaviour showed positive influences on the Educational Experience (table VIII). This finding indirectly explains how co-creation behaviour helps to get a higher level of educational experience. It also highlights the fact that as long the student is in the process of co-creation, the higher the impact they make on their educational experience. Therefore, the data supported the hypothesis, H4(a): Feedback in value co-creation will positively impact the educational experience, H4 (b): Helping in value co-creation will positively impact the educational experience and H4(d): Responsible Behaviour in value co-creation will positively impact on the educational experience.

Table VIII Results of the regression analysis (Stepwise method)

Model:

$$\text{Educational Experience} = \beta_0 + \beta_1 \text{Feedback} + \beta_2 \text{Responsible Behaviour} + \beta_3 \text{Helping} + \beta_4 \text{Information Finding} + \beta_5 \text{Tolerance} + \varepsilon$$

	Unstandardized Coefficients		Stand. Coefficients	Sig.
	B	Std. Error	Beta	
(Constant)	1.908	.283		.000**
Responsible Behaviour [H4(d)]	.240	.060	.312	.000**
Feedback [H4(a)]	.259	.052	.335	.000**
Helping [H4(b)]	.128	.056	.177	.022*

Dependent Variable: Educational Experience

** Significant at 1% level * Significant at 5% level N=168

Model Adequacy = 47%

Durbin Watson’s Statistic = 2.003

The adequacy of this model is nearly 47%. The model accuracy was ensured with Durbin Watson’s statistic (close to 2), normality of the residuals, free of multi-collinearity (all VIF values are less than 5), and free of outliers and influential points. The highest impact was recorded from the variable Feedback.

Table IX Results of the Regression Analysis with a Moderator Variable (Stepwise method)

Model:

$$\text{Educational Experience} = \beta_0 + \beta_1 \text{ Feedback} + \beta_2 \text{ Responsible Behaviour} + \beta_3 \text{ Helping} + \beta_4 \text{ Information Finding} + \beta_5 \text{ Tolerance} + \beta_6 \text{ Co-creator} + \varepsilon$$

	Unstandardized Coefficients		Stand Coefficients	Sig.
	B	Std Error	Beta	
(Constant)	2.164	.273		.000**
Responsible Behaviour [H4(d)]	.233	.057	.302	.000**
Feedback [H4(a)]	.196	.049	.254	.000**
Co-creators [H9]	.538	.122	.251	.000**
Helping [H4(b)]	.136	.051	.188	.009**

Dependent Variable: Educational Experience

** Significant at 1% level N=164

Model Adequacy = 57%

Durbin Watson’s Statistic = 2.113

Table IX illustrates the results of the analysis (only the significant results) of the moderators. The model was tested for the four moderate variables separately (H5-H9). Only the Role identification (H9) significantly moderated the relationship from the role behaviour in co-creation to the educational experience. Sex, Study year, and Study Discipline were not showed any significant moderating impact on the relationship from the role behaviour in co-creation to the educational experience.

As to table IX, the student group (category) named “co-creators” has a positive impact (0.538) on the educational experience. This implies the co-creators have a higher level of satisfaction regarding their educational experience than the mixed-behaviour group. The adequacy of the model is nearly 57% and similar to the model in table VIII, the Responsible Behaviour, Feedback, and Helping are the only significant variables to the model at 1% level.

The model accuracy was ensured with Durbin Watson’s statistic (close to 2), normality of the residuals, free of multi-collinearity (all VIF values are less than 5), and free of outliers and influential points. The highest impact was recorded from the variable Responsible Behaviour. Table X summarized the results of the hypothesis testing.

Table X Summary of the Hypothesis tests

Hypothesis	Result at 1% level	Conclusion
H1	Significant	Average level of Role Behaviour in value co-creation is different for the levels of Role Identification.
H2	Significant	Average level of the educational experience of the student is different for the levels of Role Identification.
H3	Significant	All subscales of Role Behaviour in value co-creation positively related with the educational experience of the student.
H4(a)	Significant	Feedback in value co-creation positively impacts the educational experience.
H4(b)	Significant	Helping in value co-creation positively impacts the educational experience.
4(c)	Not Significant	
H4(d)	Significant	Responsible Behaviour in value co-creation positively impacts the educational experience.
H4(e), H5, H6, H7, H8	Not Significant	
H9	Significant	Role identification of a student moderates the relationship of level of Role Behaviour in value co-creation to the educational experience.

DISCUSSION

The purpose of the research was to identify the impact of role behaviour on the value co-creation of students on their educational experience as undergraduates. Especially, in relation to a private higher education institution in Sri Lanka. The main aim of the study was to identify co-creation activities considering the behavioural aspects of the students and to explore educational experiences. The second aim was to determine the role based on the behaviours of students in performing co-creation activities.

With regard to co-creation activities, identified five co-creative activities based on their behaviours in the process of value co-creation. Since, ‘customer value co-creation behaviour’ is used to characterise the actual engagement of the customer in the process of value creation, that requires active involvement in physical, digital and mental phases^[21]. These identified activities which represent co-creation behaviours are Feedback, Helping, Tolerance, Responsible Behaviour and Information Findings.

The positive correlation values of Feedback, Helping, Tolerance, Responsible Behaviour and Information Findings show that students behave in a way to gain more educational experience by engaging in more activities such as giving comments on teaching materials, assisting other mates in lessons, adapting to the reschedules, being attentive as well by searching for lecture materials and informing difficult areas.

Furthermore, customer experience is a vital aspect of the value assessment of customers in the higher education sector it should be careful as the service experience, consists of several contact points that are diverse and relate to the overall customer experience^[28]. Based on Koris^[30] validated model of higher education, three indicators were identified to measure the educational experiences where they come across at the stage of the learning network. Indicators used were Rigour (again categorized into grading, and

classroom behaviour), Formal learning (divided into classroom and individual studies) and Pedagogy (both teaching methods, and course design) [30].

The literature identified three roles rely on the student's level of engagement and their behaviours in the value co-creation activities; co-creators who are highly engaged in co-creation activities, mixed students who reflect the characteristics of both co-creators and customers where their engagement is at a moderate level or irregular. The students belong to the customer category have extremely lower level of participation in co-creation activities. The majority of the students in this respective private higher education institution are in the mix-role category. This means they are partly co-creators and partly customers. This shows that these students do not have a clear and proper idea about their goals and what they need to do in order to achieve them. Behaviours of these students show that they are not regular and moderately engage in the co-creation process of the institution. Although there is a limited number of students who are considering themselves co-creator, they are the most important students in the value co-creation process in the institution. In the higher education context, students have more power and freedom to pursue their own education and this encourages universities and pushes them to co-create value with students and draw more students towards their universities[38]. Compared to mixed role category students these students are highly active in feedback, helping, tolerance, responsible behaviour and information findings.

Moreover, the educational experience these students gain from their higher education institution is also varied since, the term 'student experience' constantly reflects the active engagement in higher education and consumer-type role[39]. Students who are in this mixed-role category have poor attitudes towards Rigour. So, they do not have much experience and understanding about how they get offended because of this plagiarism, to which extent they need to commit to obtain better grades without any favour from the lectures, the attitude they have on the close supervision of lecturers during the examinations which gives the message education is not something fun it is challengeable. The experience they gain through Formal Learning and Pedagogy is at a moderate level which means they do not get much experience from the classroom activities, do not much into seeking knowledge on their own or are not satisfied with the course design and teaching techniques used by the lecturers in delivering lessons.

However, co-creators are far different from the mixed-role category when it comes to their level of educational experience. Co-creators are more convenient and highly adopt to the pedagogy. For instant, they always like to switch to new teaching methods without relying on traditional methods and it shows they have the same kind of attitude towards formal learning as well. At the same time, the relationship that has between the co-creation activities performed by the students in the learning process is important to enhance their educational experience as the active participation of students, has a favourable impact on curriculum designing and improves students' skills and knowledge[40]. The finding shows that if the students can be more responsible in the value creation process, listens to the lecturer very carefully and grab every detail taught by him and attend classes without missing any, then it definitely helps to get graduate with good grades and it adds experience to his or her life.

Further, co-creators let the lecturer know, a matter of understanding the lecturer then will assist the lecturer to rethink their teaching method and to switch to another better and more innovative teaching method. This ultimately helps the student to gain more experience via new teaching methods. In some cases, student needs to tolerate inconvenient time slots, and cancellation of classes without informing prior and students might miss those rescheduled classes next time. Here individual studies help the students a lot. These co-creation activities lead to an increase in the experience of the students, especially in the learning atmosphere. Another significant fact is responsible behaviour. This is considered a necessary activity in the value co-creation process so this behaviour of students highly impacts the educational experience compared to other sets of activities.

In fact, being a female or male student does not affect their grading, or effectiveness of grasping knowledge

from various teaching methods used by the lecturer or else for their classroom studies or to learn things on their own. The only thing matter is the student commitment. Considering the year of studying of the students in this institution it shows more impact is there from the final year students because they are in the process for a longer period.

Managerial Implication

There are several managerial implications that can be applied by the higher education institution to maintain the existing level of role behaviour in co-creation and to improve the educational experience further. As value co-creation is a process which cannot be done by an individual. maintaining a strong relationship between the actors throughout the process is so important. In higher education, sector lecturers and students play a significant role. Therefore, lecturers need to spare more time for students who have issues in their academics and develop a personal understanding which will make the student comfortable in the student-lecturer relationship this helps the lecturer to identify inappropriate behaviours and based on that lecturer can put more effort to change such behaviours. Another suggested implication is that; universities need to change their traditional student assessment methods to effective methods like performance-based evaluation methods.

Universities can design their curriculum by adding more practical aspects to it rather than based on theories. A well-balanced curriculum is very important for universities and it will facilitate and promote the entire process, this will lead to improve thinking patterns and implement new solutions^[41]. Practical knowledge that is gained from higher education institutions creates more opportunities in the industry. Ultimately, it will enhance the educational experiences of the student as well. Because it improves the pedagogy.

FUTURE RECOMMENDATION

This study out of major levels in the model of educational experiences in higher education only considered the learning network area as a core area in the educational experience. In future, researchers can base their research on both the institutional network of the institution as well as the learning network of the institution. The next one is that the study only draws data from students in private higher education institutions to analyse students' role behaviour in value co-creation and its impact on their educational experiences. Future researchers are encouraged to expand this study to public sector universities and it would be interesting to do the comparison between role behaviours of students in two different sectors, private and public. The target population of the study was undergraduates in a private higher education institution. It is recommended future researchers conduct empirical studies across students who are in different educational levels (e.g. bachelor, master).

CONCLUSION

However, the findings of this study show that although it's a private higher education institution, students have not identified themselves as pure customers. The majority of them categorized themselves under mixed-role (irregular level) and a small proportion of students show pure co-creator behaviours. This shows that students have not identified their roles successfully and this may be one of the main reasons for the high failure rate of students in private higher education institutions. Another fact observed here is that the role behaviours of students who identified themselves as co-creators are at a higher level, in the value co-creation process and in gaining educational experiences compared to the mixed type (irregular type) students.

Moreover, the degree of association of co-creation activities with the educational experience is varying so it is important to recognize the most influential co-creation behaviours of students in their educational

experiences with the support of lectures and the need to focus more on those activities. Another important finding of the study is that the influence makes by these co-creation behaviours in educational experience is different. While Feedback, Helping, and Responsible Behaviours of students make a significant impact on their educational experience but the Tolerance and Information Findings do not make an effect.

These findings conclude that as a private higher education institution it is very important for them to switch from the 'student as a customer' concept and to promote value co-creation and support students in identifying their role behaviours in this value co-creation process. Because role identification is much important for their success and to reach their goals. This ultimately improves the success rate of the students as well as will support private higher education institutions to sustain themselves in the private higher education sector by producing quality graduates with rich educational experiences.

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