Exploring Role of Service Competence Orientation (SCO) in Creating Value in Education Sector

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The purpose of the study is to empirically validate the impact of service competence orientation, based on service dominant logic concept, in creating value. 235 faculty members of 34 departments of University of Jammu were contacted for data collection by using census method. The study reveals that the absorptive competencies and collaborative competencies are significant predictors of SCO. Further SCO significantly contributes to organisational value. The study is confined to only faculty member perspective to understand SCO based on absorptive and collaborative competencies. The findings suggest that besides using the identified two competencies, the regrouped absorptive and collaborative competencies into four factors namely absorptive values, absorptive competencies, collaborative competencies and absorptive collaboration must be studied in future. The study recommends that SCO should be adopted in the organizations to enhance value creation.

Key Words: Service Competence Orientation, Service-Dominant Logic, Absorptive Competencies, Collaborative Competencies.

INTRODUCTION

In the present competitive era, organisations need to be service oriented to sustain market competition. The recent concept of Service-dominant Logic (SDL) developed by Vargo and Lusch in 2004 focuses on holistic service orientation. The varied concepts such as service marketing, market orientation, customer-relationship management, networked markets, mass communications and interactivity are inclusive components of SDL (Bolton 2004). The SDL concept reflects service orientation which leads to value co-creation. This concept based on service provision rather than on goods production is a challenging concept (Norman and Ramirez 1993 and Prahalad and Krishan 2008). Further Weigand and Arachchige (2009) also remarked that SDL does not view services as a particular kind of good that should be produced and marketed in the same way as traditional goods, rather it should focus on service provision (Yazdanparast, Manuj and Swartz 2010). From this perspective the services that the company provides are considered as an input for value-creation process for the organization in the future, rather than as an output. The underlying principle of SDL considers that value is created by the organization along with other stakeholders instead of organization itself. Further Lusch, Vargo and Brien (2007), Abela and Murphy (2008), Arnould (2008) and Ford and Bowen (2008) and Edvardson, Tronvoll and Gruber (2011) argued that there is a

need for SDL to be further worked out to gain more empirical validation.

THEORETICAL BACKGROUND

Majority of the scholars such as Vargo and Lusch (2004), Ballantyne and Varey (2008), Gummenson (2008), and Lusch and Vargo (2008) have contributed in the conceptual development of SDL. SDL developed by Vargo and Lusch in 2004 is a broader and comprehensive concept based on exchange of intangibles such as knowledge and skills among stakeholders. However Bolton (2004) remarked that the purview of SDL also includes service marketing, market orientation, customer-relationship management, networked markets, and interactivity. Further in 2004 Vargo and Lusch (2004), also identified eight foundation premises relating to service(s), intangibles, operant resource, symmetric information, conversation, value proposition, relational and financial feedback. Lusch and Vargo (2008) and Gronoos (2008) claim that SDL focuses on the application of operant resource that is, service as the fundamental source of competitive advantage. Later in 2008, Lusch and Vargo modified and added two more foundation premises which primarily include all social and economic actors as resource integrators and value is uniquely and phenomologically determined by the beneficiary. The same is also supported by Ordanini and Parasuraman (2010)

Service Competencies

In their further writing Lusch, Vargo and Brien (2007) and Lusch and Vargo (2008) remarked that SDL can also be seen from the perspective of competencies. The SDL notion suggests that the best way to achieve the desired level of organizational performance is through the application of competencies (Gummenson 2008, Maglio and Spohrer 2008 and Edvardson, Tronvoll and Gruber 2011). These service competencies help the organization in creating value. This is also supported by Ballantyne and Varey (2008). In addition to above, researchers such as Lusch, Vargo and Brien (2007), Maglio and Spohrer (2008), Payne,

Storbacks and Frow (2008), Vargo (2008) and Yazdanparast, Manuj and Swartz (2010) have investigated the framework of SDL and its impact in the creation of value for the organisations. SDL is based on the exchange of services where, services refer to the application of competencies for the benefit of all stakeholders (Vargo and Lusch 2008, Maglio and Spohrer 2008 and Brodie, Saren and Pels 2011). Lusch, Vargo and Brien (2007), Lusch and Vargo (2008), Ordanini and Parasuraman (2010) and Edvardson, Tronvoll and Gruber (2011) stated that knowledge and skill are the two competencies on which SDL is based. Initially Lusch, Vargo and Brien (2007), identified absorptive, adaptive and collaborative competencies. However later Lusch and Vargo (2008) argued that collaborative competencies and absorptive competencies are pivotal in adopting SDL. These two competencies are also indirectly considered by Ballantyne and Varey (2008), Gummenson (2008) and Maglio and Spohrer (2008). Further Randall, Pohlen and Hanna (2010) added four more competencies namely collaboration dynamics, information systems, organizational leadership and environment. Ordanini and Parasuraman (2010) also suggest that competencies such as collaborative, dynamic and knowledge interfaces play a vital role in enhancing the performance of the organisation. However Edvardson, Tronvoll and Gruber (2011) proposed that collaborative and adaptive competencies are important for any organization to succeed. Thus the literature reviewed indicates that the various competencies can broadly be grouped into two namely absorptive and collaborative. The collaborative competencies and absorptive competencies (Figure 1) are discussed as under;

(1) Collaborative Competencies

Collaborative competencies relate to operant resource and value proposition foundational premises. It entails all employees to collaborate with each other to be able to adjust with the changing and new environment (Lusch and Vargo 2008). Collaborative competencies focus on two way communication and interaction between the producer and the consumer and

other social and economic integrators to co-create value (Randall, Pohlen and Hanna 2010). These competencies help members to consider all the stakeholders while taking decisions regarding them and thus to collaborate with each component of the organization (Maglio and Spohrer 2008). Ordanini and Parasuraman (2010) and Edvardson, Tronvoll and Gruber (2011) also support the same.

(2) Absorptive Competencies

Absorptive competencies relate to the symmetric information and conversation foundational premises. This requires employees to provide correct and accurate information to their colleagues and not to mislead their co-workers or any other stakeholder involved in the organization (Lusch and Vargo 2008). These competencies enable both the parties to co-create value by having trust and adaptation to each other, learning together and to adjust with the changes in the organizational environment both internally and externally (Ballantyne and Varey 2008 and Edvardson, Tronvoll and Gruber 2011). Moreover these competencies enable the members to absorb new information from the various social and economic integrators and to have a free flow of communication and dialogue between different components of the organizations (Gummenson 2008 and Ordanini and Parasuraman 2010). This is also revealed by Rehman and Dean (2010) and McColl-Kennedy (2012).

ROLE OF SERVICE COMPETENCIES IN EDUCATION SECTOR

Service competencies (SC) or SDL in the education sector encourages employees to work in a networking system to promote effective interaction among various stakeholders. Therefore the functioning of the SC/SDL based organization focuses on the interaction between members of organization and the students. Basically in such a system members are encouraged to work in a

transparent system, to create dynamic environment, to make students participate in decision making and to get regular feedback from students and other members of the organization and these interactions will consequently enhance relations between different stakeholders and lead to value creation for the university.

(i) Collaborative Competencies

Collaborative competencies encourage employees to collaborate with others in the organization. These competencies when adopted in the education sector encourage the faculty members to work in team- spirit in an open and fair system. These competencies enable faculty members to acquaint themselves with specialised capabilities, to treat all the members of the organization equally, to consult others before taking any action etc. in order to provide benefit to all the stakeholders.

(ii) Absorptive Competencies

Absorptive competencies refer to employee's behaviour that enables them to provide correct and accurate information to their colleagues and avoid such information that misleads their co-workers or any other stakeholder involved in the organisation. Employees with such competencies are able to adjust with the changes in the environment both internally and externally and enable them to absorb new information from the various social and economic integrators such as co-workers, students, scholars, to make the education system more efficient and effective.

EMPIRICAL EVIDENCE FOR THE HYPOTHESIZED MODEL

Exploratory research conducted by Chan, Yim and Lam (2010) and Mele, Spena and Maria (2010) consider SDL as innovative value co-creating process through faculty and students integration within the institution. This is also supported by

Ballantyne and Varey (2008) and Gummenson (2008) who considered two competencies that is, absorptive and collaborative, within the domain of SDL for value creation. Additionally, as cited by Abela and Murphy (2008) and Maglio and Spohrer (2008) the application of absorptive competencies is necessary to strengthen the integration between the different parties of the organization to co-create value. In the same way collaborative competencies as assured by Lusch, Vargo and Brien (2007) and Maglio and Spohrer (2008) is also another primary determinant of the institution for acquiring knowledge for competitive advantage. Based on aforesaid discussion Payne, Storbacks and Frow (2008), highlighted the need to focus on these two competencies to enable the organization to create value.

Research evidence suggests that SDL give rise to favourable performance evaluations and creation of value for the institution (Joensson 2008). Value creation means that all the members of the organization are directing their efforts and capabilities to enhance the performance of the organization (Collins and Murphy 2009). Thus SDL

helps in the organizational growth through effective participation of stakeholders in co-creating value for the institution Lusch, Vargo and Brien (2007) and Ford and Bowen 2008). The same is also remarked by Chan, Yim and Lam (2010), Rehman and Dean (2010) and McColl-Kennedy (2012). With this an attempt is made to understand the interactive role of SDL in co-creating value in the organization. Summarized, a considerable amount of studies reveals that these two competencies of SDL are very pivotal for a better understanding of the concept of SDL. Further very little studies are found in the literature that theorised and measured the relationship between SDL and these two competencies (Gummenson 2008 and Vargo 2008). Thus the present study is maiden endeavour to develop and measure SCO and to assess its role in co-creating value for the university (see Figure 1).

RESEARCH MODEL AND HYPOTHESES

Based upon the previous discussion of the literature, the research model depicted in Figure 2 was developed. Two competencies namely absorptive competencies and collaborative competencies are
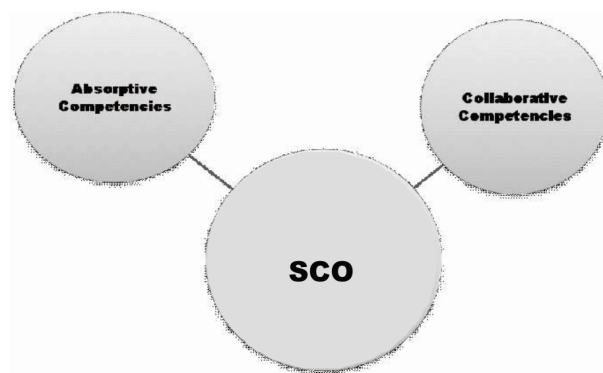
hypothesized to have significant contribution towards SC /SDL orientation of the employees. Further SCO of the faculty members significantly contributes to value is also hypothesized in the study. In summary, in our study, the following three hypotheses have been tested:

H1 : Absorptive competencies significantly contributes to SCO.

H2 : Collaborative competencies significantly contributes to SCO.

H3 : SCO significantly contributes to value

METHODOLOGY

Measures

SCO items are assessed by using its two competencies that is, absorptive competencies and collaborative competencies (Vargo and Lusch 2004, Gummenson 2008, Maglio and Spohrer 2008 and Vargo 2008). Further the value created for the university from the faculty perspective is also assessed in terms of publications, paper

presentations, participation in seminars and workshops, invited lectures etc. (Payne, Storbacks and Frow 2008). Discussions with the subject experts to identify the items relevant for measuring SCO in the education sector have been held. These efforts resulted in identifying 26 items of SCO. Further the demographic profile of the faculty members with respect to gender, age, qualification, designation and academic information related to teaching experience, administrative experience, publications, paper presentation, research guidance provided are also included in the questionnaire. The identification of the SCO items based on extant literature followed by discussions with the academicians helped in establishing face and content validity of the SDL scale. Please see Appendix for an overview of all items that have been used.

Pre-testing

Head of Department (HOD) or senior most faculty member were selected from all departments for pre-testing to finalize the questionnaire items. 30 completely filled questionnaires were received from

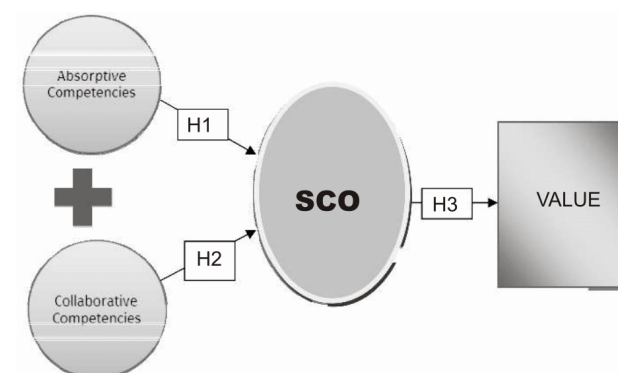**Figure 1- The SCO Research Framework**

Figure 2 - The Research Model

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34 contacted faculty members. Initially, questionnaire comprising 11 collaborative competencies, 12 absorptive competencies and 3 value items) were used for data collection. The pre-testing resulted in identifying items with similar meaning viz, one each from collaborative and absorptive competencies dimensions of SDL. These items are subsequently deleted. The final questionnaire hence, comprises of 24 SDL items.

Sample and Procedure

A total of 235 faculty members of 34 departments of University of Jammu based on census are selected for final data collection. The faculty members were approached personally to get the first hand information on the research problem using questionnaire method. Only 180 responses are received out of 235 respondents giving a response rate of 76.60%.

Demographic and Academic Profile of Faculty Members

The demographic profile of the respondents is identified according to gender and age Table 1.1. The sample of 180 consisted of 63% male (114 respondents) and 37% female (66 respondents). The number of teachers in the group AGI is 30 (16.7 % respondents), 71 teachers in the age group of AGII (39.4 %) and 79 in AGIII (43.9% respondents). Further, the respondents are also classified on the basis of four academic factors namely qualification, designation, teaching experience and administrative experience. Regarding qualification, 3.9% were MPHIL (7), 91.7% PHD (165) and 4.4% were NET qualified (6). According to designation 25.6%, 33.3% and 41.7% belong to assistant professor (46), associate professor (60) and professor (74). The teaching and administrative experience of the faculty members was also identified. The teaching experience is grouped under four groups. In the first group that is, TEGI, faculty have been with teaching experience of about 21.7%. The remaining groups that is, TEGII, TEGIII and TEGIV show 41.1%, 28.8% and 8.5%. Further the academicians having

administrative experience of 27.2%, 17.9%, 7.2%, 3.5% and 44.4% belong to respective four groups that is AEGI, AEGII, AEGIII and AEGIV. Among this 44.4% of faculty members were found to have no administrative experience.

Academic Contribution of Faculty Members

Academic contribution of faculty members in terms of publications, paper presentations, participation in seminars, workshops etc. in the last five years is given in table 1.2 The results of table reveal that majority of the faculty members are actively involved in research publications both in refereed and non-refereed journals at regional, national and international levels. Specifically maximum refereed publications are made in national journals (89.7%) followed by regional journals (71.9%) and international journals (64.4%). The percentage of non- refereed publications in regional, national and international journals include 78.9%, 71.7% and 18% respectively. Further most of the faculty members are also actively participating in seminars at regional, national and international levels that is 76.9%, 70.7% and 69.8% respectively. Table 2 also exhibits active participation of faculty members in workshops at regional, national and international levels. In addition faculty members recognised with awards and fellowships in the last five years include 29.4% and 15.6% respectively. Besides their contribution in academic about 47.8% faculty members are also associated with different social organizations.

Data Analysis

Exploratory Factor Analysis

The application of factor analysis on 24 SCO items is performed using Principal Component Analysis method along with Varimax Rotation method table 1.3. The data purification criteria included Kaiser Mayer Olkin (KMO) value (greater than 0.7), Measure of Sampling Adequacy (MSA) (greater than 0.5), Eigen value (greater than 1), Correlation Coefficient (0.3 to 0.9) and Factor Loading (FL)

(greater than 0.5) (Netemyer, William and Subash 2003, Pett, Larkey and Sullian. 2003 and Hair, Bush and Ortinou 2005). The application of factor analysis on purified SDL items resulted in four factors christened as absorptive value, absorptive collaboration, collaborative competencies and absorptive competencies. The KMO value of 0.906 and BTS chi- square= 1850.72 df= 171 at 0.000 significant level are found to be good for final analysis. Thus the SDL data converged into four factors after 7 iterations. The Cumulative Variance (65.30%) and all the MSA values are above the set criterion of 0.5. The analysis of the four evolved SDL factors is discussed as under.

Factor 1- Absorptive Value

The factor 1 comprising seven items records respective mean values as 3.69, 3.69, 3.66, 3.78, 3.78, 3.81 and 3.63 (Table 1.3). The factor clearly depicts that the faculty members possess absorptive values averagely as their overall mean came out to be 3.72, with standard deviation value as 0.689. Further the communalities of the seven items ranged between .430 to 0.746 (Table 1.3) which indicate the contribution of the items in explaining absorptive value. The cumulative variance of the factor is 22.643% out of total variance of 65.30%.

Factor II - Absorptive Collaboration

The factor explained 19.565% of cumulative variance and the overall mean is arrived at 3.60(Table 1.3). The factor loading and communalities values of the retained items are above the threshold value of 0.5. It is evident from the results that faculty is adjusting in nature as they easily absorb to new changes in the organisational environment and are interested in collaborating with their co-workers.

Factor III - Collaborative Competencies

This factor comprises three items related to collaborative competencies with respective communality value as 0.719, 0.467 and 0.707 and respective mean values as 4.13, 4.00 and 3.95. 'Inter and intra university programmes offered by

university helps in enhancing skills of stakeholders' is retained as it contributed highly in the explanation of the factor. The cumulative variance of the factor is recorded as 12.834% (Table 1.3).

Factor IV - Absorptive Competencies

The factor recorded 10.258% of cumulative variance. The three items with respective communality values as. 0.710, 0.746 and 0.715 reflect that majority of faculty members believe in regular feedback, favours new ideas and believe in adjusting as per required changes.

Psychometric Scale Properties

Reliability Analysis

The reliability statistics show cronbach alpha value as 0.924 and the scale values of overall mean, overall variance and overall standard deviation as M=71.183, V=132.866 and SD=11.526 respectively. The item mean (M=3.746, V=0.033), item variance (M=0.874, V=0.034) and inter-item correlation (M= 0.391, V=0.018) also show positive response with regard to item statistics. Further the final reliability analysis of SCO is further checked by examining the split-half alpha value for the scale. The split-half values for the 1st and 2nd half item-wise are 0.858 and 0.886 and respondent-wise for the 1st and 2nd half are 0.917 and 0.926 respectively which indicate the internal consistency of the scale as shown in table 1.4.

Validity Analysis

The value of variance explained (65.30%) and KMO (0.906) support the construct validity of the SCO/SDL scale (Table 1.5). Further the factor loading values and communalities of the four factors that is absorptive value, absorptive collaboration, collaborative competencies and absorptive competencies ranged between 0.500 to 0.814 and 0.430 to 0.746; 0.575 to 0.761 and 0.587 to 0.736; 0.582 to 0.833 and 0.467 to 0.719 and 0. 658 to 0.707 and 0.710 to 0.746 respectively, indicating the convergent validity of the scale (Table 1.3). Further, the

convergent validity is further supported by the results of correlation coefficient. Excluding 0.298 value of correlation coefficient relating to 'faculty called to interact with students and free flow of conversation and dialogue', all the remaining values are within the acceptable criteria (0.3 to 0.7) at 0.01 level (Table 1.6). Overall the reliability and validity analysis indicate good psychometric properties of the scale.

Hypotheses Testing

After the evaluation of the validity and reliability of the measures, the hypothesized relationships are tested by using multiple regression. The four SDL factors explain about 63.9% of variance. The values of multi-collinearity that is Variance Inflation Factor (VIF) (1.346 to 2.302) and Tolerance Factor (TF) (0.434 to 0.743) are within range and indicate very low degree of multicollinearity. The F value (p= 77.422) and Durbin and Watson value (2.172) are also within the range (Foster, Emma and Christian 2006).

Among the four factors of SCO/SDL the Beta value came to be highest for absorptive value (β= 0.737).

The rest three factors that is, absorptive competencies (β=0.084), collaborative competencies (β=0.033, t= 582) and absorptive competencies (β=0.016) have insignificant contribution in predicting SDL. The results thus conclude partial acceptance of H1 as one of the three factors of absorptive competencies came to be significant and rejection of H2. Further the results of our empirical study show that the assumed links in the framework are supported to have a significant contribution in creating value (β=0.889) thus accepting H3 (see Figure 3) (Table 1.7)

Impact of Demographic and Academic Factors

MANOVA is applied to study the impact of demographic and academic factors (independent variables) on SDL (dependent variable) along with their interaction effects (Pett, Larkey and Sullian. 2003, Hair, Bush and Ortinou 2005 and Foster, Emma and Christian 2006).The result of MANOVA indicates that the individual effect of all the demographic factors is insignificant with the SCO

Figure 3 - The Evolved Research Model

while only qualification, among the four academic factors, is found to be significantly related to absorptive competencies. All other relationships are found to be insignificant. Further the interaction effect of gender and age (demographic factors) and teaching experience, administrative experience, designation and qualification (academic factors) are not projecting SCO as the p- values for each SDL factor are found to be more than 0.05 (Table 1.8).

DISCUSSIONS AND IMPLICATIONS

The findings of this research indicate that the service competency orientation used to measure SDL in creating value exhibit acceptable psychometric properties in terms of both reliability and validity. Moreover, the results of our study confirm the hypothesized relationships in the research model. The relationship between absorptive competencies and collaborative competencies is found to be significant with SCO. Based on factor analysis, the results indicate that the two competencies of SDL as defined by Gummenson 2008, Lusch and Vargo 2008 and Vargo 2008 are compressed in four factors namely absorptive values, absorptive competencies, collaborative competencies and absorptive competencies. The findings further confirm that SCO significantly contributes in creating value. Although a positive relationship appear to exist between SCO and value, but in reality all the members of the organization are not fully involved in SDL pertaining activities. Based on the responses, younger faculty, faculty qualified with MPhil or NET, faculty having little teaching experience and faculty working as either associate professors or assistant professor are less exhibiting SDL behaviour. In contrast to this, middle aged and senior employees, faculty having more of teaching and administrative experience either male or female display average level of SCO. Therefore this relationship can further be strengthened by encouraging faculty members to be actively involved in SDL based system. Thus to create maximum value output, effective networking among various university core stakeholders such as faculty members, students, non-teaching staff, librarians etc. can play significant role. The relationship and interaction between different components can provide an opportunity for knowledge sharing and which consequently can pave way for optimal utilization of the skills and competencies of each party. This process eventually will result in effective implementation of network-based SDL through effective student- teacher interactions, effective networking system, effective organizational environment, additional services and training courses (Ford and Bowen 2008, Helen and Rubery 2005, Makkar and Gabriel 2008, Payne, Storbacks and Frow 2008 and Robson, Bailey and Larkin 2004). Thus, the implication of the SDL based system can help in improving the competencies of faculty members and will ultimately lead to co-creation of value by both the parties for the institution in the long run.

LIMITATIONS AND FUTURE RESEARCH

Although presence of subjectiveness in the responses of the faculty members cannot be ignored, appropriate efforts are taken to control subjectiveness using validity and reliability methods. The study examined service competency orientation using limited SDL capabilities that is absorptive and collaborative competencies. Further the ten foundational premises given by Vargo and Lusch (2008) need to be properly examined to understand the concept more comprehensively. Although core stakeholders concept is taken into consideration for extracting views on SDL, but only from faculty perspective. Therefore in future research core stakeholders concept should be taken into account. Further, the study can be extended in other higher educational institutions across region, country and globe to validate the service competency orientation. Moreover the concept is required to be examined and tested in other service sectors like hotel management, tourism, banking, tele-communication, insurance companies, corporations etc. in the future research.

Table 1.1 Demographic and academic profile of respondents				
Demographic and academic Factors	Groups	Sub- Groups	Number	Percentage (%)
Gender	Male	M	114	63
	Female	F	66	37
Age	AGI	28-37	30	16.7
	AGII	38-47	71	39.4
	AGIII	48 & Above	79	43.9
Qualification	MPhil	MPHIL	7	3.9
	PhD	PHD	165	91.7
	NET	NET	8	4.4
Designation	Assistant Professors	AP	46	25.6
	Associate Professors	AssP	60	33.3
	Professors	P	74	41.1
Teaching Experience	TEGI	1-10	39	21.7
	TEGII	11-20	74	41.1
	TEGIII	21-30	52	28.8
	TEGIV	31-40	15	8.5
Administrative Experience	AEGI	1-5	49	27.2
	AEGII		32	17.9
	AEGIII		13	7.2
	AEGIV		6	3.5
	No Experience		80	44.4

Table 1.2 Number and percentage of academic contributions of faculty members			
Factors	Faculty members		
	Number	Percentage	Missing data
Regional Refereed	124	71.9%	28.1%
Regional Non- Refereed	142	78.9%	21.1%
National Refereed	162	89.7%	10.3%
National Non- refereed	129	71.7%	28.3%
International Refereed	116	64.4%	35.6%
International Non-Refereed	32	18%	82%

Factors	Faculty members		
	Number	Percentage	Missing data
Regional Seminars	138	76.9%	23.1%
National Seminars	127	70.7%	29.3%
International Seminars	122	69.8%	30.2%
Regional Workshops	114	63.6%	36.4%
National Workshops	88	49%	51%
International Workshops	48	26.7%	73.3%
Regional Presentation	140	77.8%	22.2%
National Presentation	172	95.6%	4.4%
International Presentation	112	62.2%	37.8%
Projects Completed	77	43%	57%
Projects On going	79	43.9%	56.1%
Awards	45	29.4%	70.6%
Fellowship	28	15.6%	84.4%
Social Activities	86	47.8%	52.2%

Table 1.3 KMO, Mean, MSA and Communalities and factor loading value and percentage of variance for SDL						
Item	Factors	Mean deviation	Standard loading	Factor	Communalities	MSA
Factor- I Absorptive Values % of Variance=22.643%, Eigen Value=8.239.						
AA11	Stakeholders are consulted while taking decisions regarding them.	3.69	0.94	0.814	0.728	0.923
V1	Faculty members are invited to deliver training sessions to the incumbents.	3.69	0.88	0.801	0.703	0.915
AA10	Department utilizes the capabilities and needs of all its stakeholders for its effective functioning.	3.66	0.87	0.749	0.625	0.917
AA9	Department considers the academic and non academic needs and wants of teaching and non teaching staff	3.78	0.88	0.744	0.746	0.930
AA8	Academic needs of the students and scholars are considered by the department.	3.78	0.86	0.626	639.	0.890
V2	Faculty members are specifically called by outside university to interact with students on contemporary topic of interest.	3.81	0.83	0.532	0.430	0.896
AA7	Free flow conversation and dialogue is practiced among the stakeholders.	3.63	0.97	0.500	0.577	0.932
	Average	3.72	0.689			

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Table 1.3 KMO, Mean, MSA and Communalities and factor loading value and percentage of variance for SDL

Item	Factors	Mean deviation	Standard loading	Factor	Communalities	MSA
	Factor -2 Absorptive Collaboration % of Variance= 19.565%, Eigen Value=.1.717					
C3	Stakeholders are committed towards their work.	3.48	1.02	0.761	0.631	0.929
C2	Departmental decisions are generally taken in an unbiased manner.	3.43	1.19	0.744	0.653	0.929
C4	Members of the department are given due recognition in decision making.	3.59	1.05	0.701	0.635	0.928
AA1	Adequate information is provided to co-workers regarding academic and non academic works.	3.67	0.89	0.657	0.587	0.914
C10	Departmental goals are accomplished collaboratively by all the stakeholders.	3.79	0.87	0.616	0.653	0.902
AA2	Co-workers are provided with relevant and accurate information regarding departmental functioning.	3.64	0.94	0.575	0.736	0.915
	Average	3.60	0.769			
	Factor-3 Collaborative Competencies % of Variance= 12.834%, Eigen Value=1.373					
C8	Programmes and courses offered by the university / department help in the growth of the society.	4.13	0.82	0.833	0.719	0.787
C6	Inter and intra university programmes help in enhancing specialized skills of stakeholders.	4.00	0.87	0.651	0.467	0.892
C9	University/ department make regular efforts to excel in teaching, non –teaching and research activities.	3.95	0.84	0.582	0.707	0.872
	Average	4.02	0.659			
	Factor – 4 Absorptive Competencies % of Variance= 10.258%, Eigen Value=1.679					
AA3	Departmental members are flexible to any environmental changes (working and physical).	3.63	1.00	0.707	0.710	0.893
AA5	Regular feedback is necessary for the development of faculty members.	4.03	0.92	0.673	0.746	0.835
AA4	Department is open to new ideas from all the stakeholders.	3.72	0.99	0.658	0.715	0.888
	Average	3.79	0.797			
	Grand Mean	3.78				
	Iterations=7, KMO= 0.906, % of total Cumulative Explained= 65.300%					

Table 1.4 Item statistics, scale statistics and cronbach alpha value for SDL

Item statistics	Item mean	Mean	3.746
		Variance	0.033
	Item variance	Mean	0.874
		Variance	0.034
	Inter item correlation	Mean	0.391
		Variance	0.018
Scale Statistics		Mean	71.1833
		Variance	132.866
		Standard deviation	11.52674
Reliability statistics	Overall Cronbach Alpha		0.924
	Split Half	Item	First Half	0.858
			Second Half	0.886
		Respondent	First Half	0.917
			Second Half	0.926

Table 1.5 Construct validity of SDL

Factors	KMO	Variance
Factor I		22.643
Factor II		19.565
Factor III	0.906	12.834
Factor IV		10.258

Table 1.7 Multiple regression statistics for SDL model

Factors	Unstandardised coefficients Beta	Significance
Absorptive Values	0.737	0.000
Absorptive Collaboration	0.084	0.173
Collaborative Competencies	0.033	0.561
Absorptive Competencies	0.016	0.771
Value	0.889	0.000

Table 1.6 Item wise correlation coefficient values of SDL factors (Convergent Validity)

Items	Correlation values (p)	Items	Correlation values (p)
Absorptive Values		**Absorptive Collaboration**	
AA11 and V1	0.637	C3 and C2	0.483
AA11andAA10	0.602	C3 and C4	0.553
AA11andAA9	0.646	C3andAA1	0.467
AA11andAA8	0.490	C3andC10	0.505
AA11andV2	0.465	C3andAA2	0.437
AA11andAA7	0.520	C2 and C4	0.619
V1andAA10	0.578	C2andAA1	0.465
V1andAA9	0.597	C2andC10	0.430
V1andAA8	0.561	C2andAA2	0.598
V1andV2	0.582	C4andAA1	0.482
V1andAA7	0.452	C4andC10	0.493
AA10 and AA9	0.570	C4andAA2	0.578

Items	Correlation values (p)	Items	Correlation values (p)
Absorptive Values		**Absorptive Collaboration**	
AA10andAA8	0.548	AA1andC10	0.582
AA10andV2	0.393	AA1andAA2	0.631
AA10andAA7	0.421	C10 and AA2	0.408
AA9and AA8	0.684	**Collaborative Competencies**	
AA9andV2	0.492	C8andC6	0.413
AA9andAA7	0.623	C8andC9	0.495
AA8andV2	0.320	C6andC9	0.335
AA8andAA7	0.645	**Absorptive Competencies**	
V2andAA7	0.298	AA3andAA5	0.355
		AA3andAA4	0.654
		AA5andAA4	0470.

(All Correlation Coefficients are significant at 0.01 levels)
Note - *Items for the respective four SDL factors are given in Appendix (pp 27).*

Table 1.8 Impact of demographic and academic factors on SDL					
Factors	Groups	Effect	SDL factors	F -value	Significance
Demographic	**Gender**	**IDE**	Absorptive Values	0.723	0.397
			Absorptive Collaboration	1.022	0.314
			Collaborative Competencies	0.141	0.708
			Absorptive Competencies	1.081	0.301
	Age		Absorptive Values	0.674	0.901
			Absorptive Collaboration	0.955	0.543
			Collaborative Competencies	0.837	0.714
	Gender *Age	**INE**	Absorptive Competencies	0.820	0.737
			Absorptive Values	0.738	0.803
			Absorptive Collaboration	1.382	0.130
			Collaborative Competencies	1.164	0.289
			Absorptive Competencies	1.041	0.421
Academic	**Teaching experience**		Absorptive Values	0.732	0.829
			Absorptive Collaboration	0.746	0.814
			Collaborative Competencies	1.146	0.327
			Absorptive Competencies	0.983	0.514

Factors	Groups	Effect	SDL factors	F -value	Significance
	Administrative experience	**IDE**	Absorptive Values	0.810	0.680
			Absorptive Collaboration	0.936	0.542
			Collaborative Competencies	1.554	0.113
			Absorptive Competencies	0.832	0.656
	Designation		Absorptive Values	0.167	0.847
			Absorptive Collaboration	1.065	0.353
			Collaborative Competencies	0.094	0.911
			Absorptive Competencies	0.358	0.701
	Qualification		Absorptive Values	1.116	0.336
			Absorptive Collaboration	0.955	0.392
			Collaborative Competencies	1.769	0.181
			Absorptive Competencies	3.453	0.040
	Teaching *Administrative		Absorptive Values	0.783	0.756
			Absorptive Collaboration	0.632	0.905
			Collaborative Competencies	0.486	0.980
			Absorptive Competencies	0.913	0.596
	Teaching *Designation		Absorptive Values	0.780	0.648
			Absorptive Collaboration	1.217	0.304
			Collaborative Competencies	1.516	0.163
			Absorptive Competencies	1.565	0.146
	Administrative* Designation	**INE**	Absorptive Values	0.392	0.534
			Absorptive Collaboration	0.143	0.707
			Collaborative Competencies	0.319	0.575
			Absorptive Competencies	0.126	0.724
	Teaching *Qualification		Absorptive Values	0.124	0.913
			Absorptive Collaboration	0.104	0.980
			Collaborative Competencies	1.644	0.179
			Absorptive Competencies	1.090	0.372

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