Work Environment and Dynamic Capability: Empirical Views of Library and Information Professionals

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Abstract:

In the global competitive environment every professionals has to exhibit their capabilities in the organization in order to sustain in the professional circle. A dynamic capability is a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness. In general, a dynamic managerial capability is a one form of an effective utilization of dynamic capabilities. The use of dynamic capability in library and information field is in infancy stage. Therefore in this study an attempt has been made to evaluate the dynamic capability among LIS professionals. In Tamil Nadu, as on

date, there exist 20 State Universities, 32 Deemed Universities and 2 Central Universities.   Out of 540 questionnaire distributed, 318 were responded and the response rate is 70.37%. The dynamic capability has association with work environment capability and views on work environment. These two parameters were taken up for the study. "materials and equipment", "Information and Communication" and "Cooperation" were the first three predominant variables in showing the work environment capability. The least preferences were given to "Superior care"; "Opinion and ideas" and "recognition". The variables are grouped into four components using factor analysis. The four components thus extracted are named as "Appreciation", "Regulate", "Collaborator" and "Accommodative". In the case of views on work environment, the respondents give preference for opportunity and learn & grow.

Key words: Dynamic capability, work environment, work environment capabilities, factor analysis, soft skills.

Introduction

In the global competitive environment every professionals has to exhibit their capabilities in the organization in order to sustain in the professional circle. In exhibiting the capabilities the organizational climate and work environment plays a vital role. If the work environment is soothing to the professionals, they naturally involve themselves and exhibit their capabilities in their service. This holds good to the service industries. In the case of Library and information services the work environment matters in delivering the services to their clientele.

Dynamic Capability

Dynamic capabilities are the antecedent organizational and strategic routines by which managers alter their resource

base—acquire and shed resources, integrate them together, and recombine them—to generate new value-creating strategies (Grant, 1996; Pisano, 1994). As such, they are the drivers behind the creation, evolution, and recombination of other resources into new sources of competitive advantage (Henderson and Cockburn, 1994; Teece et al., 1997).

Kogut and Zander (1992) use the term 'combinative capabilities' to describe organizational processes by which firms synthesize and acquire knowledge resources, and generate new applications from those resources. Henderson and Cockburn (1994) similarly use the term 'architectural competence' while Amit and Schoemaker (1993) use 'capabilities.'

Definitions of Dynamic Capabilities

Few of the definitions of the dynamic capabilities are

- The subset of the competences and capabilities that allow the firm to create new products and processes and respond to changing market circumstances (Teece & Pisano (1994)
- The firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments (Teece, Pisano, & Shuen (1997))
- The firm's processes that use resources—specifically the processes to integrate, reconfigure, gain, and release resources—to match and even create market change; dynamic capabilities thus are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die Eisenhardt & Martin (2000)
- The ability to sense and then seize opportunities quickly and proficiently (Teece (2000))
- A dynamic capability is a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating

routines in pursuit of improved effectiveness Winter (2003)

- Those (capabilities) that operate to extend, modify, or create ordinary capabilities (Zahra, Sapienza, & Davidsson (2006))
- The abilities to reconfigure a firm's resources and routines in the manner envisioned and deemed appropriate by its principal decision maker(s) Helfat et al. (2007)

Therefore it can be inferred that the dynamic capabilities, can be disaggregated into the capacity (a) to sense and shape opportunities and threats, (b) to seize opportunities, and (c) to maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets.

Review of Literature

Clark and Fujimoto, (1991) discuss the use of superior product development skills to achieve competitive advantage in the automotive industry. Similarly, strategic decision making is a dynamic capability in which managers pool their various business, functional, and personal expertise to make the choices that shape the major strategic moves of the firm (Eisenhardt, 1989; Fredrickson, 1984; Judge and Miller, 1991). Other dynamic capabilities focus on reconfiguration of resources within firms. Transfer processes including routines for replication and brokering (e.g., Hansen, 1999; Hargadon and Sutton, 1997; Szulanski, 1996) are used by managers to copy, transfer, and recombine resources, especially knowledge-based ones, within the firm. Some dynamic capabilities integrate resources.

Product development routines by which managers combine their varied skills and functional backgrounds to create revenue producing products and services (e.g., Clark and Fujimoto, 1991; Dougherty, 1992; Helfat and `, 2000) are such a dynamic capability. Alliance management is considered as dynamic capability in Relationship management (Anand, Oriani, and Vassolo, 2010; Kale and Singh, 2007; Schilke and Goerzen, 2010). In the case of Organizational Structure, the dynamic capability exhibited in Resource allocation (Coen and Maritan, 2011). Similarly architectural innovation (Galunic and Eisenhardt, 2001), diversification (Doving and Gooderham, 2008; Dixon, Meyer, and Day, 2010), new product development capabilities (Henderson and Clark, 1990; Eisenhardt and Tabrizi, 1995) few more studies in dynamic capability.

In general, a dynamic managerial capability (Adner and Helfat, 2003) is a one form of an effective utilization of dynamic capabilities. The use of dynamic capability in library and information field is in infancy stage. Therefore in this study an attempt has been made to evaluate the dynamic capability among LIS professionals.

Objectives

The objectives of the study are:

1. To improve the dynamic capability by increasing the capability of the LIS Professionals workforce.
2. To identify the working environment responsibility among LIS professionals.
3. To identify the clear focus and commitment among LIS professionals in their work environment.
4. To indicate the LIS professionals that their abilities are recognized and used.
5. To provide opportunities to LIS professionals for their multi-skilling by a commitment to the development of competencies.

Hypotheses

The following hypotheses were formed based on the objectives.

1. There exists willingness in assuming the responsibility among LIS professionals in their working environment.
2. There is no significant change on competencies in meeting the challenges among the professionals.
3. LIS Professionals has a clear vision and values in their work environment.
4. There exists ensured learning among LIS Professionals.
5. There exists adaptability to the work environment among LIS Professionals.

Scope and Limitations

1. This study covers the professionals working in University libraries in Tamil Nadu (India)
2. Professionals includes person who poses post graduate qualification in library and information science and working in any university in Tamil Nadu (India)

Data Collection

In Tamil Nadu, as on date, there exist 20 State Universities, 32 Deemed Universities and 2 Central Universities. The Number of information professionals working in these institutions was not consistent. Therefore 10 questionnaires were distributed for each of the 54 universities. Therefore total questionnaire distributed works out to 540. Out of 540 questionnaire distributed, 318 were responded and the response rate is 70.37%.

Data Analysis

The dynamic capability has association with work environment capability and views on work environment. These two

parameters were taken up for the study. A well structured questionnaire was distributed among the library and information professionals working in Universities – State, Deemed and Central Universities. Their opinions were obtained and analyzed using the SPSS Software.

Demographic Data

The demographic details of the respondents are given in Table 1.

Table 1 Demographic Data

S. No.	Description	Frequency	Percent
1	Gender		
	Male	205	64.5
	Female	113	35.5
2	Qualification		
	UG	36	11.3
	PG	124	39.0
	M. Phil	146	45.9
	Ph. D	12	3.8
3	Designation		
	Librarian	119	37.4
	Asst. Librarian	199	62.6
4	Experience		
	<5 Yrs	92	28.9
	6to10 Yrs	124	39.0
	11to15 Yrs	73	23.0
	16-20 Yrs	15	4.7
	>20 Yrs	14	4.4
5	Type of Institution		
	Central University	14	4.4
	State University	136	42.8
	Deemed University	168	52.8

Out of 318 responses received, 205 (64.5%) are male and 113 (35.5%) are female. Based on their qualification the respondents are divided into 4 groups such as UG (36, 11.3%), PG (124, 39.0%), M. Phil. (146, 45.9%) and Ph.D. (12, 3.8%). The data were collected from Librarians and Assistant

Librarians only. There are 119 (37.4%) responses received from Librarians and 199 (62.6%) are Assistant Librarians.

Work Environment Capability

The work environment capability has been ascertained using ten variables on a five point scale such as Strongly Disagree, Disagree, Moderate, Agree and Strongly agree from LIS professionals working in Universities of Tamil Nadu (India). The mean and standard deviation were calculated. The ranks were assigned based on mean and standard deviation. The same is shown in Table 2.

Table 2 Work Environment Capability

S. No.	Description	SD	D	M	A	SA	Mean	Std	Rank
W1	material &equipment	5	5	28	88	192	4.4371	.84106	1
		1.6%	1.6%	8.8%	27.7%	60.4%			
W2	information & communication	4	12	28	111	163	4.3113	.87766	2
		1.3%	3.8%	8.8%	34.9%	51.3%			
W3	recognition	45	18	107	110	38	3.2453	1.17930	10
		14.2%	5.7%	33.6%	34.6%	11.9%			
W4	benefits	13	0	32	182	91	4.0629	.86783	5
		4.1%	.0%	10.1%	57.2%	28.6%			
W5	cooperative	15	9	26	102	166	4.1667	.91976	3
		4.7%	2.8%	8.2%	32.1%	52.2%			
W6	encourages	0	22	46	107	143	4.1667	.91976	4
		.0%	6.9%	14.5%	33.6%	45.0%			
W7	opinions & ideas	24	24	83	131	56	3.5377	1.09925	9
		7.5%	7.5%	26.1%	41.2%	17.6%			
W8	feedback & guidance	18	0	43	178	79	3.9434	.94482	6
		5.7%	.0%	13.5%	56.0%	24.8%			
W9	superior help	17	10	55	158	78	3.8491	1.00276	7
		5.3%	3.1%	17.3%	49.7%	24.5%			
W10	superior care	25	0	75	171	47	3.6761	.99468	8
		7.9%	.0%	23.6%	53.8%	14.8%			

The mean value ranges between 3.2453 and 4.4371. This indicates that all the variables thus taken up for the study lies between moderate and strongly agree. The standard deviation

ranges between 0.84106 and 1.17930 on a five point scale. There no significant deviation of opinion among the respondents.

In general "materials and equipment", "Information and Communication" and "Cooperation" were the first three predominant variables in showing the work environment capability. The least preferences were given to "Superior care"; "Opinion and ideas" and "recognition".

The study has further been extended to type of university such as Central Universities, State Universities and Deemed Universities. Their opinion on the variables in a five point scale is shown in Table 3.

Table 3 Work Environment Capability – Type of University

Type of University	Description	SD		D		M		A		SA	
Central Universities	Material &equipment	0	.0%	0	.0%	2	14.3%	5	35.7%	7	50.0%
	Information & communication	0	.0%	1	7.1%	2	14.3%	6	42.9%	5	35.7%
	Recognition	2	14.3%	1	7.1%	5	35.7%	5	35.7%	1	7.1%
	Benefits	2	14.3%	0	.0%	1	7.1%	9	64.3%	2	14.3%
	Cooperative	1	7.1%	1	7.1%	0	.0%	3	21.4%	9	64.3%
	Encourages	0	.0%	0	.0%	1	7.1%	4	28.6%	9	64.3%
	Opinions & ideas	0	.0%	2	14.3%	2	14.3%	6	42.9%	4	28.6%
	Feedback & guidance	1	7.1%	0	.0%	3	21.4%	8	57.1%	2	14.3%
	Superior help	0	.0%	0	.0%	3	21.4%	8	57.1%	3	21.4%
	Superior care	3	21.4%	0	.0%	4	28.6%	6	42.9%	1	7.1%
State Universities	Material &equipment	3	2.2%	1	.7%	11	8.1%	47	34.6%	74	54.4%
	Information & communication	1	.7%	3	2.2%	10	7.4%	52	38.2%	70	51.5%
	Recognition	16	11.8%	8	5.9%	53	39.0%	44	32.4%	15	11.0%
	Benefits	4	2.9%	0	.0%	12	8.8%	81	59.6%	39	28.7%
	Cooperative	7	5.1%	4	2.9%	12	8.8%	41	30.1%	72	52.9%
	Encourages	0	.0%	10	7.4%	22	16.2%	42	30.9%	62	45.6%
	Opinions & ideas	11	8.1%	6	4.4%	31	22.8%	66	48.5%	22	16.2%
	Feedback & guidance	7	5.1%	0	.0%	21	15.4%	71	52.2%	37	27.2%

	Superior help	5	3.7%	6	4.4%	24	17.6%	64	47.1%	37	27.2%
	Superior care	6	4.4%	0	.0%	35	25.7%	75	55.1%	20	14.7%
Deemed Universities	Material &equipment	2	1.2%	4	2.4%	15	8.9%	36	21.4%	111	66.1%
	Information & communication	3	1.8%	8	4.8%	16	9.5%	53	31.5%	88	52.4%
	Recognition	27	16.1%	9	5.4%	49	29.2%	61	36.3%	22	13.1%
	Benefits	7	4.2%	0	.0%	19	11.3%	92	54.8%	50	29.8%
	Cooperative	7	4.2%	4	2.4%	14	8.3%	58	34.5%	85	50.6%
	Encourages	0	.0%	12	7.1%	23	13.7%	61	36.3%	72	42.9%
	Opinions & ideas	13	7.7%	16	9.5%	50	29.8%	59	35.1%	30	17.9%
	Feedback & guidance	10	6.0%	0	.0%	19	11.3%	99	58.9%	40	23.8%
	Superior help	12	7.1%	4	2.4%	28	16.7%	86	51.2%	38	22.6%
	Superior care	16	9.5%	0	.0%	36	21.4%	90	53.6%	26	15.5%

The respective of central, state and deemed universities more than 70% of the respondents were accepted either agree or strongly agree for all the variables.

The mean and standard deviation were calculated for each type of universities and ranks were assigned based on the mean and standard deviation. The same is shown in Table 4.

Table 4 Work Environment Capability – Mean, Std., Rank

S. No	Description	Central			State			Deemed			Total		
		Mean	Std.	Rank	Mean	Std.	Rank	Mean	Std.	Rank	Mean	Std.	Rank
W1	Material and equipment	4.36	0.74	2	4.38	0.84	2	4.49	0.85	1	4.44	0.84	1
W2	Information & communication	4.07	0.92	4	4.38	0.78	1	4.28	0.95	2	4.31	0.88	2
W3	Recognition	3.14	1.17	9	3.25	1.11	10	3.25	1.24	10	3.25	1.18	10
W4	Benefits	3.64	1.22	8	4.11	0.80	5	4.06	0.89	5	4.06	0.87	5
W5	Cooperative	4.29	1.27	3	4.23	1.07	3	4.25	1.00	3	4.24	1.04	3
W6	Encourages	4.57	0.65	1	4.15	0.95	4	4.15	0.91	4	4.17	0.92	4
W7	Opinions & ideas	3.86	1.03	6	3.60	1.07	9	3.46	1.13	9	3.54	1.10	9
W8	Feedback & guidance	3.71	0.99	7	3.96	0.95	6	3.95	0.94	6	3.94	0.94	6
W9	Superior care	4.00	0.68	5	3.90	0.98	7	3.80	1.05	7	3.85	1.00	7
W10	Superior help	3.14	1.29	10	3.76	0.86	8	3.65	1.06	8	3.68	0.99	8

The respondents belong to Central Universities prefer 'encourages', 'material and equipment' and 'cooperative' as top three capabilities in the work environment. In case of the respondents belonging to the state universities, top three priorities are given to 'information and communication', 'material and equipment' and 'cooperative. The respondents from deemed universities prefer 'material and equipment', 'information and communication' and 'cooperative' as top three capabilities. In general, the respondents from the state and deemed universities have almost common opinion about the priorities on the capabilities.

Rotated component matrix were calculated for the variables for identifying the groups and the same is shown in Table 5.

Table 5 Rotated Component Matrix(a)

S. No	Description	Component			
		1	2	3	4
W3	Recognition	.746			
W4	Benefits	.839			
W1	Material and Equipment		.157		
W8	Feedback and Guidance		.819		
W9	Superior help		.832		
W7	Opinions and Ideas		.498		
W2	Information and communication			.459	
W6	Encourages			.756	
W5	Cooperative				.540
W10	Superior care				.804
Eigen values		1.752	1.695	1.303	1.226
Cumulative Squared Loadings		17.522	34.467	47.502	59.759

As can be seen from the table 5, the variables are grouped into four components. Eigen values were calculated for the same variables. The first four factors have Eigen values greater than 1. "1" was the criterion for retention of a factor, which indicates that only the first five factors are to be extracted. It can be seen that the variances were more evenly distributed in the

rotated sum of the squared loading (17.522%, 16.946%, 13.035% and 12.257% respectively; Cumulative variance ratio 59.759%), which shows that the four factors are interpretable. The four components were extracted and named as "Appreciation", "Regulate", "Collaborator" and "Accommodative". Further, the number of persons under each component has been identified and the same is shown in Table 6.

Table 6 Work Environment capability

S. No.	Description	Frequency	Percentage
1	Appreciation	89	28.0%
2	Regulate	78	24.5%
3	Collaborator	73	23.0%
4	Accommodative	78	24.5%
	Total	318	100.0%

It can be seen from Table 6 that the "Appreciation" (28.0%) has been given high preference. "Regulate" the work environment and "Accommodative" (24.5%) are given equal importance. The collaborator has given least preference. (23.0%).

The study has further been extended to type of university and the same is shown in table 7.

Table 7 Work Environment capability Vs Type of University

S. No.	Description	Central University		State University		Deemed University	
		No.	Percentage	No.	Percentage	No.	Percentage
1	Appreciation	1	7.1%	38	27.9%	50	29.8%
2	Regulate	4	28.6%	34	25.0%	40	23.8%
3	Collaborator	4	28.6%	33	24.3%	36	21.4%
4	Accommodative	5	35.7%	31	22.8%	42	25.0%
	Total	14	100.0%	136	100.0%	168	100.0%

In the case of Central University, "Accommodate" (35.7%) has given first preference. "Regulate" and "Collaborator" were given equal preference (28.6%) by the respondents.

Views on Work Environment

Opinions received from the respondents on the views of Work Environment in five point scale such as strongly disagree, disagree, moderate, agree and strongly agree and the same is shown in Table 8.

Table 8 Views on Work Environment

S. No	Description	SD		D		M		A		SA	
1	opportunity	14	4.4%	13	4.1%	39	12.3%	158	49.7%	94	29.6%
2	learn & grow	14	4.4%	12	3.8%	47	14.8%	156	49.1%	89	28.0%
3	recommend	4	1.3%	20	6.3%	40	12.6%	123	38.7%	131	41.2%
4	confidence	12	3.8%	53	16.7%	51	16.0%	64	20.1%	138	43.4%
5	satisfaction	8	2.5%	25	7.9%	51	16.0%	105	33.0%	129	40.6%

In general, most of the respondents agree with 'opportunity' and 'learn and grow' and strongly agree for 'recommend', 'confidence' and 'satisfaction' as their views on work environment.

Further, the responses received from the respondents about their views on work environment are compared with the type of the universities where they are working.

Table 9 Views on Work Environment Vs Types of Universities

S. No	Type of University	Description	SD		D		M		A		SA	
1	Central Universities	opportunity	1	7.1%	0	.0%	1	7.1%	7	50.0%	5	35.7%
2		learn & grow	0	.0%	1	7.1%	1	7.1%	7	50.0%	5	35.7%
3		recommend	0	.0%	1	7.1%	0	.0%	8	57.1%	5	35.7%
4		confidence	0	.0%	2	14.3%	0	.0%	5	35.7%	7	50.0%
5		satisfaction	0	.0%	1	7.1%	2	14.3%	6	42.9%	5	35.7%
1	State Universities	opportunity	3	2.2%	8	5.9%	17	12.5%	66	48.5%	42	30.9%
2		learn & grow	8	5.9%	2	1.5%	21	15.4%	71	52.2%	34	25.0%
3		recommend	3	2.2%	9	6.6%	17	12.5%	55	40.4%	52	38.2%
4		confidence	6	4.4%	25	18.4%	25	18.4%	29	21.3%	51	37.5%

5		satisfaction	4	2.9%	15	11.0%	18	13.2%	40	29.4%	59	43.4%
1	Deemed Universities	opportunity	10	6.0%	5	3.0%	21	12.5%	85	50.6%	47	28.0%
2		learn & grow	6	3.6%	9	5.4%	25	14.9%	78	46.4%	50	29.8%
3		recommend	1	.6%	10	6.0%	23	13.7%	60	35.7%	74	44.0%
4		confidence	6	3.6%	26	15.5%	26	15.5%	30	17.9%	80	47.6%
5		satisfaction	4	2.4%	9	5.4%	31	18.5%	59	35.1%	65	38.7%

The Table 9 shows that majority of the respondents belong to the central universities agree with 'opportunity', 'learn and grow', 'recommend' 'satisfaction' and strongly agree with 'confidence' as their views on work environment. In case of the state and central universities, most of the respondents agree with 'opportunity' and 'learn and grow' and strongly agree for 'recommend', 'confidence' and 'satisfaction' as their views on work environment.

Mean and Standard deviation were calculated for the opinion received from the respondents and ranks were assigned based on the mean and standard deviation. The same is shown in Table 10.

Table 10 Views on Work Environment – Mean, Std., Rank

S. No	Description	Central			State			Deemed			Total		
		Mean	Std	Rank	Mean	Std	Rank	Mean	Std	Rank	Mean	Std	Rank
1	Opportunity	4.07	1.07	5	4.00	0.93	2	3.92	1.03	4	3.96	0.99	3
2	Learn & grow	4.14	0.86	3	3.89	0.99	4	3.93	0.99	3	3.92	0.99	4
3	Recommend	4.21	0.80	1	4.06	0.99	1	4.17	0.92	1	4.12	0.94	1
4	Confidence	4.21	1.05	2	3.69	1.27	5	3.90	1.25	5	3.83	1.26	5
5	Satisfaction	4.07	0.92	4	3.99	1.13	3	4.02	1.00	2	4.01	1.05	2

Irrespective of the type of the universities, the respondents have common opinion that the variable 'recommend' is given the top preference. The respondents in central university opined 'recommend', 'confidence', 'learn' as the top three variables and 'opportunity' as the least one. In case of state university, the respondents preferred 'recommend', 'opportunity' and 'satisfaction' as top three views and the respondents belonging to deemed university have preferred

'recommend', satisfaction' and 'learn and grow' as the top three variables as their views on work environment. The respondents in both state and deemed universities, in their view, have give least preference to 'confidence'.

Conclusion

Changes are inevitable. Technological change has a greater impact in LIS profession. It is evident that the LIS professional has to acquaint themselves to ever changing environment in order to sustain in the profession. The dynamic capabilities view, by addressing the question of how libraries can cope with changing environments, has gained increasing attention in the literature in recent years, not only in the concept's original domain (strategic management) but also in many other areas within administration.

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