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Growth of Collection in the context of Ranganathan's Fifth Law of Library Science: A study

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Abstract: The field of higher education has witnessed a remarkable development both in terms of quantity and quality all over the world where libraries are playing a major role. Library collection is increasing at a regular pace both in physical and electronic forms. This research paper covers the universities and the institutes of national importance of Assam. This study highlights the growth and development of collection in the University libraries of Assam in terms of balance growth as indicated in the Ranganathan's fifth law of Library Science. The study delved deep in to how to accommodate the ever growing collection. It is also an attempt to understand and observe the changing roles of Ranganathan's fifth law of library science and how the law is put into practice pertaining to physical growth only limited to library collection. Besides, the research focuses on to show how Ranganathan's Fifth law of Library Science still apply and relevant in terms of collection growth. These differences are at the center of what has changed the interpretations of the fifth law.

Keywords: Collection, E- resources, Ranganathan's fifth Law, Audio Visual, Databases

1. The Study

The university libraries of Assam have been trying to face and sustain in the challenges occurred time to time. The challenges faced by the libraries can be identified mainly as the changing pattern of collection and resources available in the libraries which have been transferred from print media to electronic media. These evaluations and changing pattern was also very rightly coined by S. R. Ranganathan in his fifth law of Library Science which says "Library is a growing organism". The factors as indicated by Ranganathan always grow in the IT environment also. Only the patterns of development of these factors have been changing time to time. Ranganathan's five laws still apply in today's radically different information environment (Kwanya, T, 2010). Therefore it is seen that the Fifth law as proposed by Ranganathan is valid and acceptable in today's library and information profession.

2. Statement of the problem

The university libraries of Assam have always been given importance on the growth of collection. It is not clear as to how far the university libraries of Assam have been growing and developing in equilibrium at this time in terms of books. It's time for a change to focus and emphasis the growth and development of libraries' collection to make the ways in stable manner.

3. Objectives of the study

The following specific objectives have been lined up for the study as:

- To study the growth of collection in the university libraries of Assam.
- To study the growth of electronic collection in the university libraries of Assam.
- To study the balance growth of collection in the university libraries of Assam.

4. Scope & limitations of the study

In order to gather data exhaustively in relevant parameters as stated in the objectives, a ten years window is chosen i.e. 2005-06 to 2014-2015. There are eighteen universities and two institutes

of national importance (Table 4.5) in Assam as on today (2015). The study concentrated on seven universities (Table 1) which were established before the year 2005. In spite of being central government sponsored institute, the IIT-Guwahati and NIT-Silchar have been included in the purview of the study as they are playing a major role in the higher education sector of Assam. The other thirteen universities are excluded from the study. The reason for exclusion is either the universities are private or open universities or the universities were established after the year 2005. Further, the study is mainly focused on the first factor of growth ie collection as indicated by Ranganathan in the Fifth Law.

Table 1: University libraries of Assam under study

Sl No	Name of the University	Year of Estd.	Name of the Library	Location
1.	Gauhati University	1948	Krishna Kanta Handiqui Library(GU-KKHL)	Guwahati
2.	Dibrugarh University	1965	Lakshminath Bezbaroa Library (DU-LNBL)	Dibrugarh
3.	Assam Agricultural University	1969	Rev. B. M. Pugh Central Library (AAU-BMPL)	Jorhat
4.	Assam University	1994	Rabindra Library (AU-RL)	Silchar
5.	Indian Institute of Technology	1994	Lakshminath Bezbaroa Central Library (IIT-LNBCL)	Guwahati
6.	Tezpur University	1994	Central Library (TU-CL)	Tezpur
7.	National Institute of Technology	2002	Central Library (NIT-CL)	Silchar

Out of seven surveyed university libraries, the researcher has received response from all the university libraries of Assam. So, the percentage of response received is 100% for the university libraries.

5. Methodology

In order to carry out this study, survey (questionnaire, interview and observation) method is adopted for collection of primary data. A structured questionnaire is designed and sent to the seven universities of Assam. The researcher also consulted the annual reports of all university to verify the data.

6. Growth of collection in the university libraries of Assam

S. R. Ranganathan had given the main emphasis on growth in terms of size of a library in his Fifth Law of Library Science where the term “size” invites mainly three perspectives that are the books, the readers and the staff (Ranganathan, 1931). Considering the first factor as the main pillar of library, the study has been designed and the analysis is presented.

6.1: Collection growth

Library collection forms a sound foundation for efficient services. The physical collection of library mainly comprises of books, bound volumes of journal, theses/dissertations, research reports, seminar/conference proceedings, pamphlets and reprints, standards, specifications and patents. Moreover library holds the contemporary collection of non book material, audio visual material, online databases, maps, atlases which are very impressive and useful resources at this age.

The growth of collection of the university libraries of Assam are presented in the following subheadings.

Table 2: Cumulative & yearly growth of physical collection

GU-KKHL					DU-LNBL				
Year	Total	YGR (%)	CGR (%)	R ² Value	Year	Total	YGR (%)	CGR (%)	R ² Value
2004-05	322338	-	-	0.883	2004-05	164480	-	-	0
2005-07	323028	0.21	0.21		2005-07	186278	13.25	13.25	
2007-09	325713	0.83	1.05		2007-09	200577	7.68	21.95	
2009-11	328467	0.85	1.90		2009-11	239881	19.60	45.84	
2011-13	332355	1.18	3.11		2011-13	315139	31.37	91.60	
2013-15	336605	1.28	4.43		2013-15	322513	2.34	96.08	
AAU-BMPL					AU-RL				
Year	Total	YGR (%)	CGR (%)	R ² Value	Year	Total	YGR (%)	CGR (%)	R ² Value
2004-05	139239	-	-	0.509	2004-05	61233	-	-	0.653
2005-07	144977	4.12	4.12		2005-07	75287	22.95	22.95	
2007-09	149047	2.81	7.04		2007-09	98659	31.04	61.12	
2009-11	155691	4.46	11.82		2009-11	114606	16.16	87.16	
2011-13	174128	11.84	25.06		2011-13	120822	5.42	97.32	
2013-15	187795	7.85	34.87		2013-15	132218	9.43	115.93	
IIT-LNBCL					TU-CL				
Year	Total	YGR (%)	CGR (%)	R ² Value	Year	Total	YGR (%)	CGR (%)	R ² Value
2004-05	51745	-	-	0.059	2004-05	29813	-	-	0.171
2005-07	63107	21.96	21.96		2005-07	37555	25.97	25.97	
2007-09	83684	32.61	61.72		2007-09	45804	21.97	53.64	
2009-11	104198	24.51	101.37		2009-11	51112	11.59	71.44	
2011-13	148659	42.67	187.29		2011-13	62904	23.07	111.00	
2013-15	158469	6.60	206.25		2013-15	74331	18.17	149.32	
NIT-CL									
Year	Total	YGR (%)	CGR (%)	R ² Value					
2004-05	58362	-	-	0.702					
2005-07	65935	12.98	12.98						
2007-09	76100	15.42	30.39						
2009-11	82796	8.80	41.87						
2011-13	89647	8.27	53.61						
2013-15	96255	7.37	64.93						

YGR = Yearly Growth Rate, CGR = Cumulative Growth Rate

Figure 1: Yearly growth rate of total physical collection in %

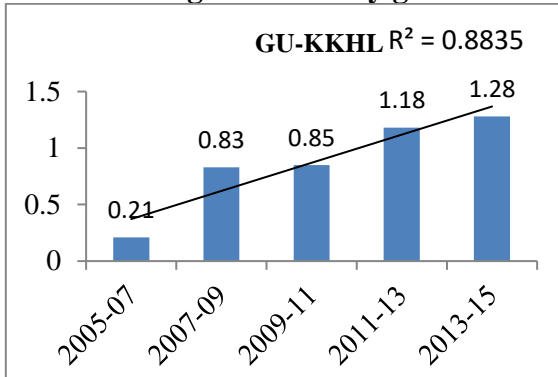


Fig.1 (a)

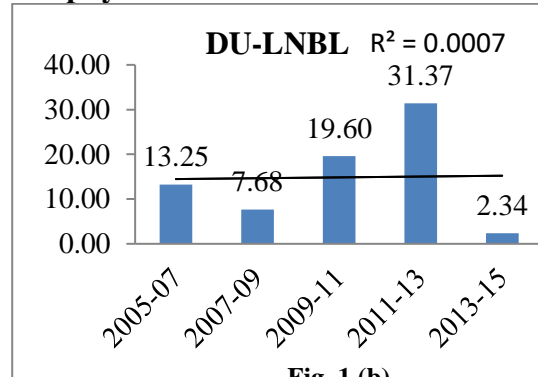


Fig. 1 (b)

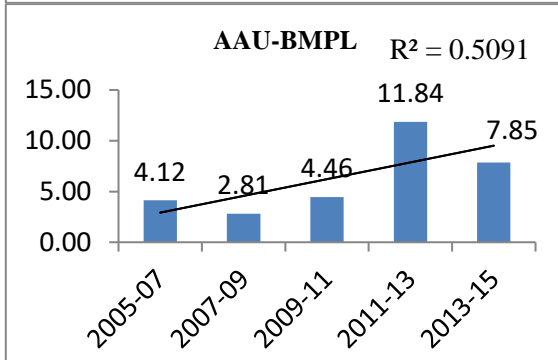


Fig. 1 (c)

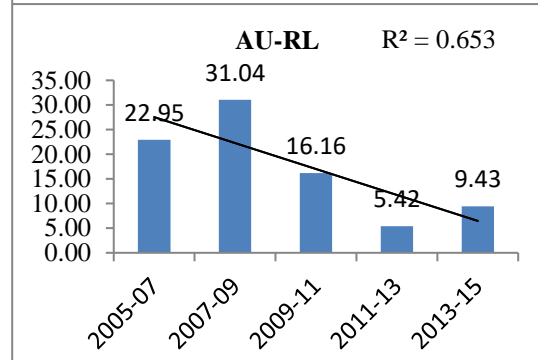


Fig 1 (d)

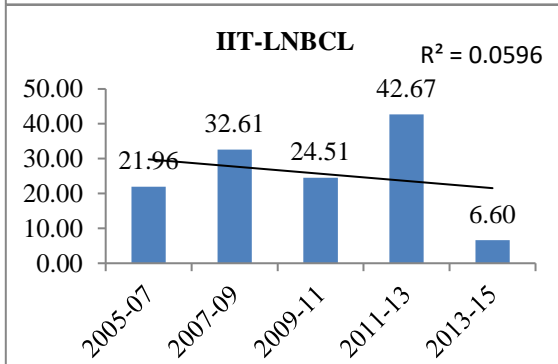


Fig 1 (e)

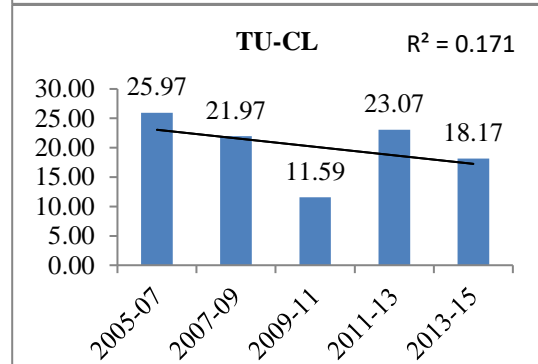


Fig 1(f)

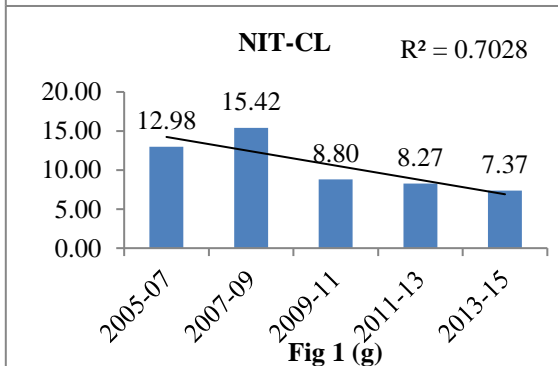


Fig 1 (g)

Table 2 highlights the yearly growth and cumulative growth rate of total physical collection in the university libraries of Assam under study. It is observed that the cumulative growth rate of total collection in GU- KKHL increased from 0.21% in 2005-06 to 4.43% in 2014-15. It is also found that in the year 2005-07, GU- KKHL had the lowest yearly growth rate of 0.21% in total physical collection and the highest yearly growth of 1.28% in 2013-15. The cumulative growth in DU-LNBL had been increasing from 13.25% in 2005-07 to 96.08% in 2014-15. DU-LNBL had the highest 31.37% yearly growth in 2011-13 and 2.34% of lowest growth rate in the year 2013-15 in total physical collection. In case of AAU-BMPL, the cumulative growth rate increased from 4.12% in 2005-07 to 34.87% in 2014-15. The highest yearly growth of 11.84% observed in the year 2011-13 and 2.81% lowest yearly growth in the year 2007-09. In AU-RL, the cumulative growth rate of total collection increased from 22.95% in 2005-06 to 115.93% in 2014-15. AU-RL had 31.04% highest yearly growth rate in 2007-09 and 5.42% lowest yearly growth in 2011-13. In case of IIT-LNBCL the cumulative growth rate increased from 21.96% in 2005-07 to 206.25% in 2014-15. The highest 42.67% yearly growth rate in physical collection found in the year 2011-13 and the lowest 6.6% found during 2013-15 in IIT-LNBCL. The cumulative growth rate of total collection increased from 25.97% in 2005-06 to 149.32% in 2014-15 in TU-CL. It is also found that in the year 2005-07, TU-CL had the highest yearly growth rate of 25.97% and 11.59% of lowest yearly growth in 2009-11. In NIT-CL, the cumulative growth of physical collection increased from 12.98% in 2005-07 to 64.93% in 2014-15. Highest 15.42% yearly growth found during 2007-09 and lowest 7.37% yearly growth found in 2013-15.

Coefficient of correlation of the growth of total physical collection in the surveyed university libraries of Assam during the period 2005-06 to 2014-15 shows higher correlation in GU-KKHL (0.883) followed by NIT-CL(0.702), AU-RL(0.653), AAU-BMPL(0.509), TU-CL(0.171), IIT-LNBCL(0.059) with least followed in DU-LNBL (0.000). This leads to infer a consistent growth of collection in GU-KKHL, NIT-CL, AU-RL, AAU-BMPL, TU-CL, and IIT-LNBCL while uneven growth observed in DU-LNBL.

6.2: Growth of electronic resources

E resources have come in a big way in different formats and there has been a sudden change in the user behavior for accepting this.

6.2.1: Growth of audio visual collection

The cumulative growth of audio visual collection in the university libraries of Assam can be analysed from the **Table 3**.

The growth of audio visual collection in the surveyed university libraries of Assam during the study period shows higher correlation in AAU-BMPL (0.64) followed by NIT- CL (0.556), DU-LNBL (0.186), TU-CL (0.128) with least followed in AU-RL (0.001). This leads to infer a consistent growth of audio visual collection in AAU-BMPL, NIT- CL, DU-LNBL, TU-CL and uneven growth found in AU-RL. However the yearly growth rates are unstable in all the years.

Table 3: Growth of audio visual collection

DU-LNBL					AAU-BMPL				
Year	AV	YGR (%)	CGR (%)	R ² Value	Year	AV	YGR (%)	CGR (%)	R ² Value
2004-05	446			0.186	2004-05	128			0.64
2005-07	446	0	0		2005-07	136	6.25	6.25	
2007-09	511	14.57	14.57		2007-09	144	5.88	12.5	
2009-11	562	9.98	26.01		2009-11	152	5.56	18.8	
2011-13	672	19.57	50.67		2011-13	160	5.26	25	
2013-15	723	7.59	62.11		2013-15	160	0	25	
AU-RL					TU-CL				
Year	AV	YGR (%)	CGR (%)	R ² Value	Year	AV	YGR (%)	CGR (%)	R ² Value
2004-05	80			0.001	2004-05	108			0.128
2005-07	130	62.5	62.5		2005-07	108	0	0	
2007-09	130	0	62.5		2007-09	108	0	0	
2009-11	240	84.62	200		2009-11	108	0	0	
2011-13	240	0	200		2011-13	1750	1520	1520	
2013-15	400	66.67	400		2013-15	1900	8.57	1659	
NIT- CL									
Year	AV	YGR (%)	CGR (%)	R ² Value					
2004-05	1080			0.556					
2005-07	2024	87.41	87.41						
2007-09	2374	17.29	119.8						
2009-11	3074	29.49	184.6						
2011-13	3465	12.72	220.8						
2013-15	4013	15.82	271.6						

AV= Audio visual collection

The growth of audio visual collection of GU-KKHL and IIT-LNBCL could not be analysed due to unavailability of data. It is needed to mention that AAU-BMPL has a collection of CAB CD and AGRIS where abstracting and indexing periodicals are available from 1973 to 2015

6.2.2: Growth of electronic-database

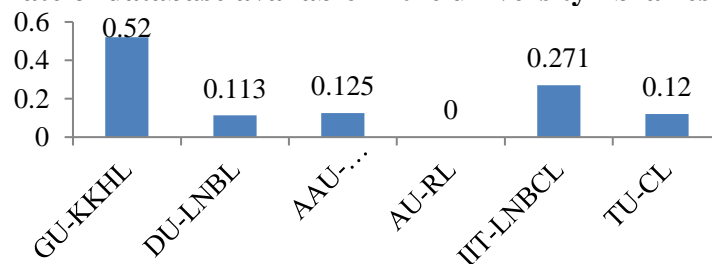
From the **Table 4** and **Figure 3**, it is seen the yearly growth rate of e- databases had been increasing in GU-KKHL, DU-LNBL, AAU-BMPL, IIT-LNBCL, TU-CL, but in AU-RL it remained constant.

The coefficient of correlation of the growth of e -databases in the surveyed university libraries of Assam during the study period shows higher correlation in GU-KKHL (0.52) followed by IIT-LNBCL (0.271), AAU-BMPL (0.125), TU-CL (0.12), DU-LNBL (0.113) and with least followed in AU-RL (0). This leads to infer a consistent growth of electronic databases in GU-KKHL, IIT-LNBCL, AAU-BMPL, TU-CL and DU-LNBL and with least followed in AU-RL. The growth of 0.75 found in NIT- CL only during 2009-11 to 2013-15. It is also noticed that the growth of e-databases had been gradually increasing during the last five years of the study period.

Table 4: Electronic databases available in the university libraries

GU-KKHL				DU-LNBL			
Year	DA	YGR (%)	R ² Value	Year	DA	YGR (%)	R ² Value
2004-05	5		0.52	2004-05	6		0.113
2005-07	5	0		2005-07	6	0	
2007-09	5	0		2007-09	12	100	
2009-11	6	20		2009-11	26	116.67	
2009-13	6	0		2009-13	11	-57.69	
2013-15	9	50		2013-15	11	0	
AAU-BMPL				AU-RL			
Year	DA	YGR (%)	R ² Value	Year	DA	YGR (%)	R ² Value
2004-05	6		0.125	2004-05	1		0
2005-07	6	0		2005-07	1	0	
2007-09	6	0		2007-09	1	0	
2009-11	6	0		2009-11	1	0	
2009-13	9	50		2009-13	1	0	
2013-15	9	0		2013-15	1	0	
IIT-LNBCL				TU-CL			
Year	DA	YGR (%)	R ² Value	Year	DA	YGR (%)	R ² Value
2004-05	5		0.271	2004-05	2		0.12
2005-07	5	0		2005-07	2	0	
2007-09	5	0		2007-09	16	700	
2009-11	6	20		2009-11	17	6.25	
2009-13	6	0		2009-13	15	-11.76	
2013-15	7	16.67		2013-15	17	13.33	
NIT- CL							
Year	DA	YGR	R ² Value				
2004-05	NA		0.75				
2005-07	NA						
2007-09	NA						
2009-11	20	0					
2009-13	20	0					
2013-15	21	5					

Figure 3: Growth rate of database available in the university libraries of Assam



6.2.3: Growth of electronic journals

From the **Table 5** it is seen that the yearly growth rate of electronic journals had been increasing in all the university libraries of Assam during 2005-06 to 2014-15. The coefficient of correlation of the growth of electronic journals in the surveyed university libraries of Assam during the period study period shows higher correlation in AU-RL (0.45), followed by, DU-LNBL (0.324), TU-CL (0.245) GU-KKHL (0.181), IIT-LNBCL (0.126), AAU-BMPL (0.044), and with least followed in NIT- CL (0.025). This leads to infer a consistent growth of electronic journals in AU-RL, DU-LNBL, TU-CL, GU-KKHL, IIT-LNBCL, AAU-BMPL, and with least followed in NIT- CL. However the collection of e-journals had been increasing exponentially during the last five years of the study period.

Table 5: Growth of electronic journals (in thousands)

GU-KKHL				DU-LNBL			
Year	EJ	YGR (%)	R ² Value	Year	EJ	YGR (%)	R ² Value
2004-05	4.23			2004-05	0.99		
2005-06	4.23	0		2005-06	0.99	0	
2006-07	3.74	-4.88		2006-07	0.99	0	
2007-08	4.04	2.99		2007-08	0.99	0	
2008-09	6.04	20		2008-09	1.2	2.12	
2009-10	5.78	-2.6	0.181	2009-10	1.3	1	0.324
2010-11	5.59	-1.92		2010-11	4.3	30	
2011-12	6.4	8.13		2011-12	5.2	9	
2012-13	7	6		2012-13	6	8	
2013-14	7.9	9		2013-14	7	10	
2014-15	9	11		2014-15	8.5	15	
AAU-BMPL				AU-RL			
Year	EJ	YGR (%)	R ² Value	Year	EJ	YGR (%)	R ² Value
2004-05	1.8			2004-05	5		
2005-06	2.1	3		2005-06	5	0	
2006-07	2.2	1		2006-07	6	10	
2007-08	2.5	3		2007-08	6.2	2	
2008-09	3	5	0.044	2008-09	6.8	6	
2009-10	3.1	1		2009-10	7	2	0.45
2010-11	3.2	1		2010-11	9	20	
2011-12	3.6	4		2011-12	11	20	
2012-13	3.7	1		2012-13	12	10	
2013-14	3.9	2		2013-14	13.2	12	
2014-15	4.5	6		2014-15	15	18	

IIT-LNBCL				TU-CL			
Year	EJ	YGR (%)	R ² Value	Year	EJ	YGR (%)	R ² Value
2004-05	7.6		0.126	2004-05	0.42		0.245
2005-06	7.8	2		2005-06	0.42	0	
2006-07	8.5	7		2006-07	0.42	0	
2007-08	8.9	4		2007-08	0.41	-0.11	
2008-09	10.5	16		2008-09	0.41	0	
2009-10	11	5		2009-10	0.77	3.66	
2010-11	12	10		2010-11	0.77	0	
2011-12	12.4	4		2011-12	7.5	67.29	
2012-13	12.6	2		2012-13	8.8	13	
2013-14	12.88	2.75		2013-14	10.3	15	
2014-15	12.84	-0.4		2014-15	12.5	22	

NIT- CL			
Year	EJ	YGR (%)	R ² Value
2004-05	5		0.025
2005-06	5	0	
2006-07	6.54	30.7	
2007-08	10.15	55.38	
2008-09	12.96	27.59	
2009-10	13.5	4.21	
2010-11	14	3.70	
2011-12	15.2	8.57	
2012-13	15.7	3.29	
2013-14	19.2	22.29	
2014-15	24	25	

EJ= Electronic Journals

7. Findings of the study

The university libraries of Assam have built their collection on electronic and printed forms. But the growth of collection of the university libraries of Assam, shows different picture in terms of the balance growth. The study has provided a useful summary of the growth of collection of the university libraries of Assam. An attempt has been made to present below the summary of findings obtained.

7.1 There has been a consistent growth of collection observed in GU-KKHL, NIT-CL, AU-RL, AAU-BMPL, TU-CL, and IIT-LNBCL while uneven growth observed in DU-LNBL. It is also found that 28.57% university libraries of Assam have shown positive growth in case of physical collection, 14.28% university libraries growth remained constant, while 57.14% university libraries' growth found negative. However there were fluctuating yearly growth rates in all the university libraries of Assam except GU-KKHL (**Table 2**).

7.2 In case of Audio visual collection growth, it is found that there is a consistent growth in AAU-BMPL, NIT- CL, DU-LNBL, TU-CL and uneven growth in AU-RL. However the yearly growth rates are unstable in all the years (**Table 3**).

7.3 The growth of electronic databases shows higher correlation in GU-KKHL, IIT-LNBCL, AAU-BMPL, TU-CL and DU-LNBL and with least followed in AU-RL. It is also noticed that the growth of e-databases had been gradually increasing during the last five years of the study(**Table 4**).

7.4 The collection of e-journals had been increasing exponentially during the last five years of the study period. It is observed that 85.71% of the university libraries of Assam have shown positive growth and 14.29% of university libraries growth remained not up to the mark. From the

trends of growth of electronic collection, it is highlighted that majority of the university libraries' electronic journals' growth are increasing during the study period (Table 5).

7.2 Suggestion and recommendations

On the basis of the above discussions some suggestion and recommendations have been proposed.

- i. The university library should evaluate the library collection annually.
- ii. The university library authorities should give more emphasis in building more electronic collections to satisfy the users' need as well as to minimize the space demand.
- iii. Every university should have a proper and standard and written weeding out policy which should be followed by the librarian.
- iv. In the interest of the libraries to measure their own strength, a proper library statistics should be maintained in regard to collection development including non book materials.

8. Conclusion

This study concludes that the growth of collection in the university libraries of Assam found to be multidimensional but not uniform. As S. R. Ranganathan emphasized the growth should be like "Organism" that is multidimensional as well as uniform. But unfortunately this study finds that though growth is there but it is neither uniform nor balanced one. Therefore, it is necessary to make dedicated efforts to prepare ourselves for the future of librarianship.

References

1. Barner, K. The library is a growing organism: Ranganathan's Fifth Law of Library Science and the academic library in the digital era, 2011.
2. Gorman, M. The five laws of library science: then & now. *School Library Journal*, 44(7), 20-23, 1998.
3. Hadizatu, H. Implication of Ranganathan's 5th law to library and information profession in the 21st century. *International Journal of Scientific Engineering & Research*, 2014, 5 (1), 2267-2277. Retrieved from <http://www.ijser.org>
4. Kwanya, T., Stilwell, C., & Underwood, P. G. Library 2.0 principles and Ranganathan's fifth law. *Mousaion*, 2010, 28(2), 1-16.
5. Kumar, S. K., Babu, B. R., & Rao, P. N. Implications of Five Laws of Library Science on Dr. SR Ranganathan's Colon Classification: An Explorative Study. *Journal of the Korean Society for Library and Information Science*, 2011, 45(4), 309-326.
6. Kuronen, T., & Pekkarinen, P. Ranganathan revisited: a review article. *Journal of librarianship and information science*, 1999, 31(1), 45-48.
7. Ranganathan, S. R. (1931). *The five laws of library science*. Madras Library Association (Madras, India) and Edward Goldston, London, UK, 1931.
8. Sen, B. K. Ranganathan's Five Laws. *Annals of Library and Information Studies*, 2008, 55, 87-90.

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