

A Bibliometric Study of Ph.D Theses Awarded In the Department of Education Punjab University, Chandigarh During The Period 2014-2018

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Abstract

The paper presents citation analysis of PhD theses submitted in the discipline of Education of the Punjab University Chandigarh during 2014-2018. The study is based on the 11985 citations taken out from 64 PhD theses of Education. The study presents analysis of several parameters like authorship pattern, forms of literature, country-wise scattering of citations, distribution of Indian and foreign citations and a ranked list of top 35 cited Education journals. The study finds that highest number of citations was single authored (50.01 %), and 47.29 % citations were from books. "University News" is found to be the most heavily used journal. The half-life of all citations is almost 20.02 years. The country-wise scattering of citations reveals that 6259 (50.20%) citations were from India and it was followed by USA and UK.

Keywords: Citation Analysis, Bibliometrics Studies, PhD Theses, Research Productivity, Education etc.

Introduction

Bibliometrics is a multipurpose tool that can be applied to various kinds of studies. It can be used for Prediction, analytical, and evaluative studies. Some of the essential applications of bibliometrics in the library and information science can be summarized as follows:

Due to the proliferation of scientific literature and increase in the number of scholarly publications in various formats and budget, constraints, academic libraries are facing plethora of problems in deciding the reading material to be purchased. In the present scenario, Library and Information Science professionals need to understand the reading material being used and cited by the scholars. Librarians are supposed to determine the requirements of the reading population by making a thorough investigation as to how much the available reading material is actually in use by the students, researchers and the teaching faculties. They are to reschedule their programs and policies regarding what are to be acquired on priority basis according to the requirements of the readers and researchers. Information obtained from vendors is not enough to decide which journal/e-book subscriptions are to be renewed or to be cancelled? The same way library managers can't depend solely on in-house and circulation statistics. Here citation analysis helps to know the information sources most relevant for researches in process. Citation analysis is a tool to calculate the effect of an article, an author, a publication by calculating the frequency of their occurrence in other works. Citation analysis studies have been completed in Science, Social Science and Humanities, which throw light on approaches to citation and citation pattern. To have a substantial collection and to increase its relevance, librarians depend upon several sources, including different metrics.

Literature Review

Various studies have been carried out on citation analysis. For the present study the following studies have been reviewed in the light of the topic.

Chaubey (2019) analyzed the citation and authorship pattern of "Journal of Chemical Science (JLS)", "Pramana Journal of Physics (PJP)" and "Proceedings Mathematical Science (PMS)". The citation authorship pattern and type of documents were traced by going through the SCOPUS

database. Total 18600 articles with citations from 262 issues of 62 volumes were analyzed. The study revealed that RJP and JCS had authorship by more than three authors while in PMS majority of the contributions were by two authors. Majority of the publications were cited journal articles i.e. 95.59%, 84.46%, and 61.32% in JCS, PMS and PJP, respectively.

Gayan and Singh (2018) performed a study entitled “Citation analysis of Doctoral theses of Mathematics, Tripura University: a Scientometric study.” Total 377 citations appended to 6 theses submitted to Shodhganga were considered for analysis. The pattern of authorship, chronological and geographical distribution and type of documents cited were analyzed. Application of Bradford’s law was used and it was revealed that “Fuzzy Sets and Systems” was the mostly preferred journal in the field. Authorship trend showed that collaboration in the field is more as compared to a single author 33 and collaboration degree was found as 0.58. It was concluded that the findings will be useful for researchers in the field while doing research and for the librarians for collection development while making acquisition policy.

Namdev (2017) analyzed the 9687 citations appended in 79 Ph.D. theses of Computer Science discipline awarded by Universities in Maharashtra state between the years 2000 to 2014. The study found that most of the theses i.e. 16 theses were awarded in the year 2010 with followed by the year 2012 with 11 theses. Out of 9687 citations, highest percentages i.e. 50% of citations were from Journals, followed by 16% citations from Books. The study revealed that 6365(65.71%) citations were by multiple authors followed by 2941 (30.36%) citations were by single authors and in 381 (3.93%) citations the authors were not mentioned. The study found that „IEEE Transactions on Pattern Analysis and Machine Intelligence“ was top in journals rank list.

Objectives of the Study

The objectives of the present study are:

- To study the subject areas/ topics covered by researchers in universities of Haryana, Punjab and Chandigarh in the field of education;
- To observe the nature and pattern of authorship cited documents of doctoral theses in Education;
- To prepare a ranked list of highly cited journals;
- To identify most cited sources both print and digital apart from journals;
- To study the obsolescence and half-life of frequently cited documents;
- To find out most cited books of doctoral theses in education;
- To examine the chronological distribution of citations and
- To determine the Geographical distribution of citations of doctoral theses in education.

Research Methodology

The data collected from the citations in 64 Ph.D. theses was analyzed by applying suitable procedures. The basic tallying reference method was applied to decide the center diaries in the field of Education. MS-Excel Worksheet was utilized for the examination of the information.

Data Analysis

The total number of citations by counting the column and rows helped in preparation of frequency tables. The collected data has been presented with the help of the tabulation, graph, pie, etc form which are required. The simple percentage method has been used for analysis the collected data.

Table-1: Year-Wise Distribution of Theses: Panjab University, Chandigarh

Year of submission	No. of Ph.D. theses submitted	%	Cumulative No. of Ph.D. theses submitted	Cumulative %
2018	22	34.38	22	34.38
2017	16	25.00	38	59.38
2016	10	15.63	48	75.00
2015	12	18.75	60	93.75
2014	04	6.25	64	100.00
Total	64	100.00		

The table no.1 depicts that the highest number of theses in the Department of Education at Panjab University, Chandigarh during this period were submitted in 2018 (22, 34.38%), 2017 (16, 25%) 2015 (12, 18.75%) and 2016 (10, 15.63%), whereas the least number of theses (4, 6.25%) were submitted in 2014.

Table-2: Distribution of Theses by Subject Area: Panjab University, Chandigarh

Subject Area	Frequency	%	Cumulative Frequency	Cumulative %
Educational Psychology	14	21.88	14	21.88
Educational and Vocational Guidance and Counseling	11	17.19	25	39.06
Educational Administration and Planning	12	18.75	37	57.81
Philosophical and sociological Economics Based of Education	10	15.63	47	73.44
Creating and Inclusive Education	07	10.94	54	84.38
Gender School and Society	03	4.69	57	89.06
Curriculum and Instructions	04	6.25	61	95.31
Information and Communication Technologies	03	4.69	64	100.00
Total	64	100.00		

Table no. 2 related to the distribution of theses by subject area in the Department of Education at Panjab University, Chandigarh during this period. The table reveals that the maximum numbers of subject area i.e. Educational Psychology (14, 21.88%) and Minimum subject area were Gender School and Society and Information and Communication Technologies (3, 04.69%) respectively.

Table-3: Authorship Patterns of Cited Documents: Panjab University, Chandigarh

Sr. No.	Author ship Pattern	No. of Citations	%	Cumulati ve Citations	Cumulative %
1	Single	5994	50.01	5994	50.01
2	Joint	3015	25.16	9009	75.17
3	Three	2110	17.61	11119	92.77
4	More than Three	626	5.22	11745	98.00
5	Not Given	240	2.00	11985	100.00
	Total	11985	100.00		

Table no. 3 depicts the authorship pattern of all used patterns by the authors. A total of 11985 citations to all patterns were analyzed to ascertain the authorship pattern in the Ph.D. theses submitted in the Ph.D. theses submitted in the Department of Education at Panjab University during the study period. Out of the total citations, single author used for 5994 citations (50.01%), while joint authors used for 3015 citations (25.16%). It is clear from the above table that three and more than three authors with (2110, 17.61% and 626, 05.22%) were the least used by the authors respectively.

Table-4: Ranking of Highly Cited Journals: Panjab University, Chandigarh

Sr. No.	Title	Area	Citations	%	Cumulative citations	Cumulative %	Rank
1	University News	India	114	2.95	114	2.95	1
2	Journal of Educational Psychology	USA	103	2.67	217	5.62	2
3	Dissertation Abstract International	USA	98	2.54	315	8.16	3
4	Indian Journal of Psychometry and Education	India	95	2.46	410	10.62	4
5	Indian Education Review	India	81	2.10	491	12.71	5
6	Edutracks	India	79	2.05	570	14.76	6
7	Indian Education Abstract	India	76	1.97	646	16.73	7
8	Journal of Environmental Education	USA	75	1.94	721	18.67	8
9	The Journal of Experimental Education	USA	74	1.92	795	20.59	9
10	Education Psychology	USA	65	1.68	860	22.27	10
11	The Journal of Education Research	USA	52	1.35	912	23.61	11
12	Journal of Educational Research and Extension	India	51	1.32	963	24.94	12
13	Journal of Learning Disabilities	USA	48	1.24	1011	26.18	13
14	Learning Disability Quarterly	USA	45	1.17	1056	27.34	14
15	Journal of Psychological Research	USA	41	1.06	1097	28.40	15
16	Journal of Applied Research	USA	40	1.04	1137	29.44	16
17	Journal of Education	USA	39	1.01	1176	30.45	17
18	Educational Leadership	India	38	0.98	1214	31.43	18
19	Review of Educational Research	USA	37	0.96	1251	32.39	19
20	Exceptional Children in School	USA	36	0.93	1287	33.32	20
21	Computer in Human Behavior	USA	35	0.91	1322	34.23	21
22	British journal of Education Technology	USA	35	0.91	1357	35.14	22
23	Journal of Technology and Teacher Education	USA	34	0.88	1391	36.02	23
24	Journal of Creative Behavior	USA	34	0.88	1425	36.90	23

25	Journal of Indian Education	India	33	0.85	1458	37.75	24
26	Educational Psychology Review	USA	31	0.80	1489	38.56	25
27	Journal of Computer Assisted Learning	USA	31	0.80	1520	39.36	25
28	Journal of Genetic Psychology	USA	29	0.75	1549	40.11	26
29	Journal of Mathematics Education	Indonesia	29	0.75	1578	40.86	26
30	Journal of Applied Psychology	UK	29	0.75	1607	41.61	26
31	Applied Cognitive Psychology	UK	28	0.73	1635	42.34	27
32	Journal of Educational Technology & Society	USA	28	0.73	1663	43.06	27
33	Journal of Research and Development in Education	USA	27	0.70	1690	43.76	28
34	Journal of Instructional Psychology	USA	27	0.70	1717	44.46	28
35	Psychological Studies	India	25	0.65	1742	45.11	29
36	Computer and Education	USA	25	0.65	1767	45.75	29
37	The Journal of Nutrition	USA	24	0.62	1791	46.37	30
38	Journal of Teacher Education	USA	23	0.60	1814	46.97	31
39	Psychology Report	USA	23	0.60	1837	47.57	31
40	The Journal of Educational Research	USA	23	0.60	1860	48.16	31
41	Journal of Experimental Education	USA	21	0.54	1881	48.71	32
42	Creativity Research Journal	UK	21	0.54	1902	49.25	32
43	Research Review International Journal of Multidisciplinary	India	21	0.54	1923	49.79	32
44	Annual Review of Psychology	USA	20	0.52	1943	50.31	33
45	Asian Journal of Contemporary Education	Indonesia	20	0.52	1963	50.83	33
46	The Journal of Abnormal and Social Psychology	USA	19	0.49	1982	51.32	34
47	Annual Review of Psychology Education	USA	19	0.49	2001	51.81	34
48	The Spanish Journal of Psychology	UK	19	0.49	2020	52.30	34
49	Journal of Research in Personality	USA	18	0.47	2038	52.77	35
50	International Journal of Psychology	USA	18	0.47	2056	53.24	35
51	Indian Journal of Disability and Rehabilitation	India	17	0.44	2073	53.68	36
52	Reading Psychology	USA	17	0.44	2090	54.12	36

53	Communication Research	USA	17	0.44	2107	54.56	36
54	International Journal of Science Education	UK	17	0.44	2124	55.00	36
55	Journal of Psychopathology and Behavioral Assessment	UK	16	0.41	2140	55.41	37
56	Academy of Management Journals	USA	16	0.41	2156	55.83	37
57	Asia-Pacific Journal of Education	UK	16	0.41	2172	56.24	37
58	MERI Journal of Education	India	16	0.41	2188	56.65	37
59	Vision Research	Netherland	16	0.41	2204	57.07	37
60	Learning Disabilities Research & Practice	USA	16	0.41	2220	57.48	37
61	Journal of Instructional Psychology	USA	16	0.41	2236	57.90	37
62	Journal of Machine Learning Research	USA	16	0.41	2252	58.31	37
63	Contemporary Educational Psychology	USA	16	0.41	2268	58.73	37
64	Journal of Research In Personality	USA	15	0.39	2283	59.11	38
65	New Frontiers in Education	India	15	0.39	2298	59.50	38
66	British Journal of Educational Psychology	USA	15	0.39	2313	59.89	38
67	International Journal of Learning & Development	USA	15	0.39	2328	60.28	38
68	Art and Design Studies	USA	15	0.39	2343	60.67	38
69	Journal of Research on Computing in Education	UK	15	0.39	2358	61.06	38
70	American Journal of Psychology	USA	15	0.39	2373	61.44	38
71	Journal of Machine Learning Research	USA	15	0.39	2388	61.83	38
72	Indian Journal of Applied Psychology	India	15	0.39	2403	62.22	38
73	British Journal of Educational Studies	UK	15	0.39	2418	62.61	38
74	Journal of Counseling & Development	USA	15	0.39	2433	63.00	38
75	American Educational Research Journal	USA	15	0.39	2448	63.39	38
76	Journal of Applied Developmental Psychology	USA	15	0.39	2463	63.78	38
77	The Journal of Environmental Education	UK	15	0.39	2478	64.16	38

78	Australian Journal of Advanced Nursing	UK	14	0.36	2492	64.53	39
79	The Primary Teacher	India	14	0.36	2506	64.89	39
80	American Journal of Psychological Research	USA	14	0.36	2520	65.25	39
81	Journal of the Indian Academy Applied Psychology	India	14	0.36	2534	65.61	39
82	Bhartiya Adhunik Siksha	India	14	0.36	2548	65.98	39
83	Indian Journal of Educational Technology	India	13	0.34	2561	66.31	40
84	American Journal of Scientific Research	USA	13	0.34	2574	66.65	40
85	Educational and Psychological Measurement	USA	13	0.34	2587	66.99	40
86	Journal of Vocational Behavior	USA	13	0.34	2600	67.32	40
87	European Journal of Educational Research	UK	13	0.34	2613	67.66	40
88	Social Science Quarterly	USA	13	0.34	2626	68.00	40
89	Reading Research Quarterly	USA	13	0.34	2639	68.33	40
90	The Leadership Quarterly	USA	13	0.34	2652	68.67	40
91	The Curriculum Journal	UK	13	0.34	2665	69.01	40
92	Reading & Writing Quarterly	UK	12	0.31	2677	69.32	41
93	The Science Teacher	USA	12	0.31	2689	69.63	41
94	Studies in Higher Education	USA	12	0.31	2701	69.94	41
95	Journal of Curriculum and Instruction	USA	12	0.31	2713	70.25	41
96	Art and Design Studies	USA	12	0.31	2725	70.56	41
97	Asia Pacific Education Review	Asia	12	0.31	2737	70.87	41
98	International Journal of Psychology & Behavior Analysis	USA	12	0.31	2749	71.18	41
99	Indian Journal of Clinical Psychology	India	12	0.31	2761	71.49	41
100	International Journal of Disability and Rehabilitation	UK	12	0.31	2773	71.80	41
101	International Journal of Sciences	USA	12	0.31	2785	72.11	41
102	Journal of College Student Development	USA	12	0.31	2797	72.42	41
103	Harvard Business Review	UK	12	0.31	2809	72.73	41
104	Education Research International	USA	12	0.31	2821	73.05	41

105	Personalities and Individual differences	Canada	12	0.31	2833	73.36	41
106	Journal of Humanities and Social Science	USA	12	0.31	2845	73.67	41
107	Journal of Business Research	USA	12	0.31	2857	73.98	41
108	Education Research Quarterly	USA	12	0.31	2869	74.29	41
109	Journal of Industries Psychology	Bangladesh	12	0.31	2881	74.60	41
110	Journal of Visual impairment and Blindness	USA	12	0.31	2893	74.91	41
111	IOSR Journal of Humanities and Social Science	China	12	0.31	2905	75.22	41
112	Journal of Turkish Science Education	Turkish	12	0.31	2917	75.53	41
113	Journal of Exceptional Child	USA	12	0.31	2929	75.84	41
114	Journal of Nursing care Quality	USA	12	0.31	2941	76.15	41
115	Journal of Education Practice	India	11	0.28	2952	76.44	42
116	Journal of Alcohol and Drug Education	USA	11	0.28	2963	76.72	42
117	American Journal of Business Management	USA	11	0.28	2974	77.01	42
118	Experiment in Education	UK	11	0.28	2985	77.29	42
119	Computers in the Schools	UK	11	0.28	2996	77.58	42
120	Indian Journal of Social Science Research	India	11	0.28	3007	77.86	42
121	Asia & Pacific Journal on Disability	Thailand	11	0.28	3018	78.15	42
122	Entire Research	India	11	0.28	3029	78.43	42
123	Indian Journal of Clinical Psychology	India	11	0.28	3040	78.72	42
124	Behavior Scientist	India	11	0.28	3051	79.00	42
125	The Education Review	India	11	0.28	3062	79.29	42
126	American Annals of the Deaf	USA	11	0.28	3073	79.57	42
127	Journal of Social Service Research	USA	11	0.28	3084	79.85	42
128	Journal of Behavior Education	USA	11	0.28	3095	80.14	42
129	Journal of Education Abstract	UK	11	0.28	3106	80.42	42
130	Asian Journal of Management Cases	Pakistan	11	0.28	3117	80.71	42
131	Journal of Education Computing Research	USA	11	0.28	3128	80.99	42

132	Journal of Education Planning & Administration	India	11	0.28	3139	81.28	42
134	Journal of Education & Teaching	UK	11	0.28	3150	81.56	42
135	Journal of Nursing Education and Practice	Canada	11	0.28	3161	81.85	42
136	Journal of School and Psychology	USA	10	0.26	3171	82.11	43
137	The Turkish Online Journal of Education Technology	Europe	10	0.26	3181	82.37	43
138	The Science Teacher	USA	10	0.26	3191	82.63	43
139	Psychology Review	USA	10	0.26	3201	82.88	43
140	Psychology Bulletin	USA	10	0.26	3211	83.14	43
141	Journal of Clinical Child Psychology	USA	10	0.26	3221	83.40	43
142	International Journal of Behavior Development	USA	9	0.23	3230	83.64	44
143	Journal of Management studies	UK	9	0.23	3239	83.87	44
144	International Journal of Special Education	Canada	9	0.23	3248	84.10	44
145	Journal of Computing Research	USA	9	0.23	3257	84.33	44
146	Journal of Management	Europe	9	0.23	3266	84.57	44
147	Canadian Journal of Learning and Technology	Canada	9	0.23	3275	84.80	44
148	International Journal of Medical Education	UK	9	0.23	3284	85.03	44
149	Australian Journal of Mental Retardation	UK	9	0.23	3293	85.27	44
150	Journal of Science Teacher	UK	9	0.23	3302	85.50	44
151	Industrial and Organization Psychology Perspectives on Science & Practice	USA	8	0.21	3310	85.71	45
152	Journal of All India Association for Education Research	India	8	0.21	3318	85.91	45
153	Global Journal of Intellectual of Development Disabilities	USA	8	0.21	3326	86.12	45
154	The Asian Journal of and Psychology Education	India	8	0.21	3334	86.33	45
155	Indian Journal of Psychometry & Education	India	8	0.21	3342	86.54	45
156	European Journal of Special Needs	UK	8	0.21	3350	86.74	45
157	The Asian Journal of and Psychology Education	India	8	0.21	3358	86.95	45

158	Indian Psychology Review	India	7	0.18	3365	87.13	46
159	Remedial and Special Education	USA	7	0.18	3372	87.31	46
160	Education Research and Review	Europe	7	0.18	3379	87.49	46
161	Canadian Journal of Learning and Technology	Canada	7	0.18	3386	87.67	46
162	Canadian Journal of Education	Canada	7	0.18	3393	87.86	46
163	Educational Research Quarterly	USA	7	0.18	3400	88.04	46
164	American Journal of Mental Deficiency	USA	7	0.18	3407	88.22	46
165	Australian Journal of Teacher Education	UK	6	0.16	3413	88.37	47
166	Journal of Higher Education	USA	6	0.16	3419	88.53	47
167	ABHIGYAN	India	6	0.16	3425	88.68	47
168	Education Research Review	Germany	6	0.16	3431	88.84	47
169	Journal of Technical, writing and Communication	USA	6	0.16	3437	89.00	47
170	Experiment in Education	UK	6	0.16	3443	89.15	47
171	British Journal of Sociology of Education	USA	6	0.16	3449	89.31	47
172	Research in Education	UK	6	0.16	3455	89.46	47
173	Journal of Special Education	USA	6	0.16	3461	89.62	47
174	American Journal of Education	USA	6	0.16	3467	89.77	47
175	European Journal of Psychology	Europe	5	0.13	3472	89.90	48
176	Asian American Journal of Psychology	USA	5	0.13	3477	90.03	48
177	International Journal of Humanities and Social Studies	India	5	0.13	3482	90.16	48
178	Journal of Abnormal Psychology	USA	5	0.13	3487	90.29	48
179	Journal of In-service Education	UK	5	0.13	3492	90.42	48
180	Journal of Career Assessment	USA	5	0.13	3497	90.55	48
181	Journal of Dental Hygiene	Canada	5	0.13	3502	90.68	48
	Other (360) Journals		360	9.32	3862	100.00	
	Total		3862	100.00	100.00		

Table 4 shows that out of a total of 181 journals cited in the theses submitted during the study period, 'University News' was highly cited journal (114, 2.95%), followed by 'Journal of Educational Psychology' (103, 2.67%), 'Dissertation abstract International' (98, 2.54%), 'Indian Journal of Psychometry and Education' (95, 2.46%), 'Indian Education Review' (81, 2.10%), 'Edutracks'

(79, 2.05%), 'Indian Education Abstract' (76, 1.97%), 'Journal of Environmental Education' (75, 1.94%), 'The Journal of Experimental Education' (74, 1.92%).

Table-5: Most Cited Sources both print and Digital apart from Journals: Panjab University, Chandigarh

Sr. No.	Form of cited documents	No. of Citations	%	Cumulative Citations	Cumulative %
1	Books	3841	47.29	3841	47.29
2	E-Book	155	1.91	3996	49.19
3	Dissertation/Thesis	1217	14.98	5213	64.18
4	Dissertation/Thesis In Web	25	0.31	5238	64.48
5	Interview/Tests/Lectures	518	6.38	5756	70.86
6	Interview/Tests/Lectures in Web	40	0.49	5796	71.35
7	Website	442	5.44	6238	76.79
8	Unpublished	410	5.05	6648	81.84
9	Conference Proceedings/Seminars	509	6.27	7157	88.11
10	Conference Proceedings/Seminars in Web	32	0.39	7189	88.50
11	Reports	349	4.30	7538	92.80
12	Reports in web	106	1.30	7644	94.10
13	Magazines/Newspapers	225	2.77	7869	96.87
14	Magazines/Newspapers In Web	20	0.25	7889	97.12
16	Unidentified	234	2.88	8123	100.00
	Total	8123			

Table.5. indicate that out of 8123 sources cited by the research scholars in the Ph.D. theses submitted in the Department of Education at Panjab University during this period, books comprised the highest citations (3841, 47.29%), followed by Dissertation/Thesis citations (1217, 14.98%), Interview/Tests/Lectures (518, 6.38%), Conference Proceedings/Seminars (509, 6.27%), websites (442, 5.44%), unpublished (410, 5.05%), reports (349, 4.30%), unidentified (234, 2.88%), Magazines/Newspapers (225, 2.27%) , E- Book (155, 1.91%) etc.

Obsolescence/Half-Life of Journals: Panjab University, Chandigarh

‘Half-life’ or ‘Obsolescence rate’ of the Journals can be calculated by analyzing the age of the cited journals. Studies of obsolescence of literature commonly assess the decline in the use of journals over time. It helps the librarians in weeding out old journals from the library.

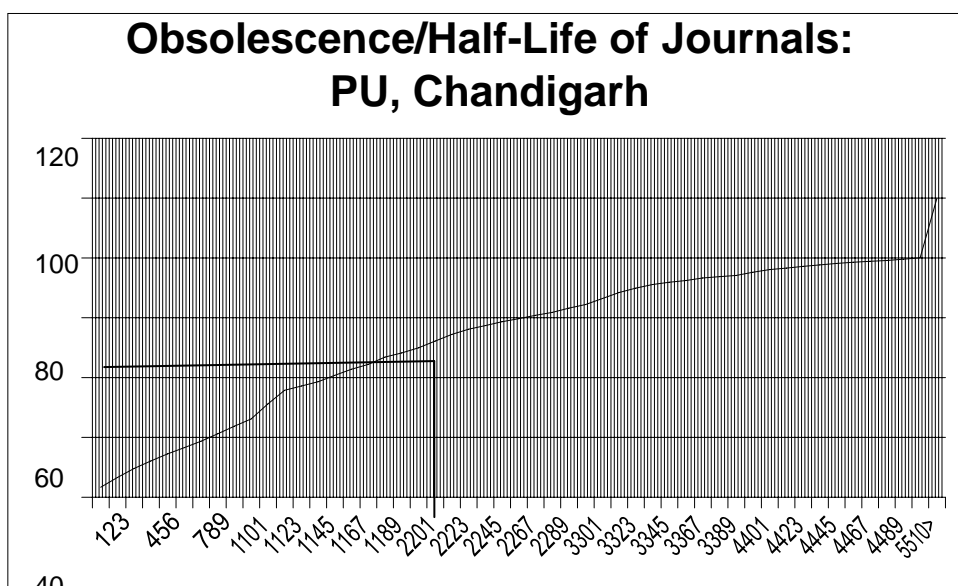


Fig. 1: Obsolescence/Half-Life of Journals: PU, Chandigarh

Fig. no. 1 shows the period of journals cited in 64 Doctoral theses awarded in the Department of Education at Panjab University, Chandigarh up to the end of 2018. It indicates that 562 journals citations (14.55%) were up to 5 years old, 1012 citations (26.20%) were up to 10 years old and 1575 citations (40.78%) were up to 15 years old. The table also shows that more than half (52.25%) of the total citations were up to 18 years old. The half life of journals in Education is 20.02 years.

Table-6: Ranked List of Highly Cited Books of Education in Panjab University: Chandigarh

Sr. No	Name of Books	Authors	Citations	%	Cumulative citations	Cumulative %	Rank
1	Statistics in Psychology and Education	Garrett H.E	74	1.85	74	1.85	1
2	Research in Education	Best. John.W	71	1.78	145	3.63	2
3	Research Methodology : Methods and Technologies	Kothari C.R	68	1.70	213	5.33	3
4	Methodology of Education Research	Lokesh Koul	63	1.58	276	6.91	4
5	Fundamental Statistics in Psychology and Education	Guilford .J.P	61	1.53	337	8.43	5

6	Recent Research in Education and Psychology	Gupta A	61	1.53	398	9.96	5
7	Essential of Education Measurement	Ebel. R.C	60	1.50	458	11.46	6
8	Adolescences Development and Adjustment	Crow and Crow	59	1.48	517	12.94	7
9	Dictionary of Education	Good C.V	58	1.45	575	14.39	8
10	Statistical Methods	Aggarwal Y.P	57	1.43	632	15.82	9
11	Organization Behavior	KreutzerR	55	1.38	687	17.19	10
12	Creativity, Process and Potential	TaylorC.W	53	1.33	740	18.52	11
13	Essential of Education Psychology	Aggarwal J.C	51	1.28	791	19.79	12
14	Educational Research	Aggarwal J.C	49	1.23	840	21.02	13
15	Fundamental of Behavior Research	Kelinger F.N	48	1.20	888	22.22	14
16	The Motivation of Work	HerzbergF	45	1.13	933	23.35	15
17	Pattern and Growth in Personality	Allport, G.W	42	1.05	975	24.40	16
18	Guidance and Counseling	Walia J.S	41	1.03	1016	25.43	17
19	Creativity and the Child	Dutt N.K	36	0.90	1052	26.33	18
20	Oxford Dictionary of Psychology	Coleman A.M	35	0.88	1087	27.20	19
21	An Introduction of Motivation	AtkinsonJ	34	0.85	1121	28.05	20
22	Encyclopedia of Education Research	Ebel, R.L	33	0.83	1154	28.88	21
22	Education Psychology	Mangal S.K	33	0.83	1187	29.70	21
23	A Model of Teacher Stress	KyriacovC	32	0.80	1219	30.5	22
24	Guidance and Counseling	Mangal S.K	31	0.78	1250	31.28	23
25	Education Psychology	Walia J.S	30	0.75	1280	32.0	24
26	Encyclopedia of Education Research	Monroe W.S	28	0.70	1308	32.7	25
27	Guidance and Counseling	Chauhan S.S	28	0.70	1336	33.4	25
28	Organization Behaviors	Hallenleck J	27	0.68	1363	34.1	26
29	Education Psychology	SmithD.N	26	0.65	1389	34.7	27
30	Creativity and Education	Pussi B.K	25	0.63	1414	35.3	28

31	Advanced Education Psychology	Chauhan S.S	25	0.63	1439	36.0	28
32	Childhood and Growing up	Aggarwal J.C	24	0.60	1463	36.6	29
33	Childhood and Growing up	Walia J.S	24	0.60	1487	37.2	29
34	Child Development	Hurlock E	24	0.60	1511	37.8	29
35	Contemporary India and Education	Mangal S.K	23	0.58	1534	38.3	30
36	Creative Learning and Teaching	Torrance E.P	23	0.58	1557	38.9	30
37	Education Psychology	Crow A	20	0.50	1577	39.4	31
38	Contemporary India and Education	Gupta Rainu	19	0.48	1596	39.9	32
39	Childhood and Growing up	Sachdeva M.S	19	0.48	1615	40.4	32
40	Methodology of Research in Education	Sidhu S.K	19	0.48	1634	40.8	32
41	Understanding Disciplines and Subject	Sachdeva M.S	19	0.48	1653	41.3	32
42	Essential of Education Psychology	Skinner K.S	18	0.45	1671	41.8	33
43	Working with Emotional Intelligence	Goleman D	18	0.45	1689	42.2	33
44	Assessment for Learning	Virak Jashwant	18	0.45	1707	42.7	33
45	Childhood and Growing up	Mangal S.K	18	0.45	1725	43.1	33
46	Gender and School Society	Gupta A.K	17	0.43	1742	43.5	34
47	Understanding Disciplines and Subject	Gupta S	17	0.43	1759	44.0	34
48	Theory of Mental Test	Gulikson H	17	0.43	1776	44.4	34
49	Work and Motivation	Vroom V.H	17	0.43	1793	44.8	34
50	Assessment for Learning	Mangal S.K	17	0.43	1810	45.3	34
51	Principal of Psychology	James W	17	0.43	1827	45.7	34
52	Advanced Education Psychology	Panday K.P	17	0.43	1844	46.1	34
53	Self Efficiency: The exercise of Control	Bandura A	16	0.40	1860	46.5	35
54	Basis of Education	Bhatia K.K	16	0.40	1876	46.9	35
55	Personality Adjustment	Smith H.C	16	0.40	1892	47.3	35
56	Creativity and Personality	Parmesh C.R	16	0.40	1908	47.7	35
57	Statically Method	Gupta S.P	16	0.40	1924	48.1	35
58	Assessment for Learning	Sharma	16	0.40	1940	48.5	35

		Asha					
59	Trend and Issue of India Education	Mishra B.K	16	0.40	1956	48.95	35
60	Stress Appraisal and Coping	Leazarus R.S	15	0.38	1971	49.32	36
61	Growth and structure of distance Education	Holmberg B	15	0.38	1986	49.70	36
62	Motivation for Achievement	Alderman M	15	0.38	2001	50.08	36
63	Measuring Education Achievement	Ebel R.L	15	0.38	2016	50.43	36
64	Job Satisfaction Scale	Dixit M	15	0.38	2031	50.83	36
65	Inclusive Education for Children with Special Needs	Bulasubramania A	15	0.38	2046	51.20	36
66	Personality: A Psychological Interpretation	Allport G.W	15	0.38	2061	51.58	36
67	Human Development of Learning	Crow C.D	15	0.38	2076	51.95	36
68	Modern applied Psychology	Goldstein	14	0.35	2090	52.30	37
69	The Communication of Emotion	Buck R	14	0.35	2104	52.65	37
70	Indian Education in Time of Global	Rajput	14	0.35	2118	53.00	37
71	Language Across Curriculum	Sharma Asha	14	0.35	2132	53.35	37
72	Teaching for Quality Learning	Bigys J	14	0.35	2146	53.70	37
73	Using Your Learning Style	Honey P	14	0.35	2160	54.05	37
74	Teacher Guide Book	Sidhu J.S	14	0.35	2174	54.40	37
75	The Principal of Psychology	James W	14	0.35	2188	54.75	37
76	Teacher Effectiveness Scale	Kulsom U	14	0.35	2202	55.10	37
77	Society and Adolescence self image	Rosenberg M	14	0.35	2216	55.46	37
78	The Psychology of Writing	Kellogg R.T	14	0.35	2230	55.81	37
79	Psychometric Methods	Guilford J.P	14	0.35	2244	56.16	37
80	Spiritual Intelligence	Levin M	14	0.35	2258	56.51	37
81	Teacher Effectiveness of College Teacher	Arokias S.A	14	0.35	2272	56.86	37
82	Creating and Inclusive Education	Walia J.S	13	0.33	2285	57.18	38
83	Work Stress and Social Support Reading	House J.P	13	0.33	2298	57.53	38
84	Creativity of Psychology Health	Barron F	13	0.33	2311	57.88	38
85	Adjustment Among College Students	Aggarwal M.C	13	0.33	2324	58.16	38
86	Social Method of Teaching	Joyce B	13	0.33	2337	58.48	38
87	Creating and Inclusive Education	Gupta R	13	0.33	2350	58.83	38
88	Use Your Learning	Buzan T	13	0.33	2363	59.13	38
89	Special Education With Attention Problem	Chandha A	12	0.30	2375	59.43	39

90	Successful Intelligence	Streberg R.J	12	0.30	2387	59.73	39
91	Understanding Disciplines and Subject	SharmaA	12	0.30	2399	60.04	39
92	Stress in Education Indian Experience	Singal S	12	0.30	2411	60.34	39
93	Work Motivation and Job Satisfaction	Chand R	12	0.30	2423	60.64	39
94	Multiple Intelligence	GardnerH	12	0.30	2435	60.94	39
95	Creating and Inclusive Education	SharmaA	11	0.28	2446	61.2	40
96	Language Across Curriculum	Mangal	11	0.28	2457	61.49	40
97	Understanding Disciplines and Subject	WaliaJ.S	11	0.28	2468	61.76	40
98	Understanding Student Learning	Entwistle N	10	0.25	2478	62.01	41
99	Vocational Interest Record	Kulshres tha S.P	10	0.25	2488	62.26	41
100	Adolescence Development	Hurlock. E.B	10	0.25	2498	62.51	41
101	Quality of Teacher	Adval.S.B	10	0.25	2508	62.76	41
102	Inclusive Growth of India	DeviS.M	10	0.25	2518	63.01	41
103	Introduction to Psychology Research	ScottM.A	10	0.25	2528	63.26	41
104	Psychology of Behavior	Carlson N.R	10	0.25	2538	63.51	41
105	Organization Behavior	Stephen.P	10	0.25	2548	63.76	41
106	Methodology of Education	SidhuS.K	10	0.25	2558	64.01	41
107	Higher Education in India	Akula R	10	0.25	2568	64.26	41
108	Frame of Mind: the Theory of Multiple Intelligence	GardnerH	10	0.25	2578	64.51	41
109	Fundamental of Distance Education	KuganD	10	0.25	2588	64.76	41
110	Business Studies	Dey. S	10	0.25	2598	65.02	41
	Reaming Title of Books Cited 9times less		1398	34.98	3996	100.00	
	Total		3996	100.00			

Table no. 6 shows that out of a total of 110 books cited in the theses submitted during the study period, 'Statistics in Psychology and Education' was highly cited books (74, 1.85%), followed by 'Research in Education' (71, 1.78%), 'Research Methodology : Methods and Technologies' (68, 1.70%), 'Methodology of Education Research' (63, 1.58%), 'Fundamental Statistics in Psychology and Recent Research in Education and Psychology' (61, 1.53%), 'Essential of Education Measurement' (60, 1.50%), 'Adolescences Development and Adjustment' (59, 1.48%), 'Dictionary of Education' (58, 1.45%), 'Statistical Methods' (57, 1.43%), 'Organization Behavior'

(55, 1.38%), 'Creativity, Process and Potential' (53, 1.33%), 'Essential of Education Psychology' (51, 1.28%), etc.

Table- 7: Chronological Distribution of Citations: Panjab University, Chandigarh

S r. N o .	Time Span	No. of Citations	% of Citations	Cumulative Citations	Cumulative %
1	2009-2018	3125	26.07	3125	26.07
2	1999-2008	2919	24.36	6044	50.43
3	1989-1998	1647	13.74	7691	64.17
4	1979-1988	972	8.11	8663	72.28
5	1969-1978	614	5.12	9277	77.41
6	1959-1968	554	4.62	9831	82.03
7	1949-1958	542	4.52	10373	86.55
8	1939-1948	546	4.56	10919	91.11
9	1929-1938	310	2.59	11229	93.69
10	Prior to 1919	451	3.76	11680	97.46
11	Not Found	305	2.54	11985	100.00
	Total	11985	100.00		

The above table indicates that mostly citations belong to published in 2009-2018 (3125, 26.07%), followed by 2919 citations (24.36%) that were published during 1999-2008, 1647 citations (13.74%) published during 1989-1998, 972 citations (8.11%) published during 1979-1988, 614 citations (5.12%) published during 1969-1978, 554 citations (4.62%) published during 1959-1968, 546 citations (4.56%) published during 1939-1948, 542 citations (4.52%) published during 1949-1958, etc.

Table–8: Geographical Distribution of Cited Literature: Panjab University, Chandigarh

Sr . No.	Country	Citations	%	Cumulative Citations	Cumulative %
1	India	6256	52.20	6256	52.20
2	United State	2748	22.93	9004	75.13
3	United Kingdom	1981	16.53	10985	91.66
4	Canada	93	0.78	11078	92.43
5	Europe	26	0.22	11104	92.65
6	Germany	18	0.15	11122	92.80
7	Japan	16	0.13	11138	92.93
8	Bangladesh	08	0.07	11146	93.00
9	Indonesia	17	0.14	11163	93.14
10	Pakistan	13	0.11	11176	93.25
11	Nigeria	28	0.23	11204	93.48
12	China	21	0.18	11225	93.66
13	Others	615	5.13	11840	98.79
	Not Found	145	1.21	11985	100.00
		11985	100.00		

Table no. 8 shows geographical distribution of citations cited in the Ph.D. theses submitted in the Department of Education at Panjab University during the study period. It reveals that majority of the citations (6256, 52.20%) were Indian publications, followed by publications from United State (2748, 22.93%) and (1981, 16.53%) of United Kingdom and (93, 0.78%) were cited by Canada. It is also clear from the table that less than 1% was cited from Europe, Germany, Japan, Bangladesh, Indonesia, etc.

Findings of the Study

The major findings of their analysis are following:

- The highest numbers of theses in Education were submitted in 2018 (34.38%).
- The table reveals that the maximum numbers of subject area was Educational Psychology (21.88%).
- During the study period, 'University News' was highly cited journal (2.95%).
- The highest cited books as sources (47.29%) followed by Dissertation/Thesis citations as (14.98%).
- The period of journals cited in 48 Doctoral theses awarded in the Department of Education at Panjab University, Chandigarh up to the end of 2018. The half life of journals in Education is 20.02 years.
- The highest numbers of citations belong to publications published during 2009-2018 as (26.07%).
- Majority of the citations (52.20%) were Indian publications followed by publications from United

State as (22.93%).

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