'PATEL HYPOTHESES OF RESEARCH EVALUATION' AMENDED

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Abstract
Five formulas for assessment of research at Journal Value, Paper Value, Scholar Value, Institute Value and Nation Value amended. Three hypotheses of research evaluations justified. Impact factor divided into two parameters Journal Value and Paper Value. In India UGC scheme of weightage to first authors, indexed journals and international journals eradicated. A uniform pattern of all journals across the world suggested. This research work in open for all persons and publishers free of cost for ever.

Key Words: Assess Immediacy, Referees, Equal, And Importance.

Introduction
Author of this manuscript proposed some formulas for evaluation of researches at different level of assessment by virtue of their values in his previous paper, wherein formulas were somewhat complicated from calculation point of view and were hypothetically exemplified[1.]Hitherto, Impact Factor trend is widely in use for evaluation of research papers by means of standard of journals throughout the world[1.]In India, UGC regulation 2010, category- III regarding Academic Performance Indicator (API) provided more weightage to first authors in research papers, indexed and international journals[2. .] Now, 'Patel plan for scientifically tie breaking of point five the decimal clock, in short Patel plan is available for counting of an incomplete page of a research paper published in any journal[3]. An alternative way of Impact factor trend is need of time which is fulfilled by author by virtue of three hypotheses. The hypotheses have mathematically proved true with help of published research papers and journals. Some fundamentalist verbally criticized to humanity factor in formulas of previous publication. Therefore, formulas secularized and simplified for easy calculations. Recently, the Honorable Prime Minister of India invoked 'made in India'.

Hypotheses: Three hypotheses of research evaluations proposed are as under:
  (i)   'Journal Value is directly proportional to sum of pages of published research papers in a year, frequency of publication in a year and referees peer review a manuscript in that journal'.
  (ii) 'Paper Value is inversely proportional to number of authors in that paper'.
  (iii) 'No single characteristic is enough to evaluate a Scholar's Value'.

Formulas
(1)Journal Value (JV) = a + b + c ,
  Where, a = total pages of research papers published by a journal in a year divided by 100, b = frequency of publication of a journal in a year divided by 8, and c = number of referees to peer review each manuscript multiplied by 2.

Examples:
  (i)   JV of current Science, India for year 2019[4.]

$$JV = \frac{4212}{100} + \frac{24}{8} + 2 \times 2 = 49.12 \text{ marks}$$

  (ii) JV of Science Magazine, America for year 2019[5.]

$$JV = \frac{5657}{100} + \frac{48}{8} + 2 \times 2 = 66.57 \text{ marks}$$

Evidently, more pages, immediacy accompanied with referees to peer review each manuscript increased value of Science Magazine journal than Current Science journal. First hypothesis of research evaluation justified.

(2) Paper Value (PV) = $\dfrac{a + b}{c}$

Where a = 1 marks for each page of a research paper with limitation of 6 marks, b = number of referees for peer review of each manuscript multiplied by 2, and c = number of authors in a particular manuscript.

Examples:

(i)   PV of a paper: Patel, Uma Shankar (2018), Patel plan for scientifically tie breaking of point five by the decimal clock, in *Journal of Multidisciplinary Research and Studies*, Volume 4, accepted online on 11/12/2018, communicated on 09/08/2018.
PV = $\dfrac{1 +1 \times 2}{1}$ = 3 marks

(ii)   PV of a paper: Hoffman *et al*. (2020), Design of an *in vitro* bio catalytic cascade for the manufacture of islatravir, *Science*, Vol. 366, Issue 6470, pp. 1255-1259.
PV = $\dfrac{5 + 2 \times 2}{35}$ = $\dfrac{9}{35}$ = 0.25 marks

Evidently, increased number of authors in paper of Hoffmann et al. of 5 pages considerably decreased its value. Second hypothesis of research justified.

(3) Scholar Value (SV) = a+b+c+d+e+f+g+h+i,

Where, a= all Paper Value of a scholar, b = award marks, c = project marks, d = guidance and supervision marks, e =conference participation marks, f = conference paper marks, g = noble prize marks, h = referee and editor marks, and i = paper citation marks.

Example: Scholar Value of author of this manuscript is as under:
SV = 63+20=5+0+33+6+0=0+0 = 127 marks.

Evidently, at least 9 characteristics are required to completely evaluate research activities of a scholar. Third hypothesis of research evaluation justified.

(4)   Institute Value (IV) = sum of scholars values of all scholars of an institute.

(5)   Nation Value (NV) = sum of Institutes Values of all institutes of a nation.

Discussion
No doubt ranking of a journal Science, America is better in Impact Factor trend and also would be in journal value trend. Journal Value of Science is 66.57 against 41 Impact factor in year 2019. Journal Value of Current Science, India is 49.12 marks against o.75 Impact Factor in year 2019 as calculated above. The enhancement of marks of Current Science and Science in Journal Value trends are of 41 marks and 17 marks respectively. The quality of journals like Current Science is good to be ranked nearby Science. The Journal Value trend uplifts good journals without affecting better journals like Science. In the formula of Journal Value a constant number 8 is to reduce too much difference among various journals, and number 2 is for equalization of peer review character almost equal to immediacy character each of which carry 6 marks in the best journals. There is no limit of number of pages to be published by journals. In the formula of Paper Value maximum 6 marks are for 6 or more than 6 pages in a paper to avoid unnecessary enlargement of papers those can effect Journal Value by increased number of pages. A constant 2 in review character is to give almost equal importance to work by authors, and peer review by referees in a research paper. Maximum marks in a published research papers may be 12 marks but in a conference paper may be of 7 marks because peer reviewed published paper are assessed in many hours by experts whereas conference papers are usually assessed in few minutes without guarantee of presence of experts in conference room. A writer of a book, monographs, manual etc. could get maximum 12

marks equal to a better research paper. A collective work should be shared equally among all authors. Increasing number of authors in a paper correspondingly decrease its value. A 10th Part of the Journal Value marks should be given to all referees and editors for their contribution in research management every year. If, Journal Value of a journal is 66 marks in a particular year then each referee would get 6 marks in that year. No marks should be given separately to referees and organizers of conferences, they would get marks for attending a conference, 2, 3 or 4 marks for state, national and international conference respectively because attending a conference is never equal to writing a research paper after extensive study and work.5, 6 and 7 marks are for awards of state, national and international level respectively. 5 and 8 marks are for minor and major projects carried completely, respectively. 2, 4, 8 marks are for supervision of M. Sc., M. Phil. And Ph. D. supervision because supervisor become a part of research papers published by students. 5, 6, and 7 marks for paper reading in state, national and international level conferences respectively. 1000 marks for each Noble prize divided by authors' number in that award. 3, 6 and 9 marks for up to 50, 100 and more than 100 citations of a research paper in a year respectively. Somewhat less marks are prescribed in each and every character of research activity with an objective to reduce burden of calculation at Institute Value and National Value. Administrative and co=curricular works are not research works, so, no place in the formula of Scholar Value. Impact Factor divided into Journal Value and Paper Value because these two are distinct parameters of research evaluations. Journal Value can only be calculated of previous years but Paper Value can be calculated of current year also. Exemplified: Journal Value of Science for year 2019 is 66.57 marks whereas Paper Value of Hoffman *et al.*,a paper published in 2020 referred above in formula of Paper Value is 0.25 marks. It is unwise if, we say that 66.57 is equal to 0.25. If, 35 authors in above paper each gets 41 Impact Factor (marks) then total value of paper becomes 1435. It is also unwise if, we say 41 Impact factor of Science journal is equal to 1435 impact Factor of a paper. In case, any page is partly printed in a paper then rounding off of incomplete page should be done following 'Patel plan of scientifically tie breaking of point five by the decimal clock" [3, Annexure=A].

Suggestions
1. A common uniform pattern of all journals across the world to avoid bias in counting of pages.
2. Every paper should be furnished by journal value of previous year and instant paper value on first or last page of every research paper.

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