



Construction and Standardisation of UGC-CARE List of Journals

Awareness Test for Teachers and Research Scholars

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ABSTRACT

The present paper is an attempt to construct and standardized a UGC-CARE List of Journals Awareness Test for the Teachers and Research Scholars. The Final scale consisted of 44 items, distributed over 5 dimensions of UGC-CARE List of Journals as prescribed the UGC, New Delhi with effect from 14 June 2019, namely Background and Objectives of UGC-CARE, CARE protocols, CARE Universities and Committees, CARE Groups and Journal Analysis. The reliability of the Test was found to be 0.85 (Test-Retest Method) and 0.90 (Split Half Method). To determine the validity of the UGC-CARE List Awareness Test, the researcher showed the Test to a number of experts seeking judgement regarding the coverage of the constructs.

Keywords: Awareness, Research Scholars, Teachers, UGC-CARE List of Journals.

INTRODUCTION

Research is a process of information gathering, absorption, and assimilation. It entails questioning, information collecting, organisation, analysis, and synthesis in accordance with the study objectives. The process of creative activity that research entails is carried out in a methodical manner in order to add to or improve the reservoir of knowledge. Research entails rigorous and continual scientific attempts to uncover truth and create new knowledge for the benefit of society. This encompasses understanding of man, culture, and society, as well as applying this knowledge to create new applications for the present or future. (OECD, 2002).

Nowadays, research ethics is somewhat divorced from issues of research and scientific integrity, and is portrayed as including research or scientific misconducts such as (a) data fabrication, (b) plagiarism, (c) falsification, and so on. Research integrity is concerned with the principles of professional conduct for researchers and is required for any ethical research.

Misconduct is defined as an intentional or purposeful departure from acknowledged and recognised scientific behaviour norms (Shamoo and Resnik, 2009). When a researcher fabricates data or plagiarises information or ideas in a study report, this is considered research misconduct. To mitigate this, applicable ethical principles must be followed while performing, reporting, and publishing high-quality research (Resnik, 2020). However, occurrences of publication retractions and plagiarism demonstrate that scientific misconduct has become increasingly common in

recent years. Researchers that engage in unethical or misleading publication practises increase the number of low-quality or predatory journals (**Ferris & Winker, 2017**)

The rise of predatory journals in India appears to be mostly due to an overemphasis on quantity rather than quality of research publishing in order to obtain employment and promotions (**Seethapathy et al., 2016**). By paying, one may obtain garbage from predatory or unauthorised publications that have been published. This practise has degraded the nation's reputation of research activity and has brought to light unethical practises in the sphere of research and academia (**Singhal and Kalra 2021**). So, the need of the hour is to put an end to unethical research practises and to improve research quality. In order to make it a reality, the UGC formed the Consortium for Academic and Research Ethics (CARE) in June 2019 to enhance academic integrity, publishing ethics, and overall research quality in India (**Patwardhan, 2019**). To that end, the UGC has formed an empowered committee to oversee CARE's operations.

The UGC established the CARE to meet worldwide standards of high quality research and to combat academic misconduct as well as plagiarism in academic works. The goal of establishing the UGC-CARE is to identify, continually monitor, report on, and maintain the "UGC CARE Reference List of Quality Journals." These goals were formalised as necessary measures for quality standards that every publication must adhere to.

The UGC's implementation of the CARE List is billed as a bold move towards improving research quality and curbing the country's rising prevalence of compromised publishing ethics. Thus, intervention is likely to dissuade academics from publishing in predatory journals and attending predatory conferences just for the purpose of gaining fake notoriety.

Purpose of the Scale

All the teachers of higher education institutions, whether new entrants or on the threshold of promotions either through direct recruitments or career advancements both are going to be affected by the indexing of journals in UGC-CARE List. Similarly all the research scholars in various stages of M.Phil., Ph.D. and PDF need publications in the UGC-CARE List of Journals for completion of their research works and are also going to be affected with this new system of indexing journal. Hence these new guidelines will affect every person who is engaged in research work in a various ways.

At this juncture the question arises, how much the teachers and research scholars are prepared for publication in the UGC CARE listed journals and how much they are aware of this?

In order to find the answer of the above question, it is pertinent to know that how much the teacher and research scholars of Higher Educational Institutions of are familiar with the different dimensions of the journals and their analysis protocols. There is lack/absence evidences with regard to the above issues. Therefore, this test will help to find the answers to this question and hence the test has been prepared.

Objective

To construct and standardize a UGC-CARE List Awareness Test for Teachers and Research Scholars

Construction of the Awareness Test

The steps followed to construct and standardize the scale are discussed below.

1. Preparation of a draft of Awareness Test.
2. Try out the draft of Awareness Test.
3. Item analysis of the Awareness Test

4. Selection of the items for final Awareness Test
5. Determination of the reliability of the Awareness Test
6. Determination of the validity of the Awareness Test

Preparation of the test

The awareness test has been prepared on the basis of the table of specification or blue print of the test. This helps in establishing content validity of the test and provides much effort for the construction of the test. The test consists of 44 questions on the following parameters:

- (a) Background and Objectives of UGC-CARE List of Journals
- (b) UGC-CARE Protocols
- (c) UGC-CARE Universities and Committees
- (d) UGC-CARE Groups
- (e) Journal Analysis process of UGC-CARE

The test included objective type questions with a booklet to be distributed. Each question was related to specific content area of the study, and prepared the scoring key. All the questions were closed ended with four options for answer to be chosen from.

Preliminary Try Out and Try out of the Test

The initial draft of the questionnaire had 50 items which were administered on 10 numbers of sample teachers of colleges/university and 10 numbers of research scholars. After trying out the questionnaire, the researcher found out some flaws in the questionnaire and corrected it. The researcher, after removing the drawbacks administered the test on the selected samples. The Try Out of the test has been done on 30 college teachers and 70 university teachers and on 100 research scholars.

Item analysis

After final try out the researcher found out the item difficulty and discriminating power for each of the questions and found that 6 items out of 50 items were felt more difficult. After removing those 6 questions, 44 items were considered to be moderate in difficulty level, which established a high content validity of the test items. Therefore, the researcher decided to keep a total of 44 questions in awareness test of UGC CARE List of Journals for teachers and research scholars.

Estimation of Item Difficulty

It is desirable that the items of test should be of reasonable level of difficulty. The difficulty level of the test item was indicated by the percentage of students who get the item right. The difficulty level is expressed by a numerical term. It must ranges from 25 % to 75%. But the items having medium difficulty i.e. 50% should be retained. And the other items which means to easy and too difficult items were discarded. It was calculated by applying the following formula:

Computation of the Item Difficulty

$$ID = \frac{R}{T} \times 100$$

Where, R= Number of students who got the item right

T= Total number of the students who tried the item

Estimation of Discriminating Power

The discriminating power of an item refers to the degree to which it discriminates between students with high and low achievement. The Discriminating power ranges from – 1.00 to +1.00 co-efficient of co-relation. If items show the discriminating power value less than 0.30, that item should be avoided.

Computation of the Discriminating Power:

$$DP = \frac{RU - RL}{\frac{1}{2}T}$$

Where, RU = Number of pupils in the upper group i.e. top 27% who got the item right

RL = Number of pupils in the lower group i.e. bottom 27% who got the item right

T = Total number of students in both the groups

The Final Form of the Test

In the final form of the test there are 44 items, distributed over 5 dimensions of UGC-CARE List of Journals namely Background and Objectives of UGC-CARE, CARE protocols, CARE Universities and Committees, CARE Groups and Journal Analysis. The test is having 44 multiple choice questions, scoring for each item of the test was done by giving a score of 1 for correct answer, and 0 for incorrect answer. Therefore, the maximum score is 44 and the minimum score is 0.

Table 1: Distribution of items for the final test consisting of 44 items

| Sl. No. | Content Area/Dimensions | Item Numbers | Total no. of Items | Percentage |
|---------|---------------------------------------|---|--------------------|-------------|
| 1 | Background and Objectives of UGC-CARE | 5,9,11,15,17,19,40 | 7 | 15.9% |
| 2 | CARE Protocols | 3,29,32,35,37,39,43 | 7 | 15.9% |
| 3 | CARE Universities and Committees | 4,6,14,23,30,31,44 | 7 | 15.9% |
| 4 | CARE Groups | 7,12,16,24,25,26 | 6 | 13.6% |
| 5 | Journal Analysis | 1,2,8,10,13,18,20,21,22,27,28,33,34,36,38,41,42 | 17 | 38.6% |
| | Total | | 44 | 100% |

Reliability

The reliability and validity are the two important characteristics of any tool used for research. The researcher employed the Test- Retest Method and Split Half Method on 50 participants (20 Teachers and 30 Research Scholars) for estimation of reliability of coefficient which was found to be 0.85 and 0.82 respectively. The test was considered as having high reliability.

Reliability of Awareness Test by Test & Retest Method

| SL.NO. | TEST (X) | RETEST (Y) | XY | X ² | Y ² |
|--------|----------|------------|-----|----------------|----------------|
| 1 | 32 | 30 | 960 | 1024 | 900 |
| 2 | 24 | 26 | 624 | 576 | 676 |
| 3 | 28 | 27 | 756 | 784 | 729 |
| 4 | 30 | 32 | 960 | 900 | 1024 |
| 5 | 22 | 24 | 528 | 484 | 576 |
| 6 | 26 | 25 | 650 | 676 | 625 |
| 7 | 23 | 25 | 575 | 529 | 625 |
| 8 | 24 | 22 | 528 | 576 | 484 |
| 9 | 32 | 30 | 960 | 1024 | 900 |
| 10 | 24 | 22 | 528 | 576 | 484 |
| 11 | 24 | 22 | 528 | 576 | 484 |
| 12 | 30 | 28 | 840 | 900 | 784 |
| 13 | 28 | 27 | 756 | 784 | 729 |
| 14 | 28 | 28 | 784 | 784 | 784 |
| 15 | 32 | 30 | 960 | 1024 | 900 |
| 16 | 25 | 26 | 650 | 625 | 676 |
| 17 | 25 | 27 | 675 | 625 | 729 |
| 18 | 22 | 23 | 506 | 484 | 529 |
| 19 | 28 | 26 | 728 | 784 | 676 |
| 20 | 26 | 26 | 676 | 676 | 676 |
| 21 | 30 | 28 | 840 | 900 | 784 |
| 22 | 24 | 23 | 552 | 576 | 529 |
| 23 | 27 | 25 | 675 | 729 | 625 |
| 24 | 22 | 23 | 506 | 484 | 529 |
| 25 | 32 | 29 | 928 | 1024 | 841 |
| 26 | 30 | 32 | 960 | 900 | 1024 |
| 27 | 20 | 22 | 440 | 400 | 484 |
| 28 | 18 | 20 | 360 | 324 | 400 |
| 29 | 32 | 30 | 960 | 1024 | 900 |
| 30 | 26 | 24 | 624 | 676 | 576 |
| 31 | 24 | 22 | 528 | 576 | 484 |
| 32 | 28 | 24 | 672 | 784 | 576 |
| 33 | 25 | 26 | 650 | 625 | 676 |
| 34 | 27 | 24 | 648 | 729 | 576 |
| 35 | 24 | 22 | 528 | 576 | 484 |
| 36 | 27 | 25 | 675 | 729 | 625 |
| 37 | 32 | 30 | 960 | 1024 | 900 |

| | | | | | |
|--------------|-------------------------------------|-------------------------------------|---------------------------------------|--|--|
| 38 | 28 | 27 | 756 | 784 | 729 |
| 39 | 26 | 24 | 624 | 676 | 576 |
| 40 | 23 | 22 | 506 | 529 | 484 |
| 41 | 28 | 27 | 756 | 784 | 729 |
| 42 | 20 | 22 | 440 | 400 | 484 |
| 43 | 22 | 24 | 528 | 484 | 576 |
| 44 | 18 | 20 | 360 | 324 | 400 |
| 45 | 23 | 24 | 552 | 529 | 576 |
| 46 | 18 | 23 | 414 | 324 | 529 |
| 47 | 20 | 24 | 480 | 400 | 576 |
| 48 | 24 | 22 | 528 | 576 | 484 |
| 49 | 28 | 26 | 728 | 784 | 676 |
| 50 | 26 | 27 | 702 | 676 | 729 |
| Total | $\Sigma x = 1285$ | $\Sigma y = 1267$ | $\Sigma xy = 33052$ | $\Sigma x^2 = 33761$ | $\Sigma y^2 = 32551$ |

$$r = \frac{N \Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{[N \Sigma x^2 - (\Sigma x)^2][N \Sigma y^2 - (\Sigma y)^2]}}$$

$$\begin{aligned}
&= \frac{50 \times 33052 - (1285 \times 1267)}{\sqrt{[50 \times 33761 - (1285)^2][50 \times 32551 - (1267)^2]}} \\
&= \frac{1652600 - 1628095}{\sqrt{(1688050 - 1651225)(1627550 - 1605289)}} \\
&= \frac{24505}{\sqrt{36825 \times 22261}} \\
&= \frac{24505}{\sqrt{819761325}} \\
&= \frac{24505}{28631.47} \\
&= 0.85
\end{aligned}$$

Reliability of Awareness Test by Split Half Method

| S. No. | X | Y | XY | X ² | Y ² |
|--------|----|----|-----|----------------|----------------|
| 1 | 30 | 31 | 930 | 900 | 961 |
| 2 | 24 | 26 | 624 | 576 | 676 |
| 3 | 26 | 27 | 702 | 676 | 729 |
| 4 | 30 | 32 | 960 | 900 | 1024 |
| 5 | 22 | 24 | 528 | 484 | 576 |
| 6 | 26 | 25 | 650 | 676 | 625 |
| 7 | 23 | 26 | 598 | 529 | 676 |
| 8 | 24 | 22 | 528 | 576 | 484 |

| | | | | | |
|--------------|------------------------------------|------------------------------------|---------------------------------------|--|--|
| 9 | 32 | 30 | 960 | 1024 | 900 |
| 10 | 23 | 22 | 506 | 529 | 484 |
| 11 | 24 | 22 | 528 | 576 | 484 |
| 12 | 30 | 28 | 840 | 900 | 784 |
| 13 | 28 | 27 | 756 | 784 | 729 |
| 14 | 28 | 26 | 728 | 784 | 676 |
| 15 | 32 | 30 | 960 | 1024 | 900 |
| 16 | 25 | 26 | 650 | 625 | 676 |
| 17 | 25 | 27 | 675 | 625 | 729 |
| 18 | 22 | 23 | 506 | 484 | 529 |
| 19 | 28 | 26 | 728 | 784 | 676 |
| 20 | 26 | 26 | 676 | 676 | 676 |
| 21 | 30 | 28 | 840 | 900 | 784 |
| 22 | 24 | 23 | 552 | 576 | 529 |
| 23 | 27 | 25 | 675 | 729 | 625 |
| 24 | 22 | 23 | 506 | 484 | 529 |
| 25 | 32 | 28 | 896 | 1024 | 784 |
| Total | $\Sigma x = 663$ | $\Sigma y = 653$ | $\Sigma xy = 17502$ | $\Sigma x^2 = 17845$ | $\Sigma y^2 = 17245$ |

$$\begin{aligned}
 r_{ht} &= \frac{N \Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{[N \Sigma x^2 - (\Sigma x)^2][N \Sigma y^2 - (\Sigma y)^2]}} \\
 &= \frac{25 \times 17502 - (663 \times 653)}{\sqrt{[25 \times 17845 - (663)^2][25 \times 17245 - (653)^2]}} \\
 &= \frac{437550 - 432939}{\sqrt{(446125 - 439569)(431125 - 426409)}} \\
 &= \frac{4611}{\sqrt{6556 \times 4716}} \\
 &= \frac{4611}{\sqrt{30918096}} \\
 &= \frac{4611}{5560.40} \\
 r_{ht} &= 0.82
 \end{aligned}$$

$$\begin{aligned}
 r_{wt} &= \frac{2(r_{ht})}{1 + r_{ht}} \\
 r_{wt} &= \frac{2(0.82)}{1 + 0.82} \\
 &= \frac{1.64}{1.82} \\
 r_{wt} &= 0.90
 \end{aligned}$$

Validity

The validity of test was also ensured by taking suggestions from the content experts and language experts on the basis of content validity and face validity.

Norms

The below mentioned table is represents the Norm for Awareness Test

Table 2: Showing Norms

| Sl. No. | Score Range | Norm |
|---------|-------------|-----------|
| 1 | 1-9 | Very Low |
| 2 | 9-18 | Low |
| 3 | 18-27 | Average |
| 4 | 27-36 | High |
| 5 | 36-44 | Very High |

Conclusion

The researcher constructed and standardized the above awareness test by preparing question on 5 different dimensions of UGC CARE List for measuring the awareness of teachers and research scholars towards UGC CARE List of Journals with 44 items. For try-out of the test and to find out the reliability of the constructed test, the data has been collected from teachers and research scholars from Assam and Arunachal Pradesh by administering the constructed test. This test will help to find out the level of awareness of researcher about the UGC-CARE List of Journals and indexing process.

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