

NUMERICAL SKILLS – THE KEY TO EMPLOYABILITY OF THE YOUTH

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Abstract : Economic growth requires that various business and government organizations have adequately trained staff having the requisite skills to do the work expected from them. Hence there is a basic requirement of employees with adequate numerical skills at various levels in the organization. It will be difficult to achieve economic growth if the employees do not possess these important skills. Basic numerical and mathematical skills improve the potential of individuals to find good jobs. Countries also need a trained workforce for economic development.

This paper focuses on the requirements of various numerical skills for getting recruitments in various business and government organizations and it finds out the current status of the numerical skills in the undergraduate students. It also gives suggestions and recommendations for improvement of numerical skills in undergraduate students.

Keywords: Numerical skills, Job recruitment examinations, Employability.

I.INTRODUCTION

Mathematics is a branch of knowledge that deals with measurement, numbers and quantities. Each of the diverse branches of Mathematics has useful applications in various fields. Mathematics is an indispensable tool in all human endeavors and is being used in various fields such as trade, commerce, banking, financial services, agriculture, economics etc. Every business enterprise has to use basic Mathematics to run their organization. Mathematics is used to calculate sales volume, percentage growth, profit and loss, inventory calculation etc. Basic knowledge of Mathematics is also required in stock market operations for the purpose of calculation of client accounts, margin requirements etc. In import-export trade, calculation of value of import/export, calculation of import duties, transportation costs etc need mathematical calculations. Banks also need to have an elaborate system of recording all banking transactions (which are all numerical in nature), assessment of credit requirement of clients, interest/EMI calculation on loans etc. Insurance sector also has to use Mathematics knowledge for the calculation of premium on their policies. In the field of Economics, knowledge of Mathematics is extremely vital for the purpose of calculation of Gross Domestic Product (GDP), Economic growth rate, fiscal deficits, trade deficits, etc and a wide range of other Economic parameters.

Economic growth requires that various business and government organizations have adequately trained staff having the requisite skills to do the work expected from them. Hence there is a basic requirement of employees with adequate numerical skills at various levels in the organization. It will be difficult to achieve economic growth if the employees do not possess these important skills. Basic numerical and mathematical skills improve the potential of individuals to find good jobs. Countries also need a trained workforce for economic development.

This paper focuses on the requirements of various numerical skills for getting recruitments in various business and government organizations and it finds out the current status of the numerical skills in the undergraduate students.

SIGNIFICANCE AND IMPORTANCE OF THE NUMERICAL SKILLS IN VARIOUS BUSINESS AND GOVERNMENT ORGANIZATIONS

Various business and government organizations conduct examinations for job recruitments. In the examinations conducted by UPSC (Union Public Service Commission), MPSC (Maharashtra Public Service Commission), Railway recruitment board and the Nationalized Banks for the recruitments of clerical grade, probationary officers and management trainees various numerical skills of the candidates are tested. Candidates are required to pass the numerical ability test in order to qualify for the interview and further selection process. It has been observed that many candidates do not qualify for the next stage of selection process due to lack of numerical skills even though they have adequate knowledge in other areas. Not only for entrance test but also during the actual work, the employees need to have good numerical ability to perform their job requirements effectively. The numerical skills which are tested in these examinations include simple arithmetic calculations, fractions, calculation of percentage, calculation of profit and loss, calculation of simple and compound interest, calculation of discount, calculation of arithmetic mean, permutations and combinations, interpretation of charts, data interpretation, probability etc.

OBJECTIVES OF THE STUDY

1. To assess the numerical skills requirements in various job recruitment examinations.
2. To find out the numerical skills of undergraduate students.
3. To give recommendations and suggestions for improving the numerical skills.

RESEARCH METHODOLOGY

The study is based on

- i. The primary data obtained from the survey of undergraduate students and the teachers.
- ii. The secondary data from published sources and web search.

THE NUMERICAL SKILLS OF UNDERGRADUATE STUDENTS: FINDINGS AND ANALYSIS

The author conducted a survey of undergraduate students of Arts and Commerce streams to study their numerical skills which are required for these job recruitment examinations. Also the discussions were conducted with the teachers regarding the numerical skills of these students.

Following are the observations of the survey conducted:

1. 50% of the students faced problems in doing simple arithmetic calculations.
2. Only 35% of the students could calculate discounts and interests properly
3. Only 10% of the students could answer the questions on probability correctly.
4. Only 25% of the students could do interpretation of charts correctly.
5. Only 20% of the students could do data interpretation correctly.

It has been observed that generally students of Science and Engineering do not face much difficulty as far as numerical ability section of examination is concerned. However, students of Arts and Commerce streams face many difficulties in passing the numerical ability tests. Generally students of Arts faculty do not opt for the subject Mathematics after their standard X examination. Commerce stream students learn the subject Mathematics only in the first year of their graduation. Hence Arts and Commerce students face difficulties in passing the numerical ability tests of various competitive examinations for job recruitment.

The poor numerical ability has also been observed in school children according to ASER. The Annual Status of Education Report (Rural) 2013 (ASER) examines the state of primary and middle school education in rural India. It is reported that only half of the students could do simple arithmetic calculations such as subtraction and division. On 13th January 2015, NGO "Pratham" released 10th Annual Status of Education Report (ASER 2014). The report says that less than 25% of school children have good numerical ability.

SUGGESTIONS FOR IMPROVEMENT OF NUMERICAL SKILLS

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Following are the suggestions to improve the numerical skills of these students:

i. A short-term certificate course which has focus only on the numerical ability requirements of these competitive examinations should be designed. Course should be of 2 to 3 weeks duration. It should address basic mathematical calculations of discount, simple and compound interest, probability etc. The improvement in numerical ability can be assessed by conducting pre-course and post-course tests. Certificate should be issued after the completion of the course. Such certificates can be an added qualification for the purpose of selection of candidates in small and medium organizations. These courses can be conducted in all degree colleges.

ii. Computer Assisted Learning (CAL) can play a vital role in enhancing the numerical ability of the students. Since CAL is a self explanatory and interactive learning, the students can learn at their own pace and they can also take the tests from time to time to check whether they have understood the concept properly and assess their numerical ability. In developed countries CAL softwares are widely used to improve the numerical ability of academically weak students and these softwares are found to be very useful and effective.

iii. The knowledge of Vedic Mathematics can help the students to improve some basic numerical skills such as simple arithmetic calculations. With this knowledge students can do some arithmetic calculations without the use of calculator.

CONCLUSION

In today's competitive world good numerical ability is an extremely important aspect in the selection of candidates in various job recruitment examinations. It has been observed that many students of Arts and Commerce streams do not possess required numerical skills to pass these examinations successfully. Therefore, it is necessary to improve the numerical skills of the undergraduate students to make them suitable for job selection. Some short-term certificate courses, use of CAL, knowledge of Vedic Mathematics etc can help the students to improve their numerical skills significantly.

REFERENCES

- 1.(ed) Chopra J. K. (2012): Recruitment of Probationary Officers and Management Trainees, Unique Publishers New Delhi, ISBN: 978-81-8357-296-5
- 2.(Dr) Datason R. P., Arora Manish, Gulati S. L. (2012): Clerical Cadre Recruitment in State Bank of India, New Light Publishers, New Delhi, ISBN: 81-86332-99-5
- 3.(Dr) Lal and Jain :Railway Recruitment Board, Assistant Loco Pilot Examination, Upkar Prakashan, Agra, New Delhi, ISBN: 978-81-7482-161-4
- 4.(Dr) Lal and Jain (2012): UPSC Special Class Railway Apprentice Examination, Upkar Prakashan, Agra, New Delhi, ISBN: 978-81-7482-455-4
- 5.(ed) Pratiyogita Darpan: Railway Recruitment Board, Ticket Collector Commercial Clerk, Upkar Prakashan, Agra, New Delhi, ISBN: 978-81-7482-159-1
- 6.(Dr) Stella Antony and (Dr)Purushothaman (1994): CAI for Underachievers, Indian Council for Research in Educational Media, Tiruchirapalli, Tamilnadu, ISBN: 81-86367-00-4
- 7.<http://blogs.wsj.com/indiarealtime/2013>
- 8.<http://www.globalpartnership.org/focus-areas/numeracy>
- 9.<http://www.jagranjosh.com/>
- 10.<http://www.skillsyouneed.com/numeracy-skills.html>
- 11.<https://www.tes.co.uk/article.aspx?storycode=6400496>