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# EDUCATIONAL DEVELOPMENT IN KARNATAKA: INTER-DISTRICT DISPARITIES

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**Abstract:** *The present study made an attempt to identify the inter-district disparities in educational development in Karnataka and to find out various factors behind the growth of disparities. Mainly, the secondary data are used in the study regarding education. To know the educational development of each district of the state, the Composite Index Method has been used. To develop District-wise educational development index for the year 2010-11, the fifteen indicators have been selected. The findings of the study prove that the districts in Karnataka state are marked with wide disparity in education development. Some districts of the state have recorded remarkable progress in educational development. So steps should be taken to reduce the disparities among the districts of state in respect of educational development by appropriate policy measures by the planners.*

***Keywords:*** *Education, Composite Index, Economic development, Literacy and Enrolment.*

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**INTRODUCTION:**

Now the nature and forms of education is changing swiftly in perspective of the whole world. The importance of education has been realizing from far behind the Raman and Mahabharata era. We, looking at the world, can claim that the nations and cultures committed to education and training has made greater strides in both intellectual and economic growth.

Education plays a vital role in shaping our lives and life styles. It is an established fact that education is a catalyst of socio-economic transformation. And it is crucial factor in the understanding of social problems. It enhances our ability to develop solution for these problems. The economic growth depends to a large extent upon changes in human thinking which plays the important role in productive process through organizational and managerial ability. Further education also play a key role in the production because it supplies physical and mental labour to higher order and thus helps in marketing right decisions for the development of country.

Education has now become the corner stone of institutional frame work an several counts. There is an in extricable link between education and national development. The development of Indian education has its impact on modernization of the society, the economy and also on overall development. The contribution of education to Indian economic growth has been quite remarkable. The expansion and development of higher education has enabled Indian economy to be modernized by the setting up of many new industries and also made agricultural progress by the production of fertilizers. As result of the poor quality of education capital output ratio in India is very high and unfavorable and productivity is low.

Attainment of higher levels of education is the necessary and sufficient condition for alleviation of poverty, higher level income of the people and further economic progress. According to National Human Development Report 2001, the process of education and attainments thereof has an impact on all aspects of life. It captures capability of acquiring knowledge, communication, and participation in community life.

A benefit of education is both direct and as well as indirect impact on economy. Therefore education is a prerequisite for progress and development in economy. Further the level and spread of education has not only been an important pre condition for sustained economic

growth and development, both in the developed and developing countries, but it has also played a critical facilitative role in the demographic, social and political transition of these societies. Creation, application and adoption of new technologies, lower-fertility, infant and child mortality rates, better nutritional, hygiene and health states of children, reproductive health and empowerment of women, social mobility and political freedom, all have visible linkages with educational attainment of people (NHD-Report,2001).

Educational progress can be assessed in terms of outcomes, such as literacy rates, educational attainments and enrolment and also of input indicators into the educational system, such as the number of institutions, teachers and school infrastructure.

## OBJECTIVES, MATERIALS AND METHODS:

To the light of above background the present study made an attempt to identify the inter-district disparities in educational development in Karnataka and to find out various factors behind the growth of disparities.

Present paper focuses on pattern of educational infrastructure and looks of several aspects, including various educational institutions, students' enrolment, literacy rate and remedial measures for improvement in educational infrastructure in the state. Mainly, the secondary data are used in the present study regarding education. Sources of secondary data received from Selected Educational statistics-2010-11, Census Report 2011, Govt. of India, Karnataka At a Glance-2010-11, Directorate of Economics and statistics, Karnataka Development Report 2007, Economic Survey of Karnataka 2010-11, Reports, Articles and Government Publications. To know the educational development of each district of the state, in the present study Composite Index Method has been used.

## CONSTRUCTION OF COMPOSITE INDEX:

In constructing the composite indices of development, the Principal Component Analysis (PCA) has been used. The PCA was originally derived from the factor analysis. For computing the composite index at district level of Karnataka state, a composite index has been obtained through the following formula.

$$C_i = \sum_{j=1}^{n} F_{ij} R_{ij}$$

Where;

$C_i$ = Composite index of educational development of district 'i'.

i = 1, 2, 3, 4, 5, ……30 (Districts)

j = 1, 2, 3, 4, 5, ……15 (Indicators)

$F_{ij}$ = the factor loading of district 'i' on indicator 'j'

$R_{ij}$ = the rank of district 'i' on indicator 'j'

After computing the composite index of educational development, the simple statistical variations tests i.e., computed values of Standard Deviation (S.D) and Mean ($\overline{X}$) are applied to these composite indices, then by using these two values all the districts are classified into four groups i.e., highly developed, developed, backward and highly backward.

## SELECTION OF THE INDICATORS:

We have clear cut data on the following few variables that would help us to have a comprehensive look at the developments in the educational infrastructure of the State. To develop District-wise educational development index for the year 2010-11, the following fifteen indicators have been selected for the present analysis.

| Sl. No | Educational Parameters |
|---|---|
| 1 | Primary Schools per lakh of Population - $X_1$ |
| 2 | Primary Schools per 100 Sq.Kms of area - $X_2$ |
| 3 | Secondary Schools per lakh of Population - $X_3$ |
| 4 | Secondary Schools per 100 Sq.Kms of area - $X_4$ |
| 5 | Pre-University Colleges per lakh of Population - $X_5$ |
| 6 | Pre-University Colleges per 100 Sq.Kms of area - $X_6$ |
| 7 | Collegiate Educational Institutions per lakh of Population - $X_7$ |
| 8 | Collegiate Educational Institutions per 100 Sq.Kms of area- $X_8$ |
| 9 | Percentage of Students enrolled in Primary Schools - $X_9$ |
| 10 | Percentage of Students enrolled in Secondary Schools - $X_{10}$ |
| 11 | Percentage of Students enrolled in Pre-University College - $X_{11}$ |
| 12 | Percentage of Students enrolled in Collegiate Educational Institutions - $X_{12}$ |
| 13 | Pupil-Teacher Ratio in Primary Schools - $X_{13}$ |
| 14 | Pupil-Teacher Ratio in Secondary Schools - $X_{14}$ |
| 15 | Literacy Rate (In Percentage) - $X_{15}$ |

## RESULTS AND DISCUSSION:

Observed values from the table-1 that the number of Secondary Schools per 100 Sq.kms of area ($X_4$) has the highest factor loading i.e. 0.7072, in the principal component which

represents that the said indicator is most statically significant, followed by percentage of students enrolled in secondary schools, $X_{10}$ (0.6970) and number of secondary schools per lackh population, $X_3$ (0.6630). The factor loading on indicator Pupil-teacher Ratio in secondary schools, $X_{14}$ (0.3338) is very small in magnitude and therefore, it is statistically insignificant.

**Table-1: Factor Loading of Educational development (2010-11)**

| Indicators | Factor Loading |
|---|---|
| $X_1$ | 0.4108 |
| $X_2$ | 0.4446 |
| $X_3$ | 0.6630 |
| $X_4$ | 0.7072 |
| $X_5$ | 0.6198 |
| $X_6$ | 0.6577 |
| $X_7$ | 0.4029 |
| $X_8$ | 0.4975 |
| $X_9$ | 0.4628 |
| $X_{10}$ | 0.6970 |
| $X_{11}$ | 0.4748 |
| $X_{12}$ | 0.5037 |
| $X_{13}$ | 0.4774 |
| $X_{14}$ | 0.3338 |
| $X_{15}$ | 0.3811 |

Source: Computed

The composite Index of educational development for each district obtained by using the factor loadings for the year 2010-11 and Ranking is also given to each district according to the composite index is represented in Table-2. This table depicts that the lowest index value of the district indicates the top position for the educational development. This table stands as a testimony for the dominant position of Hassan district. It stands first in 2010-11 by recording 58.47 index values and stayed distinctly ahead of all other districts. Another district Dakshina Kannada was not for behind Hassan district in education sector. Dakshina Kannada and Tumkur figured in second and third places respectively.

On the other side, Yadagiri district has the highest educational development index value (213.60) and stands in last postion, followed by Koppal (197.88 Index value) and Chamarajanagar (191.46 Index value).

**Table-2: Composite Index of Educational Development with Ranks (2010-11)**

| Sl. No | Districts | Composite Index | Rank |
|---|---|---|---|
| 1 | Bagalkot | 136.65 | 22 |
| 2 | Bangalore (R) | 86.00 | 7 |
| 3 | Bangalore (U) | 107.08 | 13 |
| 4 | Belgaum | 112.49 | 15 |
| 5 | Bellary | 151.37 | 26 |
| 6 | Bidar | 96.98 | 8 |
| 7 | Bijapur | 139.27 | 24 |
| 8 | Chamarajanagar | 191.46 | 28 |
| 9 | Chikkaballapur | 128.60 | 19 |
| 10 | Chikmagalur | 122.71 | 18 |
| 11 | Chitradurga | 138.53 | 23 |
| 12 | Dakshina Kannada | 69.51 | 2 |
| 13 | Davanagere | 80.67 | 6 |
| 14 | Dharwad | 101.16 | 9 |
| 15 | Gadag | 132.71 | 20 |
| 16 | Gulbarga | 106.64 | 12 |
| 17 | Hassan | 58.47 | 1 |
| 18 | Haveri | 117.70 | 16 |
| 19 | Kodagu | 145.12 | 25 |
| 20 | Kolar | 121.58 | 17 |
| 21 | Koppal | 197.88 | 29 |
| 22 | Mandya | 79.87 | 5 |
| 23 | Mysore | 79.05 | 4 |
| 24 | Raichur | 153.60 | 27 |
| 25 | Ramanagar | 103.81 | 10 |
| 26 | Shimoga | 110.25 | 14 |
| 27 | Tumkur | 76.39 | 3 |
| 28 | Udupi | 103.99 | 11 |
| 29 | Uttara Kanaada | 133.20 | 21 |
| 30 | Yadagiri | 213.60 | 30 |

Source: Computed

To know the relative position of each districts in educational development , district-wise classification have been made according to educational development index values as shown in table-3. We may observe from this table, the Hassan district has been listed in the first group i.e. highly developed group showing highest levels of development. The reason behind that, in Hassan district, the availability of schools and colleges per lakh of population has been highest among the districts of the state. The district stood third rank in literacy rate. Other districts of the state like, Dakshina Kannada, Tumkur, Mysore, Mandya and Davangere Districts was not far behind Hassan district in educational development due to the leading number in most of the indicators.

**Table-3: Classification of districts on the levels of Educational Development (2010-11)**

| Groups | Level of Development | Districts |
|---|---|---|
| I | Highly Developed | Hassan, Dakshina Kannada, Tumkur, Mysore, Mandya and Davanagere |
| II | Developed | Bangalore (R), Bidar, Dharwad, Ramanagar, Udupi, Gulbarga, Bangalore (U), Shimoga, Belgaum and Haveri |
| III | Backward | Kolar, Chikmagalur, Chikkaballapur, Gadag, Uttara Kanaada, Bagalkot, Chitradurga, Bijapur, Kodagu, Bellary and Raichur. |
| IV | Highly Backward | Chamarajanagar, Koppal and Yadagiri |

Source: Computed

As far as developed districts are concerned, Ten districts figured in this category viz. Bangalore Rural, Bidar, Dharwad, Ramnagar, Udupi, Gulbarga, Bangalore Urban, Shimoga, Belgaum and Haveri districts. It is due to high levels of achievements in few educational indicators. Further, Eleven districts namely, Kolar, Chikmagalur, Chikkaballapur, Gadag, Uttara Kannada, Bagalkot, Chitradurga, Bijapur, Kodugu, Bellary and Raichur districts are fall in the backward group. the reasons or such a low level of development are mainly related to less number of schools and colleges per 100 Sq.Kms of area, less percentage of enrolment , teacher-pupil ratio and literacy rate.

Three districts such as, Chamarajanagar, Koppal and Yadagiri figured in the highly backward group, which indicates the low level of educational development due to inadequate development of all the indicators during 2010-11.

## CONCLUSION AND SUGGESTIONS:

The issues pertaining to educational development are receiving attention from academicians as well as policy makers. Hence, an attempt was made in this study to examine the level of educational development for each district of the Karnataka state by computed the composite index of education. The findings of the study prove that the districts in Karnataka are marked with wide disparity in education development. Some districts of the state have recorded remarkable progress in educational development.

Education is indispensable to economic development and played a critical facilitative role in the demographic, social and political transition of these societies. So steps should be taken to reduce the disparities among the districts of state in respect of educational development

by opening more schools, improving the infrastructure facil.ities, appointing more teachers, simplifying the curriculum, organizing enrolment drives, providing free text books, mid day meals of reasonable quality and appropriate policy measures by the planners.

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